## Honeywell | MasterLink R510.4



# MasterLink R510.4 User's Guide 80-1061 | V2.0 | 2018

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# 1 About MasterLink

MasterLink R510.4 provides a single software package to configure, calibrate and access data from gas volume correctors. The software's intuitive dashboard enables users to quickly determine the overall health status of instruments. Employing standardized terminology, it makes it easy to configure and calibrate instruments, import data, and generate reports and graphs, thereby eliminating time-consuming manual effort.

The MasterLink R510.4 software employs a dashboard based design philosophy enabling users to get a one-shot status of connected devices. A gas industry first, the software can connect to the device using a choice of short-range wireless communication protocols. Its dashboard displays information about alarms, battery voltage, audit trail, configuration integrity, firmware status, time sync and live data. This helps the user understand the current condition of the connected device from a holistic point of view.

The MasterLink R510.4 software addresses the increasing adoption of mobile devices for functions like checking the health of field devices, downloading reports, instrument calibration and other activities once performed exclusively on a laptop. The software offers versatile wireless connectivity and is compatible with the latest versions of both the iOS and Android operating systems.

## 1.1 Features

MasterLink allows users to:

- Define dashboard data (auto) download settings
- Provides a wizard based calibration approach
- Enable SSL encrypted communication with site Over the Air (OTA)
- Enable BLE security
- Secure critical site data
- Download audit, event and alarm log data
- Generate reports such as:
  - Item report
  - Site report
  - Calibration report
  - Short List report
  - Audit Trail reports
  - Event Log report
  - Alarm Log report
  - Activity Log report
  - Cellular Log report
  - Diagnostic Log report

- Perform Database Administrative tasks such as
  - CSD (Comma Separated Data) Conversion
  - Import/Export instrument data
  - Import/Export site data
- Perform instrument and modem firmware updates
- Capture live data and plot graphs
- Plot graph over Audit Trail data
- Perform role based user administration for MasterLink
- Administer access privileges for device level functions by sending user table
- Configure communication settings
- Perform offline log-in configuration and send to instrument when connected

## 1.2 Security Considerations

- It is recommended to use the Cloud Link 4G modem in integrated mode with EC 350 for better Bluetooth security during pairing
- For data protection, it is recommended to provide full privileges to the *Pro-gramData\Honeywell\MasterLink* folder only to appropriate MasterLink users
- All files transferred to an Android device for use by MasterLink must be deleted after use to ensure that there is no data loss / leak
- It is recommended to keep the Android phone or iPhone used for MasterLink updated with the security patches released by the respective platforms
- It is also recommended to enable SSL for secure communication with MasterLink R510.4

## 1.3 Supported Device Functionality

								*CL	= Cloud	l Link	4G Mod	lem, PA	\ = Pul	se Accu	ımulator	, TC = Turb	o Cor	rector,
	EC 35- 0	C- L	EC 35- 0 + CL	P- A	CNI- 4	Mi- ni Ma- x	ER- X	T- Cl	Min- i- AT	T- C	Ac Cute- st	ER X 35- 0	ER- X 35- 0 + CL	Mi- ni	Tur- bo Mon	PT Mod- bus	E- R	EC- AT
ltem Report	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Audit Report	~	×	~	~	~	~	~	~	~	~	~	~	~	×	×	x	~	~
Alarm Report	~	~	~	×	~	~	×	×	~	~	~	~	~	×	×	×	×	~
Event Report	~	~	~	×	~	~	×	×	~	~	~	~	~	x	×	×	×	~
ShortList	~	~	~	1	1	1	~	~	1	~	~	~	~	~	~	1	1	1

								*CL	= Cloud	l Link	4G Mod	em, PA	A = Puls	se Accu	ımulator	, TC = Turb	o Cor	rector,
	EC 35- 0	C- L	EC 35- 0 + CL	P- A	CNI- 4	Mi- ni Ma- x	ER- X	T- Cl	Min- i- AT	T- C	Ac Cute- st	ER X 35- 0	ER- X 35- 0 + CL	Mi- ni	Tur- bo Mon	PT Mod- bus	E- R	EC- AT
Report																		
Activity Report	~	~	~	~	~	~	~	~	1	~	~	~	~	~	~	1	~	1
Diagnostic Report	×	~	~	×	~	×	×	×	×	×	×	×	~	x	×	×	×	×
Cellular Report	×	~	~	×	~	x	×	x	×	×	×	×	~	x	×	x	x	×
Send Log Configurati on	~	x	~	×	x	x	x	×	x	×	×	~	~	x	x	x	×	x
Change Instrument Access Code	×	×	x	~	×	~	~	~	4	~	~	×	×	~	~	~	~	~
Send User Table	~	1	~	×	~	×	×	×	×	×	×	~	~	x	×	×	×	×
Send Item File	~	1	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Config Check Template	~	×	~	~	~	~	~	~	~	1	~	~	~	~	~	~	~	~
P1 Calibration	~	×	~	×	×	~	~	×	~	~	~	~	~	~	×	×	~	~
P2 Calibration	~	×	~	×	x	×	~	×	~	~	~	~	~	x	x	x	~	x
P3 Calibration	×	×	×	×	x	×	~	×	x	×	×	x	×	x	x	x	×	x
Temperatu re Calibration	~	×	~	×	×	~	~	~	~	~	~	1	~	1	×	×	~	~
Firmware Download	~	1	~	×	~	×	×	×	×	×	×	~	~	×	×	×	×	×
Config By Item Or Group	~	~	~	~	~	~	~	~	~	~	~	1	~	1	~	~	~	~
Audit Trail Edit	~	×	~	~	~	~	~	~	~	~	~	~	~	sc	x	×	~	~
Shut Down Device	~	×	~	~	~	~	~	~	~	~	~	~	~	~	~	~	1	~
Live Data Graph	~	×	~	×	x	~	~	~	~	~	~	~	~	~	x	x	~	~

								*CL	= Cloud	l Link	4G Mod	em, PA	A = Puls	se Accu	ımulator	, TC = Turb	o Cor	rector,
	EC 35- 0	C- L	EC 35- 0 + CL	P- A	CNI- 4	Mi- ni Ma- x	ER- X	T- Cl	Min- i- AT	T- C	Ac Cute- st	ER X 35- 0	ER- X 35- O + CL	Mi- ni	Tur- bo Mon	PT Mod- bus	E- R	EC- AT
Administer Data	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
EVC Firmware Download	~	×	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	4
Certificate Upload	×	~	~	×	~	×	×	×	×	×	x	x	~	×	×	×	×	x
Modem Firmware Download	32	~	~	×	~	×	×	st	×	×	×	×	~	×	x	×	×	æ
Time Sync	~	~	~	1	1	1	~	1	1	1	~	1	1	×	×	×	1	~
Write Items	1	1	1	1	~	~	~	1	1	~	~	~	~	~	~	√	1	~
Active Alarms	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	x	~	~
User Manageme nt	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Generate Reports	~	~	~	×	~	~	~	~	~	~	~	1	~	~	~	~	1	~
EVC Reset Battery	~	~	~	x	x	×	×	~	×	×	x	~	~	x	x	x	×	x

# 1.4 Supported File formats and extensions

		FILE FORMAT EXTENSION										
	lte- m File	ltem Tem- plate File	Firm- ware File	Us- er Tab- le	Short- List File	Logging Con- figuration	Audit Grap- hs	Live Grap- h Set- ting	Live Gra- ph Val- ues	ShortL- ist File With Value	Cer- tificate file	
EC 350	IE3	TE3	BIN	UT- E	CE3	LC	AGS	LGS	LGV	KE3		
Cloud Link 4G Modem	ICL	TCL	BIN	UT- E	CCL					KCL	PEM	
EC 350 + Cloud Link	ECL	TEL	BIN	UT- E	CEL	LC	AGS	LGS	LGV	KEL		
Pulse Accu- mulator	IPA	TPA	ММХ		СРА					КРА		

		FILE FORMAT EXTENSION									
	lte- m File	Item Tem- plate File	Firm- ware File	Us- er Tab- le	Short- List File	Logging Con- figuration	Audit Grap- hs	Live Grap- h Set- ting	Live Gra- ph Val- ues	ShortL- ist File With Value	Cer- tificate file
CNI4	INI4	TNI4	MMX/- BIN	UT- E	SNI4					KNI4	
Mini-Max	IMX	TMX	MMX		СМХ			LGS	LGV	KMX	
ERX	IEX	TEX	MMX		CEX			LGS	LGV	KEX	
ТСі	ITC	TTCI	TCA		СТС			LGS	LGV	КТС	
Mini AT	IMA	TMA	TXT		СМА			LGS	LGV	KMA	
Turbo Cor- rector	ITT	TTT			СТТ			LGS	LGV	КТТ	
AccuTest	ITA	TTA			СТА			LGS	LGV	KTA	
ERX 350	IER- 3	TER3	BIN	UT- E	CER3	LCER3		LGS	LGV	KER3	
ERX 350 + Cloud Link	IER- 3L	TER3L	BIN	UT- E	CER3L	LCER3	AGS	LGS	LGV	KER3L	
Mini	IMN	TMN			CMN			LGV		KMN	
Tur- boMonitor	ITB	ттв	TBX/T- 8X		СТВ					КТВ	
PT Mod- bus	IPT- C	TPTC	PTX		CPTC					КРТС	
ER	IER	TER			CER			LGS	LGV	KER	
ECAT	IAT	TAT			CAT			LGS	LGV	KAT	

In MasterLink R510, file extensions of Cloud Link 4G Modem and EC350 + Cloud Link Integrated device have been changed as below:

		File format extension									
	Item File	Item Template	ShortList	Shortlist with							
	-R510	-R510	-R510	Values-R510							
CloudLink	.ICL	.TCL	.CCL	.KCL							
EC 350 + Cloud Link	.ECL	.TEL	.CEL	.KEL							

# 2 Installation

This chapter describes the installation of MasterLink software.

## 2.1 Before you install

Here are the recommended system specifications:

#### Stand Alone Central Server Configuration

Component	Requirement							
CPU	Quad Core and above							
RAM	8 GB and above							
Disk Space	80 GB and above							
	Windows Server 2012 – SP1 (Standard, Essentials) : 64 bit							
Operating Sys- tem	Windows Server 2012 R2 –SP1 (Standard, Essentials) : 64 bit							
	Windows Server 2016 (Standard, Essentials) : 64 bit							
	SQL Server 2008 R2 (Standard, Enterprise) : 32 bit SQL							
	Server 2012 (Standard, Enterprise) : 32 bit							
	SQL Server 2014 (Standard, Enterprise) : 32 bit							
Databasa	SQL Server 2008 R2 (Standard, Enterprise) : 64 bit							
Database	SQL Server 2012 (Standard, Enterprise) : 64 bit							
	SQL Server 2014 (Standard, Enterprise) : 64 bit							
	SQL Server 2016 (Standard, Enterprise) : 64 bit							
	SQL Server 2017 (Standard, Enterprise) : 64 bit							
Web Server	Internet Information Server (IIS) 8.0							

### Database Server Configuration

Component	Requirement
CPU	Quad Core and above
RAM	8 GB and above
Disk Space	80 GB and above
	Microsoft Windows 2008 Standard Edition 32 bit
Operating System	Microsoft Windows 2008 Standard Edition 64 bit
	Microsoft Windows 2008 R2 Standard Edition 32 bit

Component	Requirement
	Microsoft Windows 2008 R2 Standard Edition 64 bit
	Windows Server 2012 – SP1 (Standard, Essentials) : 64 bit
	Windows Server 2012 R2 –SP1 (Standard, Essentials) : 64 bit
	Windows Server 2016 (Standard, Essentials) : 64 bit
	SQL Server 2008 R2 (Standard, Enterprise) : 32 bit
	SQL Server 2012 (Standard, Enterprise) : 32 bit
	SQL Server 2014 (Standard, Enterprise) : 32 bit
Databaaa Samuar	SQL Server 2008 R2 (Standard, Enterprise) : 64 bit
Database Server	SQL Server 2012 (Standard, Enterprise) : 64 bit
	SQL Server 2014 (Standard, Enterprise) : 64 bit
	SQL Server 2016 (Standard, Enterprise) : 64 bit
	SQL Server 2017 (Standard, Enterprise) : 64 bit

**Note:** If you are using a database instance on your network, you need to have domain user permission.

### Application/ Web Server Configuration

Component	Requirement
CPU	Quad Core and above
RAM	8 GB and above
Disk Space	80 GB and above
Operating System	Windows Server 2012 – SP1 (Standard, Essentials) : 64 bit Windows Server 2012 R2 –SP1 (Standard, Essentials) : 64 bit Windows Server 2016 (Standard, Essentials) : 64 bit
Web Server	Internet Information Server (IIS) 8.0

#### **Client Configuration**

Component	Requirement	
CPU	Dual Core and above	
RAM	4 GB and above	
Disk Space	40 GB and above	
	Windows 7 – SP2 / Convenience rollup (Professional, Enterprise, Ultimate) : 32bit, 64 bit	
Operating Sys-	Windows 8 – (Core, Pro, Enterprise) : 32bit, 64 bit	
tem	Windows 8.1 – (Core, Pro, Enterprise) : 32bit, 64 bit	
	Windows 10 – (latest build 2 months before release) : 32bit, 64 bit	
	Windows Vista Standard Edition 32 bit	

#### Mobile Recommendations

	Android OS 4.3x, 4.4.0-4.4.4, 5.0.0-5.0.2, 5.1.x, 6.0
	RAM: 1 GB onwards Memory: 8 GB onwards
Android	Processor Speed: Dual-core 1 GHz onwards
	Communication BLE compatible
	General availability of Mail Client required
	OS 7.1.x, 8.4.x, 9.1.x, 10.1.x
	Memory: 8 GB onwards
ios	Screen Size: 3.5 inches onwards
105	RAM: 1 GB onwards
	Communication BLE capability
	General availability of Mail Client required

## 2.2 MasterLink Server Installation

#### Prerequisites:

Administrative Privileges are required to install the application.

#### To Install MasterLink Server:

1. Launch the installer. The MasterLink - InstallShield Wizard appears.



Click Next. The License Agreement page appears.

2. Click *I* accept the terms in the license agreement and then click **Next**. The Feature Selection page appears.

📲 Lioner av all Masteri ink San var – Instal			
I noneywell MasterLink Server - Instal	llShield Wizard		×
License Agreement Please read the following license agree	ment carefully.		と
END USER I	LICENSE AGREEME	NT	^
IMPORTANT: READ THIS END USER LICENSE A USING THE SOFTWARE (AS DEFINED BELOW) AND ENFORCEABLE LEGAL AGREEMENT BETW ("HONEYWELL"). YOU ACKNOWLEDGE YOU AM AUTHORITY TO DO SO, OR IF YOU DO NOT HA ANY DAMAGES RESULTING FROM A BREACH O BUYER ONLY UPON THE CONDITION THAT CONTAINED IN THIS LICENSE. BY OPENING ELECTRONICALLY, OR DOWNLOADING, INST. REPRESENTS THAT IT READ, UNDERSTANDS AN OF THIS LICENSE. IF BUYER DOES NOT AGREE	GREEMENT ("LICENSE" ACCOMPANYING THIS VEEN THE BUYER AND RE BINDING THE BUYE VOF THE AUTHORITY, Y OF THIS LICENSE. HONE BUYER ACCEPTS ALL THE SEALED SOFTWA ALLING, COPYING, OH ID AGREES TO BE BOU TO THE TERMS AND CO	CAREFULLY BEFORE LICENSE. THIS LICENSE D HONEYWELL INTERN R, AND REPRESENT N DU WILL BE PERSONA WELL LICENSES THE OF THE TERMS AND ARE PACKAGE, INDICA R USING THE SOFT ND BY THE TERMS AN INDITIONS OF THIS LICE	NSTALLING OR IS A BINDING IATIONAL INC. YOU HAVE THE LLY LIABLE FOR SOFTWARE TO CONDITIONS ATING ASSENT WARE, BUYER D CONDITIONS ENSE THEN DO
$\bigcirc$ I accept the terms in the license agreen	nent		
			Print
I do not accept the terms in the license	agreement		Print
I do not accept the terms in the license InstallShield	agreement		Print

3. Unselect Client and Select both AppWebServer and ServerDatabase feature from the list and then click **Next**.

岁 Honeywell MasterLink - InstallS	Shield Wizard
Custom Setup Select the program features you want installed.	と
Click on an icon in the list below to change how a feature is in:	stalled. Feature Description This feature requires 54MB on
Install to: C:\Program Files (x86)\Honeywell\MasterLink\	your hard drive.
InstallShield Space < Back	Next > Cancel

The Login account information page appears.

Note : AppWebServer and ServerDatabase can be installed in separate servers (same network).

4. Login with your administrator credentials and then click Next.

The Website and Port Number details for Installation page appears.

Honeywell MasterLink - InstallShield Wizard
Account Information Please enter the account information for Application Service.
Login ID: Password:
Note: Please enter valid Service Account information in the format 'Domain\Username'.
InstallShield < Back Next > Cancel

5. Provide the Website Name and valid Port numbers and then, click Next.

岁 Hone	eywell MasterLink - InstallShield Wizard
Website Information Please enter the Websi	te and Port number details for installation
Website Name:	MasterLinkServer
MasterLinkServer Port No:	8092
IdentityServer Port No:	8089
MLAlarmsService Port No:	8083
InstallShield	
	< Back Next > Cancel

6. You can browse and select a database on your network.

<b>B</b>	Honeywell Maste	erLink - InstallS	hield Wizard	x
Database Se Select datab	erver ase server and authentica	tion method		さ
Database serv	ver that you are installing t	0:		Browse
(IOCBI)				browse
InstallShield				
		< Back	Next >	Cancel

<b>1</b>	Honeywell MasterLink - InstallShield Wizard	x
F	From the list of servers below, select the database server you would like to target.	
	(local) IE38VWSV403 IE38VWSV443\INSPEC IE38VWSV498 IE38VWSVPC760 IE38VWSVPC823 IE38VWSVPC823\SQLEXPRESS	
Ins	tallShield OK Cancel	

**Note:** If you are using a database instance on your network, you need to have domain user permission.

8. Click **Next**. The *Database Folder* page appears. Browse and select the folder where you want to install MasterLink database files.

谩	Honeywell MasterLink - InstallShield Wizard
Databas Click Nex	e Folder xt to install to this folder, or click Change to install to a different folder.
Ø	Install MasterLink database to: C:\ProgramData\Honeywell\MasterLink Change
InstallShield -	
	< Back Next > Cancel

9. Click **Next**. The *Destination folder* page appears, displaying information about the default destination folder.

闄	Honeywell MasterLink - InstallShield Wizard
Destinat Click Ne:	ion Folder xt to install to this folder, or click Change to install to a different folder.
Þ	Install Honeywell MasterLink to: C:\Program Files (x86)\Honeywell\MasterLink\ Change
InstallShield -	< Back Next > Cancel

10. Click **Next**. The *Ready to install the Program* page appears.

😸 Honeywell MasterLink - InstallShield Wizard 🗙
Ready to Install the Program The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back Install Cancel

11. Click Install to continue.

閿	Honeywell MasterLink - InstallShield Wizard 🗕 💷 🗙
Installing The prog	Honeywell MasterLink ram features you selected are being installed.
15	Please wait while the InstallShield Wizard installs Honeywell MasterLink. This may take several minutes.
	Status:
	Creating AppPools
InstallShield –	
	< Back Next > Cancel

12. Finally, click **Finish** to complete.

<b>₩</b>	Honeywell MasterLink - InstallShield Wizard	ĸ	
	The InstallShield Wizard Completed The InstallShield Wizard has successfully installed Honeywell MasterLink. Click Finish to exit the wizard.		
	Show the Windows Installer log		
< <u>B</u> ack <u>Finish</u>			

Note: Select the check box to view the Installer log.

## 2.3 MasterLink Client Installation

#### Prerequisites:

Administrative Privileges are required to install the application.

#### To Install MasterLink Server:

1. Launch the installer. The MasterLink - InstallShield Wizard appears.



Click Next. The License Agreement page appears.

2. Click *I accept the terms in the license agreement* and then click **Next**. The *Feature Selection* page appears.

Honeywell MasterLink Client - Install License Agreement Please read the following license agreem	Shield Wizard		× E
END USER L	ICENSE AGREEM	ENT	^
IMPORTANT: READ THIS END USER LICENSE AG USING THE SOFTWARE (AS DEFINED BELOW) A AND ENFORCEABLE LEGAL AGREEMENT BETW ("HONEYWELL"). YOU ACKNOWLEDGE YOU AR AUTHORITY TO DO SO, OR IF YOU DO NOT HAN ANY DAMAGES RESULTING FROM A BREACH O BUYER ONLY UPON THE CONDITION THAT I CONTAINED IN THIS LICENSE. BY OPENING ELECTRONICALLY, OR DOWNLOADING, INSTA REPRESENTS THAT IT READ, UNDERSTANDS ANI OF THIS LICENSE. IF BUYER DOES NOT AGREE T	REEMENT ("LICENSE ACCOMPANYING THIS EEN THE BUYER AT E BINDING THE BUY E THE AUTHORITY, F THIS LICENSE. HOT BUYER ACCEPTS AL THE SEALED SOFT ALLING, COPYING, (C) D AGREES TO BE BO O THE TERMS AND (C)	") CAREFULLY BEFORE 5 LICENSE. THIS LICENS 10 HONEYWELL INTER (FER, AND REPRESENT YOU WILL BE PERSONN. NEYWELL LICENSES THE L OF THE TERMS AN VARE PACKAGE, INDIC OR USING THE SOFT UND BY THE TERMS AN CONDITIONS OF THIS LI	INSTALLING OR E IS A BINDING NATIONAL INC, YOU HAVE THE ALLY LIABLE FOR SOFTWARE TO D CONDITIONS CATING ASSENT WARE, BUYER ID CONDITIONS CENSE THEN DO
<ul> <li>I accept the terms in the license agreem</li> </ul>	ent		Print
O I do not accept the terms in the license a	agreement		
	< Back	Next >	Cancel

3. Select the type of Database for installation - SQLite(default) or SQL Server.

Click Next to continue.

🚼 Honey	well MasterLink Client - InstallShield Wizard	×
Databas Please	<b>e Selection</b> select the type of database for installation	と
	Select the type of Database for installation:	
	<ul> <li>SQLite DB</li> <li>SQL Server DB</li> </ul>	
InstallShield	< Back	Next > Cancel

SQLite DB is selected by default.

If you select SQL Server DB, then you need to browse and select a database on your network.

👸 Honeywell MasterLink Client - Install	Shield Wizard		×
Database Server Select database server and authenticat	ion method		と
Database server that you are installing to	<b>D:</b>	~	Browse
InstallShield	< Back	Next >	Cancel

B Honeywell MasterLink - InstallShield Wizard	x
From the list of servers below, select the database server you would like to target.	
(ocal) IE38VWSV403 IE38VWSV443\INSPEC IE38VWSV498 IE38VWSVPC760 IE38VWSVPC823 IE38VWSVPC823\SQLEXPRESS	
InstallShield OK Cancel	

**Note:** If you are using a database instance on your network, you need to have domain user permission.

8. Click **Next**. The *Database Folder* page appears. Browse and select the folder where you want to install MasterLink database files.

🔀 Honeywell MasterLink Client - InstallShield Wizard	×
Database Folder Click Next to install to this folder, or click Change to install to a different folder.	と
Install MasterLink database to: C:\ProgramData\Honeywell\MasterLink	Change
InstallShield	Cancel

9. Click **Next**. The *Destination folder* page appears, displaying information about the default destination folder.

🕞 Honeyw	Honeywell MasterLink Client - InstallShield Wizard			
<b>Destinati</b> Click Nex	<b>on Folder</b> It to install to this folder, or clic	Change to install	to a different folder	と
	Install Honeywell MasterLink t C: \Program Files (x86) \Honey	o: well\MasterLink\		Change
InstallShield -		< Back	Next >	Cancel

10. Click **Next**. The *Ready to install the Program* page appears.

🔐 Honeywell MasterLink Client - Instal	IShield Wizard		×
Ready to Install the Program The wizard is ready to begin installation	1.		と
Click Install to begin the installation.			
If you want to review or change any of exit the wizard.	f your installation settings	, click Back. Click C	ancel to
TestallChield			
115001511ICIU	< Back I	install	Cancel

11. Click Install to continue.

🛃 Honeywe	II MasterLink Client - Install	Shield Wizard		×
Installing The prog	Honeywell MasterLink am features you selected are	being installed.		と
17	Please wait while the InstallS may take several minutes.	nield Wizard installs Honey	well MasterLink. This	
	Status:			
	Creating AppPools			
The line of the				
InstaliShield —		< Back N	ext > Can	cel

12. Finally, click **Finish** to complete.

🚰 Honeywell MasterLink Client - InstallShield Wizard 🛛 🗙 🗙				
	InstallShield Wizard Completed	1		
	The InstallShield Wizard has successfully installed Honeywell MasterLink. Click Finish to exit the wizard.			
	Show the Windows Installer log			
	< <u>B</u> ack <u>Finish</u>			

Note: Select the check box to view the Installer log.

## 2.4 Interoperability with SuiteSQL

MasterLink R510.1 can coexist with Suite SQL.

New MasterLink R510.1 can be used with either SQL database Server or SQLite database.

If a single data source is preferred with an existing MasterLink SQL installation, please choose SQL Server as a database option during MasterLink R510.1 installation.

## 2.5 MasterLink Client Installation with SQL Server

#### Prerequisites:

- If you are using SQL Server, then a SQL Server instance must be installed before installing MasterLink.
- Administrative Privileges are required to install the application.

#### To Install MasterLink Installation with SQL Server:

1. Launch the installer. The MasterLink - InstallShield Wizard appears.



2. Click Next. The License Agreement page appears.

B MasterLink - InstallShield Wizard	X
License Agreement	4.
Please read the following license agreement carefully.	
END USER LICENSE AGREEMENT	*
IMPORTANT: READ THIS END USER LICENSE AGREEMENT ("LICENSE") CAREFULLY BEF USING THE SOFTWARE (AS DEFINED BELOW) ACCOMPANYING THIS LICENSE. THIS LIC AND ENFORCEABLE LEGAL AGREEMENT BETWEEN THE BUYER AND HONEYWELL IN ("HONEYWELL"). YOU ACKNOWLEDGE YOU ARE BINDING THE BUYER, AND REPRESS AUTHORITY TO DO SO, OR IF YOU DO NOT HAVE THE AUTHORITY, YOU WILL BE PERS ANY DAMAGES RESULTING FROM A BREACH OF THIS LICENSE. HONEYWELL LICENSES BUYER ONLY UPON THE CONDITION THAT BUYER ACCEPTS ALL OF THE TERMS CONTAINED IN THIS LICENSE. BY OPENING THE SEALED SOFTWARE PACKAGE, II ELECTRONICALLY, OR DOWNLOADING, INSTALLING, COPYING, OR USING THE S REPRESENTS THAT IT READ, UNDERSTANDS AND AGREES TO BE BOUND BY THE TERM OF THIS LICENSE. IF BUYER DOES NOT AGREE TO THE TERMS AND CONDITIONS OF TH I accept the terms in the license agreement	ORE INSTALLING OR ENSE IS A BINDING ITERNATIONAL INC. ENT YOU HAVE THE GONALLY LIABLE FOR THE SOFTWARE TO AND CONDITIONS NDICATING ASSENT SOFTWARE, BUYER IS AND CONDITIONS IS LICENSE THEN DO Print
InstallShield	
< Back Next >	Cancel

3. Click *I accept the terms in the license agreement* and then click **Next**. The *Database Selection* page appears.

MasterLink - InstallShield Wizard  Database Selection  Please select the type of database for installation		
	Select the type of Database for installation:	
	© Sqlite DB	
nstallShield	< Back Next > Cancel	

By default, SQL DB Server is selected.

If you choose to continue with a *SQL DB Server* for installation, then you will see the following page (as shown in step 4), where you need to select the database server instance.

4. Click **Next** to continue. The *Database Server* page appears.

B MasterLink - InstallShield Wizard	×
Database Server Select database server and authentication method	と
Database server that you are installing to:	- Drawit
locainost	Browse
InstallShield	
< Back Next	> Cancel

5. Click **Next**. The *Database Folder* page appears. Browse and select the folder where you need to install MasterLink and database files.

😸 MasterLi	ink - InstallShield Wizard	23
Database Click Net	e <b>Folder</b> xt to install to this folder, or click Change to install to a different folder.	と
Þ	Install MasterLink database to: C: \ProgramData \Honeywell \MasterLink Char	ıge
InstallShield -	< Back Next > Ca	ncel

6. Click **Next**. The *Destination folder* page appears, displaying information about the default destination folder.

ink - InstallShield Wizard	23
ion Folder ext to install to this folder, or click Change to install to a different folder.	
Install MasterLink to: C:\Program Files (x86)\Honeywell\MasterLink\ Change	
i 0	nk - InstallShield Wizard ion Folder kt to install to this folder, or dick Change to install to a different folder. Install MasterLink to: C:\Program Files (x86)\Honeywell\MasterLink\ Change

7. Click **Next**. The *Ready to install the Program* page appears.

😸 MasterLink - InstallShield Wizard	
Ready to Install the Program       The wizard is ready to begin installation.	
Click Install to begin the installation.	
If you want to review or change any of your installation settings, dick Back. Click Cancel to exit the wizard.	
InstallShield < Back Cancel	

8. Click Install to continue.

🛃 MasterLi	nk - InstallShield Wizard
Installing The prog	MasterLink ram features you selected are being installed.
17	Please wait while the InstallShield Wizard installs MasterLink. This may take several minutes.
	Status:
InstallShield -	
	< Back Next > Cancel

9. Finally, click **Finish** to complete.



Note: Select the check box to view the Installer log.

## 2.5.1 Installing MasterLink with remote SQL Server

#### Prerequisites:

If you are using SQL Server, then a SQL Server instance needs to be installed before installing MasterLink R510.4 on Windows 8/8.1 or higher machines.

#### To Install MasterLink with remote SQL Server

1. Right-click Setup file and then click *Run as administrator*. The *MasterLink - InstallShield Wizard* appears.



2. Click Next. The License Agreement page appears.

😸 MasterLink - InstallShield Wizard	٢
License Agreement Please read the following license agreement carefully.	•
END USER LICENSE AGREEMENT	<u> </u>
IMPORTANT: READ THIS END USER LICENSE AGREEMENT ("LICENSE") CAREFULLY BEFORE INSTALLING OR USING THE SOFTWARE (AS DEFINED BELOW) ACCOMPANYING THIS LICENSE. THIS LICENSE IS A BINDING AND ENFORCEABLE LEGAL AGREEMENT BETWEEN THE BUYER AND HONEYWELL INTERNATIONAL INC. ("HONEYWELL"). YOU ACKNOWLEDGE YOU ARE BINDING THE BUYER, AND REPRESENT YOU HAVE THE AUTHORITY TO DO SO, OR IF YOU DO NOT HAVE THE AUTHORITY, YOU WILL BE PERSONALLY LIABLE FOR ANY DAMAGES RESULTING FROM A BREACH OF THIS LICENSE. HONEYWELL LICENSES THE SOFTWARE TO BUYER ONLY UPON THE CONDITION THAT BUYER ACCEPTS ALL OF THE TERMS AND CONDITIONS CONTAINED IN THIS LICENSE. BY OPENING THE SEALED SOFTWARE PACKAGE, INDICATING ASSENT ELECTRONICALLY, OR DOWNLOADING, INSTALLING, COPYING, OR USING THE SOFTWARE, BUYER REPRESENTS THAT IT READ, UNDERSTANDS AND AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS LICENSE. IF BUYER DOES NOT AGREE TO THE TERMS AND CONDITIONS OF THIS LICENSE. THE NOT	
I accept the terms in the license agreement     Print	
I do not accept the terms in the license agreement	
InstallShield	
< Back Next > Cancel	

3. Click *I accept the terms in the license agreement* and then click **Next**. The *Database Selection* page appears.

🛃 Master	Link - InstallShield Wizard
Database Selection           Please select the type of database for installation	
	Select the type of Database for installation:
	SQL DB Server
	© Sqlite DB
InstallShield	< Back Next > Cancel

By default, *SQL DB Server* is selected. If you choose to continue with a *SQL DB Server* for installation, then you will see the following page (as shown in step 4), where you need to select the database server instance.

4. Click **Next**. The *Database Server* page appears.

B MasterLink - InstallShield Wizard	×
Database Server Select database server and authentication method	と
Database server that you are installing to:	
localhost 🗸	Browse
InstallShield	
< Back Next >	Cancel

You can browse and select a database on your network.

(local) (local)\SQLEXPRESS (localdb)\v11.0		-
HPSIE1ACMBV1 HPSIE1AESMBLD1		
HPSIE1AOPTVBLD2 HPSIE1APTBLD1		
HPSIE1APTBLD1\SQLSER: HPSIE1APTBLD2	2014STD	
HPSIE1APTBLD3 HPSIE1APTBLD4		
HPSIE1APTBLD7 HPSIE1APTBLD7\SQLSER:	2014STD	
HPS-IE1A-S003TO HPS-IE1A-S003TO\ESX2K	8R2	
HPS-IE1A-S003TO HPS-IE1A-S003TO\ESX2K HPS-IE1A-S003TO\SQL2K	8R2 8R2	

**Note:** If you are using a database instance on your network, you need to have domain user permission.

5. Click **Next**. The *Database Folder* page appears. Click on **Change** and enter the path on the remote machine where user intends to create the Database files. The path selected on remote machine should not exist on the machine where the installer is running

闄 MasterLi	nk - InstallShield Wizard	23
Database Click Nex	e <b>Folder</b> <t a="" change="" click="" different="" folder,="" folder.<="" install="" or="" th="" this="" to=""><th>と</th></t>	と
	Install MasterLink database to: C:\ProgramData\Honeywell\MasterLink Cha	nge
InstallShield -	< Back Next > Ca	ancel

Note: The path selected on remote machine should exist on remote machine.

6. Click **Next**. The *Destination folder* page appears, displaying information about the default destination folder. The path selected on remote machine should not exist on current machine where installer is running

闄 MasterLi	ink - InstallShield Wizard
Destinat Click Net	ion Folder xt to install to this folder, or click Change to install to a different folder.
Þ	Install MasterLink to: C:\Program Files (x86)\Honeywell\MasterLink\ Change
InstallShield -	< Back Next > Cancel

7. Click **Next**. The *Ready to install the Program* page appears.

H MasterLink - InstallShield Wizard
Ready to Install the Program           The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield Cancel

8. Click Install to continue.



9. Click Finish to complete.

4	InstallShield Wizard Completed
	The InstallShield Wizard has successfully installed MasterLink. Click Finish to exit the wizard.
	Show the Windows Installer log
	< Back Finish Cancel

Note: Select the check box to view the Installer log.

## 2.6 Installing MasterLink with SQLite

1. Right-click Setup file and then click *Run as administrator*. The *MasterLink - InstallShield Wizard* appears.



2. Click Next. The License Agreement page appears.

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I accept the terms in the license agreement     Print     I do not accept the terms in the license agreement  InstallShield	IMPORTANT: READ THIS END USER LICE! USING THE SOFTWARE (AS DEFINED BEL AND ENFORCEABLE LEGAL AGREEMENT ("HONEYWELL"). YOU ACKNOWLEDGE YO AUTHORITY TO DO SO, OR IF YOU DO NI.	NSE AGREEMENT ("LICENSE") LOW) ACCOMPANYING THIS L BETWEEN THE BUYER AND DU ARE BINDING THE BUYEI OT HAVE THE AUTHORITY, YC	CAREFULLY BEFORE INSTALL ICENSE. THIS LICENSE IS A B HONEYWELL INTERNATION R, AND REPRESENT YOU HA	LING OR BINDING IAL INC. AVE THE BLE FOR
I do not accept the terms in the license agreement InstallShield	ANY DAMAGES RESULTING FROM A BRE BUYER ONLY UPON THE CONDITION 1 CONTAINED IN THIS LICENSE. BY OPEI ELECTRONICALLY, OR DOWNLOADING, REPRESENTS THAT IT READ, UNDERSTAN OF THIS LICENSE. IF BUYER DOES NOT AC	EACH OF THIS LICENSE. HONE THAT BUYER ACCEPTS ALL NING THE SEALED SOFTWA INSTALLING, COPYING, OR IDS AND AGREES TO BE BOUI GREE TO THE TERMS AND CO	YWELL LICENSES THE SOFTW OF THE TERMS AND CONI RE PACKAGE, INDICATING USING THE SOFTWARE, ND BY THE TERMS AND CONI NDITIONS OF THIS LICENSE T	ARE TO DITIONS ASSENT BUYER DITIONS THEN DO
InstallShield	ANY DAMAGES RESULTING FROM A BRE BUYER ONLY UPON THE CONDITION T CONTAINED IN THIS LICENSE. BY OPEI ELECTRONICALLY, OR DOWNLOADING, REPRESENTS THAT IT READ, UNDERSTAN OF THIS LICENSE. IF BUYER DOES NOT AC I accept the terms in the license ag	ACH OF THIS LICENSE, HONE THAT BUYER ACCEPTS ALL NING THE SEALED SOFTWA INSTALLING, COPYING, OF IDS AND AGREES TO BE BOUI GREE TO THE TERMS AND CO greement	YWELL LICENSES THE SOFTW OF THE TERMS AND CONI RE PACKAGE, INDICATING USING THE SOFTWARE, ND BY THE TERMS AND CONI NDITIONS OF THIS LICENSE T	ARE TO DITIONS ASSENT BUYER DITIONS HEN DO
	BAYE DAMAGES RESULTING FROM A BRE BUYER ONLY UPON THE CONDITION I CONTAINED IN THIS LICENSE. BY OPEI ELECTRONICALLY, OR DOWNLOADING, REPRESENTS THAT IT READ, UNDERSTAN OF THIS LICENSE. IF BUYER DOES NOT AC I accept the terms in the license ag I do not accept the terms in the lice	EACH OF THIS LICENSE. HONE THAT BUYER ACCEPTS ALL NING THE SEALED SOFTWA INSTALLING, COPYING, OR DS AND AGREES TO BE BOUI GREE TO THE TERMS AND CO greement tense agreement	YWELL LICENSES THE SOFTW OF THE TERMS AND CONI RE PACKAGE, INDICATING USING THE SOFTWARE, USING THE SOFTWARE, ND BY THE TERMS AND CONI NDITIONS OF THIS LICENSE T	ARE TO DITIONS ASSENT BUYER DITIONS HEN DO

3. Click *I accept the terms in the license agreement* and then click **Next**. The *Database Selection* page appears.

🔡 Master	Link - InstallShield Wizard
Databa	se Selection select the type of database for installation
	Select the type of Database for installation:
	SQL DB Server
	Sqlite DB
InstallShield	< Back Next > Cancel

By default, SQL DB Server is selected. User is required to select SQLite DB.

4. Click **Next**. The *Destination folder* page appears, displaying information about the default destination folder.

闄 MasterLi	ink - InstallShield Wizard	23
Destinati Click Nex	ion Folder xt to install to this folder, or click Change to install to a different folder.	と
	Install MasterLink to: C:\Program Files (x86)\Honeywell\MasterLink\ Char	ıge
InstallShield -	< Back Next > Ca	ncel
5. Click **Next**. The *Ready to install the Program* page appears.



6. Click Install to continue.

🔡 MasterLi	nk - InstallShield Wizard
Installing The prog	y MasterLink gram features you selected are being installed.
<b>i</b> ₽	Please wait while the InstallShield Wizard installs MasterLink. This may take several minutes.
	Status:
InstallShield	
	< Back Next > Cancel

7. Click **Finish** to complete.



Note: Select the check box to view the Installer log.

# 2.7 Post Installation Steps

 To log on to MasterLink application, users need access to C:\ProgramData\Honeywell\Masterlink. By default, all users under Users group has the required privileges. If a user falls under any other user group, then administrator should give "Full Control" privileges on folder "C:\ProgramData\Honeywell\Masterlink" for that particular user group.

	Cl	Coourity	<b>D</b> · <b>V</b> ·			
eneral	Sharing	Security	Previous Versions	Customize		
Object name: C:\ProgramData\Honeywell\MasterLink						
Group or	user nan	nes:				
& CR	EATOR	WNER				
SY.	STEM					
St. Adr	ninistrator	s (IE1FLT	1D7N6C2\Administra	ators)		
S. Use	ers (IE1FL	T1D7N6C	2\Users)			
			(5.)#55%			
To chan	ge permis	sions, click	c Edit.	Edit		
Permissi	ons for Us	sers	Allow	Deny		
Full co	ontrol		~			
Modify	Y		1			
Read	& execute	e	~	:		
List fo	Ider conte	ents	~			
Bead						
neau	Write					
Write			~			
Write For spec	ial permis	sions or ad	Vanced settings	AL		
For spec	ial permis vanced.	sions or ad	vanced settings,	Advanced		
For spec	ial permis vanced.	sions or ad	Vanced settings,	Ad <u>v</u> anced		
For spec click Ad	ial permis vanced. out acce	sions or ad	vanced settings,	Ad <u>v</u> anced		
For spec click Ad	ial permis vanced. out acce	sions or ad	and permissions	Advanced		

2. If SQL server is used as a database while installing the MasterLink application, then all users who will use the application must be provided DBO access on SUITE32 database.

# 2.8 Upgrading MasterLink

To upgrade MasterLink R510.4 from R500.1 to R510.1:

 On the machine where MasterLink R510.4 R500.1 is installed, launch the MasterLink R510.4 R510.1 installer. The following pop-up appears.



2. Click **OK**. The installation wizard continues with the upgrade process,

🔡 Honeywe	ll MasterLink - InstallShie	ld Wizard		_ 🗆 🗙
Installing The prog	Honeywell MasterLink ram features you selected are	being installed.		と
i <del>g</del>	Please wait while the InstallS may take several minutes. Status: Updating component registra	hield Wizard installs	s Honeywell MasterLi	nk. This
InstallShield –		< Back	Next >	Cancel

3. After the upgrade completes, the following page appears. Click **Finish** to complete the upgrade.



# 3 MasterLink User Interface

This chapter describes the steps of getting started with MasterLink. This chapter also explains the user interface along with the different features that are available in separate tabs.

# 3.1 Getting Started

On launching the MasterLink, you will see a screen to log on.



# 3.1.1 User Creation and Activation Process

To start using MasterLink Application, one must create a Site Administrator user who can in turn create multiple users with different privileges based on the business requirements.

#### 3.1.1.1 Site Administrator Creation

The Site Administrator must initially get a MasterLink license from Honeywell Process Solutions | Mercury Instruments. This license key can be used to register a Site Administrator in the MasterLink Application. Contact <u>TAC team</u> to get your license key.

#### 3.1.1.2 Creating Users

After the site administrator is registered, they can create new users using <u>Security</u> feature. To know more on passkey generation refer to <u>User Configuration</u>.

For individual user, the generated license key must be emailed to the respective users allowing them to register and start using MasterLink application.

#### 3.1.1.3 User Registration

For a first time user, click **New User** and register. User is required to register with license key provided by the site Administrators. The **User name** you enter while registering must match with the user name used while creating the license key.

Enter the log-in details, browse and select the license key, and then click **Register**.

The Login screen appears.

Log on with your credentials. Click Sign In.



The following screen is displayed:



Refer **MasterLink Installation Guide** for understanding the prerequisites and installation instructions.

#### 3.1.1.4 Forgot Password

If users forget their password they can reach out to the site Administrator for a new passkey. Once the key is received, users can reset their passwords by clicking the **Forgot Password** link. The Forgot Password screen appears.

Enter your user-name, browse and select the license key, and finally enter your new password. Click **Reset** to log-in with the new password.



# 3.2 Sites

The 'Sites' screen lists all sites configured in the MasterLink application. A Site refers to a field instrument such as:

1. Accutest	10. ERX 350 + Cloud Link 4G Modem
2. Cloud Link 4G Modem	11. Mini
3. CNI4	12. Mini-AT
4. EC 350	13. Mini-Max
5. EC 350 + Cloud Link 4G Modem	14. PTModbus
6. ECAT	15. Pulse Accumulator
7. ER	16. TCI
8. ERX	17. Turbo Corrector
9. ERX 350	18. Turbo Monitor

The user can also add a new Site, as well as edit or remove an existing Site. From the 'Sites' screen, users can connect to a device deployed on the field.

This section describes the steps to configure and add a site to MasterLink. It also explains how to connect and communicate with existing sites.

**Note:** In Coexistence scenario, any Cloud Link related sites that are added using New Master link will be displayed as "Unknown" sites in MasterLink.

# 3.2.1 Add Site

In the 'Site Management' screen, you can configure and connect to site.

Dashboard	Site Management			All 🍸	Q Search site
	ec350site 😨		ec350site	Connect	
Site (S)	EC 350 Stand Alone		EC 350	Modem	Serial Internet IrDA
View/ Edit			Stand Alone		
Calibrate		Instrument Type	EC 350 -	Internet/Phone	None •
Read Data		Site Name *	ec350site		UDP SSL
$\oslash$		Site Location	hyd	Site Phone/IP Address	
Live Data		Site ID *	0000000	SSL Private Key	
Administer		Site ID 2 *	0000000	Modem ID	0
Settings		User ID *	0	Modem Port	None 🔻
Security		Instrument Access Code *	****	Post Modem Command	
- Çî					
Ø		Add Site			
Connect 🦲	Not Connected   📮			Comm Monitor   S	end Capture Buffer to File

Site can be connected and configured over the following interfaces based on deployment (device type):

	Serial	IRDA	Modem	Internet*
EC 350	~	~	~	$\checkmark$
Cloud Link	~	×	×	~
EC 350 + Cloud Link	~	~	×	~
Pulse Accumulator	~	×	~	~
CNI4	~	×	×	~
Mini Max	~	×	~	~
ERX	~	×	~	~
ТСІ	×	~	×	×
Mini AT	~	×	~	~
Turbo Corrector	$\checkmark$	×	~	$\checkmark$
Accutest	$\checkmark$	×	$\checkmark$	$\checkmark$
ERX 350	~	$\checkmark$	~	$\checkmark$
ERX 350 + Cloud Link	$\checkmark$	$\checkmark$	×	$\checkmark$
Mini	$\checkmark$	×	~	$\checkmark$
Turbo Monitor	~	×	~	$\checkmark$
PT Modbus	$\checkmark$	×	~	×
ER	$\checkmark$	×	$\checkmark$	✓

	Serial	IRDA	Modem	Internet*
ECAT	~	×	$\checkmark$	~

\* Assuming that a cellular modem is being used.

**Note:** Before adding a new site, ensure that you have configured your communication settings under <u>Settings > Communications Setup</u>.

Click **Add Site** to create a new site or a field device. This function is used to add site information to the Site List.

Site Manageme	ent			
	C350 + oud Link grated Mode			
Instrument Type	EC350 + Cloud Link •	Internet/Phone	None •	
Site Name *			UDP SSL	
Site Location		Site Phone/IP Address *		
Site ID *		SSL Private Key		
Site ID 2 *		Modem ID	0	Configure the site details and click Save
User ID *		Modern Port	None •	
Instrument Access Code *		Post Modem Command		
			Save Cancel	
		an X Con X		

Attention: In integrated mode, Site IDs must be identical for device and modem. (If you are using EVC or Recorder's Site ID with 8 digits, then Modem ID should be Last 6 digits).

Also, an integrated site must be added in 'Integrated' mode only. Otherwise only the Cloud Link modem will be added as a site followed by a sync with the central server. A Site once created and synced with the central server cannot be deleted from the server. However, the site can be deleted from Technician's mobile app.

Attention: Site IDs must not be changed after it is synced with the central server. If the Site ID is changed after the sync, then the mobile iOS app may not work as expected.

While adding an integrated site, the EVC or Recorder's site IDs will be shown as Site IDs of integrated sites. The Cloud Link modem's Site ID will not be displayed as the Site ID of the integrated site. However, the Site ID of the Cloud Link modem will still be used to scan and detect the integrated site. The 'Site Management' screen has 2 views:

1. Tile View:

Honeywell	Master	Link			Release	: R510.1	Build V	/ersion	: 11.1.18.(	()   ()	$\mid$ ? $\mid$ Q ad	min –		×
Dashboard	Site M	anagement				,		$\overline{\times}$	∷ 88	Q	Search by Site N	ame/ID/Location	×	
Site Site View/Edit Calibrate Read Data Calibrate Calibrate Calibrate Calibrate		EC350_395506 EC 350	Stand Alone	9	Direct Connect EC 350	Stand Al	one							
Settings														
Security						Add Site								
Disconnect 🔘	Connecte	ed (EC 350)   📮	Direct Conne	ct 00000	00000000 - 000				Comm M	onitor	Send Captu	re Buffer to	File	

2. List View:

Honeyv	<b>vell</b>   MasterLink			Release	e: R510.1   Bui	ild Version: 11.1.18.0   (j)	?   Q admin   _	□ ×
Dashboard	Site Manage	ement			All		Search by Site Name/ID/Locatior	×
Q	Site Name	Device Type	Site Location	Site ID	Site ID 2	Instrument Description	Site Phone/IP Address	Moder
Site	EC350_395506	EC 350		00395506	00395506	00395506-00395506	37.156.39.184/40000	0
63	Direct Connect	EC 350		00000000	00000000	0000000-00000000	37.156.39.184	0
View/ Edit								
Calibrate								
Read Data								
Contraction Live Data								
Administer								
Ø Settings								
Security								
<i>a</i> ∧								P
Í					Add Site			
Disconnect	Connected ( EC	C 350 )   📮 Direc	t Connect 000000	00000000 - 00		Comm Monitor	Send Capture Buffer to	File 🔡

# 3.2.2 Connecting to a Site

When you log on to MasterLink and if you are not connected to a site or a device, you will see the following screen.



Click on the Site tab or the Connect to a Site link to get started.

Configured sites can be connected using the 'Site Management' screen of MasterLink.

**Note:** To connect an instrument through serial interface or modem configure the communication settings in the Settings tab.

After successfully connecting to the device, the dashboard starts downloading the data.

Note: It is recommended that the user waits till the dashboard data is loaded.



**Note:** Panels with red icons indicate that user attention is required.

### 3.2.3 Direct Connect

The 'Direct Connect' feature lets the MasterLink R510.4 connect to a site which is physically connected to a computer. The Direct Connect functionality works based on the serial port or IrDA settings configured under <u>Settings > Communications Setup</u>.

#### To connect a device:

- 1. Physically connect the instrument using a serial or IrDA interface.
- 2. Configure the required communication settings, go to <u>Settings > Communications Setup</u>.
- 3. Configure the user specific User ID and Access Code, go to Settings > Device Properties
- 4. Click **Connect** located at the bottom left. The device will be connected and the dashboard starts loading.

After connecting to an instrument users must manually add it to the site list. If the site is not already added, an **Add Site** page will be shown.

Dashboard	Site Manageme	ent				
<b>Q</b> Site	Dire	ect Connect				
View/Edit	AC Stan	cumulator d Alone				
Calibrate	Instrument Type *	Pulse Accumulator *	Internet/Phone	None *		
Read Data	Site Name *	Direct Connect				
Contraction Live Data	Site Location		Site Phone/IP Address	5		
*	Site ID *		SSL Private Key		Warning	$\otimes$
Administer	Site ID 2 *		Modem ID		The instrument you are connected is not added as a site. Please add the site.	
Settings	Event Log User Id	0	Modern Port	None -		
Security	Instrument Access Code *	*****	Post Modem Command			
GD Update						
				Save Cancel		

Provide required site details and click on Save.

In case of integrated device, for example CNI4 (Pulse Accumulator + Cloud Link 4G Modem). If MasterLink R510.4 is able to connect to Pulse Accumulator only and not the Cloud Link 4G Modem, then the dashboard loads only the with the Pulse Accumulator data and notifies users that it could not connect to CNI4. This scenario arises if the site is already added as CNI4, but only the Pulse Accumulator is connected. In this case, If the site is not already added, MasterLink will just treat the connected device as standalone Pulse Accumulator.



# 3.3 Dashboard

On successful site connection, dashboard data gets loaded automatically based on the 'Auto Download Settings'.

Dashboard has various panels that show current data from the connected site. The dashboard automatically reads and displays the following data:

- Critical instrument data
- Last call details (when MasterLink R510.4 is used)
- Active alarms
- Configuration checks based on the item template file
- Time Sync
- Firmware
- Audit Trail data
- Battery status

Using Data Download Settings, you can configure the dashboard data and as per your requirement.



Note: The instrument data can vary based on the connected device type.

The dashboard has various panels containing instrument data, organized in panels. User can further drill down to see relevant data by clicking on respective panels.

#### 3.3.1 User Interface

User Interface consists of the following sections:



- Tiles related to the application features include:
- Header contains:
  - MasterLink application release and build number
  - About MasterLink button (i)
  - Masterlink Application help button (?)
  - User account button
- Footer contains the following information:

	The icons displayed on the footer are used to illustrate the following:						
Icons	Not connected to any site,  - Connecting to a site,  - Connected to a site						
Comm Monitor	Displays all the communications (command/responses) between MasterLink application and the connected site.						
Send Capture Buffer to File	Allows the user to save all the communication into a file for analysis.						

# 3.3.2 Instrument Data

The Dashboard shows current instrument data from the connected site. This data is read from the instrument and displayed under the *Instrument Data* widget.



On clicking any value, further details are displayed.

Dashboard	Dashboard					Integrated EVC + MiCe	I Senal No. 12343234 Refresh
Site	Instrument Data					Alarms	
() View/ Edit	80.48 ccF	60.93 psi	1 O Corrected Vol	ume		1	Pressure High 1/23/15 13.45
0	Corrected Volume	P1 Pressure	Item Code	Description	Value	0.5	
Calibrate			000	Corrected Volume	0000100 (m3)	05	Pressure Low 1/17/15 12:09
6	59.03	58.2 -	113	High Res Cor Value	100.8739 (m3)		Pressure Low 1/17/15 12:09 (8)
Read Data		00.2	043	Total Correction Factor	0.9075		
$\oslash$	Uncorrected Volume	Gas Temperature	116	Squared Super	1.0000		Pressure Low 1/17/15 12:09 (3)
Live Data			053	Specific Gravity	0.62		-
\$	Configuration Check	Time Sync	054	% N2	0.42 (%)	lit Trail	Battery
Administer			055	% CO2	0.01 (%)		
Ø			140	Energy	134 (Therms)		51/2 0 10
Settings	$\bigcirc$	Standard		Close			Low Lime 5.0 6.10v
*	$(\checkmark)$	3:24:				00%	
Security	Ŭ	March 1, 2016		Modem 1.0	4		$\underset{\text{Low Limit 6.0}}{\overset{\text{Modem}}{\text{-}}} 4.60_{v}$
	All the item values are within range. No error found!	ERRORI Actual Time 1 20:14   0	Parte: 03/02/2018	NOT URDATED Recommended version (EVC)	3.01 100 of 10	0 items are downloaded	
Disconnect	Connected (EC 350)					Comm	Monitor Send Capture Buffer to File

#### 3.3.3 Alarms

User can drill down to alarm and event history by clicking on the number of active alarms displayed on the dashboard.

Dashboard	Active Alarms	
2 Site	Active Alarms List	Alarm History Events History
View/ Edit	Image: Non-State Low Alarm         Image: Non-State Low Alarm <th< th=""><th>1 Transducer Alarm</th></th<>	1 Transducer Alarm
Calibrate	1059 - P2 Transducer Alarm         Image: Constraint of the system         Image: Constem         Image: Constraint of the system	tem Alarms 0.00
Read Data	107 - Tamper Detected Alarm 11/25/16 16:45	
C Live Data		
Administer		
Ø Settings		
Security		
<b>€</b> ₽	Back Clear All	
Disconnect C	O Connected (EC 350)   💭 ec350#8e   00000000 - 00000000	Comm Monitor   Send Capture Buffer to File

Individual alarms can be cleared by clicking 🤞

All active alarms can be cleared at once, by clicking Clear All.

User can access alarms and event log reports from the Dashboard.

Dashboard	F	Report Name: Report Selections	Alarm Log : 1 site ,Fro	Report m : 10-12-2016	07:19:58 To : 2	1-12-2016 16:41:47		Alarm Log Report	Site inf	o: 0000000:0000000 -	View
View/ Edit	S	Bite ID: 00   Site	Name: ec350 Time	Site   Site Loca	tion: hyd Item #	Alarm Desc	Alarm Value	Alarm Limit			
$\bigcirc$		12/10/2016	07:19:58	Alarm	99	Battery Low Alarm	3.092	4.600			
Calibrate		01/01/2001	00:00:02	Alarm	107	Tamper Detected Alarm	11111111	0000000			
6		01/01/2001	00:00:02	Alarm	1058	P1 Transducer Alarm	8	0000000			
Read Data		01/01/2001	00:00:02	Alarm	1059	P2 Transducer Alarm	8	0000000			
0		01/01/2001	00:00:02	Alarm	1335	Temp Probe Alarms	4	0000000			
Live Data		01/01/2001	00:00:02	Alarm	144	Temperature Low Alarm	-94.56	-37.22			
- - -		01/01/2001	00:00:02	Alarm	1025	Supercompress Alarm	10	0000000			
Administer		01/01/2001	00:00:31	Alarm Ack	144	Temperature Low Alarm	-94.11	-37.22			
		01/01/2001	00:00:31	Alarm Ack	1025	Supercompress Alarm	10	00000000			
Settings		01/01/2001	00:00:31	Alarm Ack	1058	P1 Transducer Alarm	8	0000000			
**		01/01/2001	00:00:31	Alarm Ack	1059	P2 Transducer Alarm	8	0000000			
Security		01/01/2001	00:00:31	Alarm Ack	1335	Temp Probe Alarms	4	0000000			
- GD		01/01/2001	00:00:31	Alarm Ack	107	Tamper Detected Alarm	11111111	0000000			T
Ĩ		Print Destination	Adobe PDF	:	÷		Back	Preview Print			
Discoursed		onnected ( EC	350 ) 🔲 ec	350site 000000	0000000 - 00	n I			Comm Mo	nitor   Send Capture But	Hor to Eilo

Refer Auto Download Settings page for more details.

# 3.3.4 Configuration Check

After connecting to the instrument, MasterLink compares values of items defined in the template with actual values in the instrument and reports the status of Configuration Check widget on Dashboard. User can correct the values from the drill-down screen.

Dashboard	Configuration Cl	neck		
2	Select item to corr	rect value		
Site	Item Number	Description	Default	Actual
63	0	Corrected Volume	9	0
View/ Edit	2		4	0000000
$\bigcirc$	5	Ch-APulses Waiting	24	0000000
Calibrate	13	Base Pressure	12	14.7300
9	14	Atmospheric Pressure	45	14.7300
Live Data				
Settings				
Security				
Ø				Back Correct Value

When all the values are corrected, the Configuration Check widget reports status as 'All Items found are within range'.

Dashboard	Dashboard			Integrated E	C350 + Cloud Link	Serial No. 123456789	Refresh
2 Site	Instrument Data				Alarms		Clear All
View/ Edit	00414141 CCF	0.000 PSI	0.0 CF/Hr		1	44 - Temperature Low Alarm	$\otimes$
$\bigcirc$	Corrected Volume	P1 Gas Pressure	Dial Rate (Unc Vol)	O dBm	1	025 - Supercompress Alarm	$\otimes$
Calibrate				$\widehat{\mathbf{c}}$	5 1	058 - P1 Transducer Alarm	$\otimes$
6	00111111	-135.06	0.00	Last Known Signal Strength	1:	335 - Temp Probe Alarms	$\otimes$
Read Data	Uncorrected Volume	Gas Temperature	Elow Rate (Cor Vol)		1	07 - Tamper Detected Alarm	$\otimes$
		ous remperature	How rate (our vol)				
Live Data	Configuration Check	Time Sync	<u>↓</u> Firmware	Audit Trail		Battery	
Administer							
Ø Settings	$\bigcirc$	DST	1.1033				
Security	$\bigcirc$	<b>18:38:55</b> Dec 21 2016	Cloud Link 1.0001	Download	Completed	External Pow	ered
<i>4</i> 9	All the item values are within range . No error found !						
) Disconart	Connected (EC350 + Cloud Link)	00002424 - 00002424			Comm Mor	- nitor   Send Canture Buf	fer to File
Cilconnear U					Comm Wor	inton in Senia Capitale Bui	iento nie

Read more: Item Template Configuration

# 3.3.5 Time Sync

'Time Sync' page provides a user configurable option to enable/disable auto time synchronization of the connected device with your PC.

Alternatively, time can be synchronized manually by clicking on **Sync**.



Time difference trigger point is taken into account when application reports time synchronization status.

Refer <u>Time Sync Properties</u> page for more details.

k

# 3.3.6 Firmware Update

Dashboard reports the current firmware revision/version(s) loaded in the instrument(s).

Dashboard	Dashboard				EC 350 Serial No	Refresh
Q Site	Instrument Data			Alarms		Clear All
Gg) View/ Edit	00000011	0.000 PSI P1 Gas Pressure	0.0 CF/Hr Dial Rate (Un	c Vol)	144 - Temperature Low Alarm 1025 - Supercompress Alarm 1058 - P1 Transducer Alarm	8
Calibrate	00000010 CCF Uncorrected Volume	-94.15 C Gas Temperature	0.00 CCF/Hr Flow Rate (Cc	r Vol)	1059 - P2 Transducer Alarm 1335 - Temp Probe Alarms	8
Live Data	Configuration Check	Time Sync	Firmware	😥 Audit Traii	Battery	
Administer Settings Security		DST 03:14:05 Jan 01 2001	EC 350 1.1026	Download Complete	d External Powe	ered
€Ĵ	File does not exist in the location.	ERROR ! Computer Time 14:09:54   Date : 13/12/2016		Comm	Monitor	er to File

Firmware versions can be upgraded using the firmware drill down screen.

Dashboard	Update									
Q Site	EVC 1.1026	Modem Certificate								
65						Step	Status			
View/ Edit	Firmware Filename:	File Location:		Brow	/se	Validate FW file				
$\bigcirc$						Send Firmware				
Calibrate						Validate Firmware				
6	Versions		Selected Firmware De	tails		Sync date and time				
Read Data	Current Firmware	1.1026	Firmware Type							
$\sim$	Loader	2.0012	New Firmware							
Live Data										
Administer										
() Settings										
Security										
<i>4</i> D										
Í				Start U	Upgrade	Reset				
Disconnect (	Connected ( EC 350	) 🛄 ec350site 00000000 -	0000000					Comm Monitor   Se	nd Capture Buffer 1	to File

The **Update** screen consists of three tabs:

- EC 350 Firmware Upgrade
- Cloud Link 4G Modem
- Certificate

The current firmware version details are displayed on the relevant update screen. The firmware file to be used can be browsed and version of the firmware to be upgraded is displayed under 'Selected Firmware Details' section.

Browse and select the required firmware file to be uploaded and observe application displays the information of firmware file selected under 'Selected Firmware Details' section.

The new firmware is transferred to the instrument and then installed.

**Note:** MasterLink R500 Application (Windows & Mobile) supports firmware upgrade to the EC 350 and Cloud Link 4G Modem, only if the devices have the following firmware versions:

Cloud Link 4G Modem: 1.0001

EC 350: 1.1032

It is not recommended to perform a firmware upgrade, unless the devices are running on the versions mentioned above.

# 3.3.7 Audit Trail

As soon as you connect an instrument to MasterLink Software Applications, Audit Trail data from the instrument is automatically downloaded. Instrument data is automatically downloaded if the Auto Download settings are enabled.

			Logs   Dia	gnosiic Logs	Celiulai Logs						
					Audit Tra	ail Report					
Report Name: Audi Report Selections: 1 sit	it Trail Report e ,From 2016-1	2-10 07:15:00 To 2	016-12-13 14:32:	:02				Site info :	0000000:0000000	▼ Log # : 1	•
Site ID: 0 0 Log1   Site Na	ame: ec350site	Site Location: hyd									
Log Date and Time	Incremen tal Cor Vol (CCF)	Incremen tal Unc Vol (CCF)	P1 Interval Avg Press (PSLG)	Interval Avg Gas Temp (C)	Battery Voltage Reading (VOLTS)	Correcte d Volume (CCF)	Uncorrec ted Volume (CCF)	P1 Gas Pressure (PSI-G)	Gas Temperat ure (C)	Case Temperat ure (C)	Battery Low Vo Limit (VOLTS
12/10/2016 7:15:00 AM	0	0	.000	-94.24	3.091	9	10	.000	-94.25	22.11	4.600

Refer <u>Auto Download Settings</u> for more details.

#### 3.3.8 Battery

While connecting to the site, application reads the type of power source (Battery or External). If battery powered, voltage is displayed on Dashboard.

Dashboard battery drill down is not allowed if the site is externally powered. However, if the site is battery powered the Dashboard drill down plots the battery voltage against time.





## 3.3.9 Update User Account

If privileges associated with user role are modified, then the respective user account needs to be updated with a new passkey shared by administrator.

Click on username and select Update User Account.



The Update User Account pop-up appears.

Admin		
Current Password	ł	
XXXXXXXXXXXX		
Key		
Кеу		

Update user account using the new key sent by the administrator.

#### 3.3.10 Change Password

Password of an existing user can be changed using the Change Password option.

Click on user-name and select Change Password.



The Change Password pop-up appears.

Change Password			$\otimes$
Current Password			_
New Password			-
Confirm Password			-
	Change	Close	

Type current password, and then the new password. You also need to confirm your new password by typing it again.

After you finish making the required changes, click **Change** to save the changes.

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# 3.4 View and Edit

This tab has the functionality for performing various interactions with device such as read/write item, read item file etc.

## 3.4.1 Configure by Group

MasterLink must be connected to an instrument for this function to work. 'Configure by Group' tab displays groups categorized by items corresponding to connected instrument.

Instrument items (which vary per type of instrument) can be grouped by function. The 'Configure by Group' tab displays the item values that apply to the type of connected instrument after grouping them by function. For example, all items related to pressure calibration are displayed on one screen.

When connected to an instrument, you can click on the **Read** button to read item values from the connected instrument.

To change item values:

- 1. Click on the desired function group (panel on left) to see the group items (panel on right).
- 2. Select an item by clicking the check box next to it.
- 3. Enter a value for the selected item number, and click on Write button.

Volume & Energy       Volume & Energy       Read tem gy number of description       Value       Unit         P1 Pressure       Image: tem by number of description       Value       Unit       Image: tem by number of description       Value       Unit         P1 Pressure Calibration       Image: tem by number of description       Value       Unit       Image: tem by number of description       Value       Unit         P1 Pressure Calibration       Image: tem by number of description       Value       Unit       Values to the connected device       Value to the values to the connected device </th <th></th> <th>Configure by</th> <th>Item   S</th> <th>Send Item File</th> <th>Logging Configuration   Man</th> <th>age User Table   Manage Shor</th> <th>tlist</th> <th>0</th> <th></th>		Configure by	Item   S	Send Item File	Logging Configuration   Man	age User Table   Manage Shor	tlist	0	
Correction Factors       Item Number       Description       Value       Unit         P1 Pressure       000       Corrected Volume       00000011       CCF       Read item Values to the connected Values to the connected Values to the connected Values       000       Corrected Volume       00000010       CCF       Read item Values to the connected Values to the connected Values to the connected Values       000       Corrected Values       00000010       CCF       Read item Values to the connected Values to the connected Values       Values       Values       CCF       Read item Values to the connected Values to the connected Values       Values       Values       Values       CCF       Read item Values to the connected Values       Values       Values       Values       Values       Values       Values       CCF       Read item Values to the connected Values       Values       Values       Values       Values       Values       Values       CCF       Values       Values       Values       Values       Values       Values       Values       CCF       Values	Volume & Energy	►Î	Volume &	Energy				Read Item Write	e item Export
P1 Pressure       000       Corrected Volume       00000011       CCF       Read item values to the connected device         P1 Pressure Calibration       113       Hi Res Cor Vol       110000       CCF       Read item values to the connected device         Temperature       892       Hi Res Unc Vol       0.0000       CCF       CCF       CCF       Corrected Volume Values to the connected device         Temperature Calibration       090       Cor Volume Units       CCF        CCF       CF       CCF	Correction Factors	•		Item Number	Description	Value	Unit	Ν	
P1 Pressure       002       Uncorrected Volume       0000010       CCF       Read item values to the connected device         P1 Pressure Calibration       113       Hi Res Cor Vol       11.000       CCF       Values to the connected device         Temperature       982       Hi Res Unc Vol       0.0000       CCF       CCF       Corrected device         Temperature Calibration       090       Cor Volume Units       CCF        CCF       device         Temperature Calibration       096       Corr Vol # of Digits       8 Digits           Flow & Dial Rates       097       Unc Vol # of Digits       8 Digts           Site information       098       Meter Index Rate       10 CF           0       098       Meter Index Rate       10 CF           Volume and Flow Statistics       114       Meter Scaling Factor       1.00000          Date & Time Config       433       Volume Input Mode       LF-UMB/instrument Drive          1       439       Meter Displacement (CF)       1.00000       CFree				000	Corrected Volume	00000011	CCF		
P1 Pressure Catibration       113       Hi Res Car Vol       110000       CCF       from the connected device       values to the connected device         Temperature       892       Hi Res Unc Vol       0.0000       CCF	P1 Pressure	▶		002	Uncorrected Volume	00000010	CCF	Read item	Write item
Temperature       892       Hi Res Unc Vol       0.0000       CCF       connected device         Temperature Calibration       090       Cor Volume Units       CCF          Flow & Dial Rates       096       Corr Vol # of Digits       8 Digits          Site Information       097       Unc Volume Units       CCF          098       Meter Index Rate       10 CF          098       Meter Index Rate       10 CF          098       Meter Index Rate       10 CF          1114       Meter Scaling Factor       1.00000          124 & Time Contig       433       Volume Input Mode       LF-UMBInstrument Drive          1349       Meter Displacement (CF)       1.00000       CFree	P1 Pressure Calibration	•		113	Hi Res Cor Vol	11.0000	CCF	from the	values to th
Temperature Calibration       090       Cor Volume Units       CCF        Corr Vol         Fine & Dial Rates       092       Unc Volume Units       CCF       4          Site information       097       Unc Volume Units       CCF       4          Site information       097       Unc Vol # of Digits       B bigIs       4          P1 Pressure and Temperature Statistics       098       Meter Index Rate       10 CF       4          Volume and Flow Statistics       114       Meter Scaling Factor       1.000000           Date & Time Contig       433       Meter Index Rate       Other       4	Temperature			892	Hi Res Unc Vol	0.0000	CCF	connected	device
Temperature Calibration       096       Corr Vol # of Digits       8 Digits          Flow & Dial Rates       092       Unc Volume Units       CCF          Site Information       097       Unc Vol # of Digits       8 Digits          P1 Pressure and Temperature Statistics       098       Meter Index Rate       10 CF          Volume and Flow Statistics       114       Meter Scaling Factor       1.00000          Date & Time Config       432       Meter Model       Other          042       Meter Displacement (CF)       1.00000				090	Cor Volume Units	CCF -		device	
Flow & Dial Rates       092       Unc Volume Units       CcF          Site Information       097       Unc Vol # of Digits       8 Digits          P1 Pressure and Temperature Statistics       098       Meter Index Rate       10 CF          Volume and Flow Statistics       114       Meter Scaling Factor       1.00000          Date & Time Contig       433       Volume Input Mode       LF-JUMB/Instrument Drive          Date & Time Contig       438       Meter Displacement (CF)       1.00000       CF/rev	Temperature Calibration			096	Corr Vol # of Digits	8 Digits 👻			
Site Information       097       Unc Vol # of Digits       8 bigts          P1 Pressure and Temperature Statistics       098       Meter Index Rate       10 CF          0       098       Meter Index Rate       10 CF          0       114       Meter Scaling Factor       1.00000          0       433       Volume Input Mode       LF-UMB/Instrument Drive          Date & Time Config       433       Meter Model       Other          0       439       Meter Displacement (CF)       1.00000       CF/rev	Flow & Dial Rates	►		092	Unc Volume Units	CCF •			_
Image: Construction     Image: Construct	Site Information			097	Unc Vol # of Digits	8 Digits 👻			
P1 Pressure and Temperature Statistics         114         Meter Scaling Factor         1.00000            Volume and Flow Statistics         433         Volume Input Mode         LF-UKB/Instrument Drive •            Date & Time Config         433         Meter Model         Other            Date & Time Config         433         Meter Model         Other				098	Meter Index Rate	10 CF 💌	,		
Volume and Flow Statistics         Image: Statistics </td <td>P1 Pressure and Temperature St</td> <td>atistics</td> <td></td> <td>114</td> <td>Meter Scaling Factor</td> <td>1.000000</td> <td></td> <td></td> <td></td>	P1 Pressure and Temperature St	atistics		114	Meter Scaling Factor	1.000000			
Date & Time Config         432         Meter Model         Other             439         Meter Displacement (CE)         1000000         CE/rev	Volume and Flow Statistics	•		433	Volume Input Mode	LF-UMB/Instrument Drive •			
439 Meter Displacement (CE) 100000 CE/rev	Date & Time Config			432	Meter Model	Other •			
				439	Meter Displacement (CF)	1.000000	CF/rev		

# 3.4.2 Configure by Item

MasterLink must be connected to an instrument for this function to work as different instruments have different items and groups categorized. 'Configure by Item' tab displays all items corresponding to connected instrument and by default, all items are sorted by item number.

An item can be searched with Item number or description. The check box must be checked in order to read/write value(s) of any item.

To change item values:

- 1. Select an item by clicking on the check box next to it.
- 2. Enter a value for the item number.
- 3. Click **Write Item** after making the changes. This will write the new item value to the connected instrument.

		Selu len P	ne   Logging comiguratio	n   Manage user lab		Q Search item by number o
Ite	m Number	Description	Value	Unit	Read	I Item Write Item Advance
<b>V</b> 00	00	Corrected Volume	00000012	CCF		
00	02	Uncorrected Volume	00000010	CCF	Read item values	Write item value
00	05	Ch-APulses Waiting			from the	to the connecte
00	06	Ch-B Pulses Waiting			connected device	device
00	07	Ch-C Pulses Waiting		-		
00	08	P1 Gas Pressure	0.000	PSI		
01	10	P1 High Alarm Limit	1422335.	PSI		
01	11	P1 Low Alarm Limit	-71.117	PSI		
01	12	P1 Cal Atmos Pressure		PSI		
01	13	Base Pressure	1234.000	PSI		
01	14	Atmospheric Pressure	14.6960	PSI		
01	15	Press used at P1-Zero		PSI		
		Design and at D4 Occas		DOL		

Sliding the mouse over the column divider until a cross is displayed, then dragging it to the desired width can resize the column widths. Use the up/down arrows or across arrows for full viewing of all data fields.

**Note:** Selecting a check box against an item after modifying the search criteria would refresh the previous selections.

Click on Advance Options and select Raw Item Access to modify the value of an item.

nfigure by G	roup   Cor	nfigure by Item   Send Item Fil	e Logging Configuration	on   I	Manage User Table   Manage Shortlist	O Search item	hy number o
						Read Item Write Item	Advance
Iter	n Number	Description	Value		Unit		Raw Ite
11	1	Temperature Factor Mode	Fixed	•			Shut
11:	2	P1 Transducer Type	Gauge	Ŧ			
11:	3	Hi Res Cor Vol	387.7509		CF		
114	4	Meter Scaling Factor	1.000000				
11	6	Squared Supercompress	0.9999				
11	8	Reference Number 1					
11	9	Reference Number 2					
12	0	Calibration Date P1 Press	1/1/0001		MM-DD-YY		
12	1	Calibration Date Temp	1/1/0001		MM-DD-YY		
12	2	Firmware Version	1.1102				
12	7	Instrument Type Code					
13	0	Scroll List Item 1					
_							

Search for a particular item either by number or description.

					C Search item i
					Read Item Vivite Item
Item Number	Description	Value		Unit	
111	Temperature Factor Mode	Fixed			
112	P1 Transducer Type	Gauge	law Item Access		$\otimes$
113	Hi Res Cor Vol	387.7509	Item Number *	114	
114	Meter Scaling Factor	1.000000			
116	Squared Supercompress	0.9999	Value	2	
118	Reference Number 1				
119	Reference Number 2			Read Item Write Item	
120	Calibration Date P1 Press	1/1/0001		MM-DD-YY	
121	Calibration Date Temp	1/1/0001		MM-DD-YY	
122	Firmware Version	1.1102			
127	Instrument Type Code				

Clicking on **Shut down** will shut down the device.

## 3.4.3 Send Item File

An Item File stores the current instrument's item code values on your computer in a file. You can configure different items corresponding to an instrument in an 'Item File' and then send it to the device.

Click **Browse** and select the item file. (.IE3 for EC 350, .ICL for Cloud Link 4G Modem, .ECL for EC 350 + Cloud Link 4G Modem)

Dashboard	View/ Edit	Configure by Item Sen	d Item File	onfiguration Manage User	Table   Manage Shortlist	
Site	Choose an item type	Cal-items Non Cal-items	ocation :	Browse	Browse and select the item file.	]
Calibrate				•		_
Read Data						
Live Data						
Administer						
Settings						
Security						
,				Send to Device		

View the values configured for different item numbers.

Configure by	Group Configure by Item	Send Item File M	lanage Logging Configuration	Manage User Tabl	e Manage Shortlist	Q Search item	by number or
Location: We	10nt3ks015\RMG\MasterLinkR500.1	E1_Build_9_Nov_2015	Browse				
Item Number	Item Description	Value	Unit	Item Number	Item Description	Value	Unit
0000	Corrected Volume	00242990	CF	0013	Excess TCal Change %	2.0000	CF
0002	Uncorrected Volume	00266559	CF	0014	Total Correction Factor	1.0000	CF
0005	Ch-A pulses waiting	00000000	-	0015	Press Correction Factor	1.0000	-
0006	Ch-8 pulses waiting	00000000	-	0016	Temp Correction Factor	1.0000	-
0007	Ch-C pulses waiting	00000000	PSI	0017	Aux Correction Factor	1.0000	PSI
0008	P1 gas pressure	13.775	PSI	0018	Unsquared Supercompress	1.0000	PSI
0010	P1 high alarm limit	99999.99	PSI	0019	Battery Voltage Reading	2.372	PSI
0011	P1 low alarm limit	-1.000	PSI	0020	Battery Low Volt Limit	4.600	PSI
0012	P1 Cal atmos pressure	0.0000	PSI	0021	Shutdown Voltage Limit	4.000	PSI
0012	P1 Cal atmos pressure	0.0000	PSI	0021	Shutdown Voltage Limit	4.000	PSI
0012	P1 Cal atmos pressure	0.0000	PSI	0021	Shutdown Voltage Limit	4.000	PSI
0012	P1 Cal atmos pressure	0.0000	PSI	0021	Shutdown Voltage Limit	4.000	PSI
0012	P1 Cal atmos pressure	0.0000	PSI	0021	Shutdown Voltage Limit	4.000	PSI

Click Send to Device to send the Item File to the connected field instrument.

# 3.4.4 Logging Configuration

#### [Available only for EC 350 and ERX 350 devices]

Using MasterLink software, an instrument can be configured to contain as many as 5 independent logs, each with its own collection of item values and collection (sample) frequency. Each log can be configured to collect values for up to 20 items.

comigure by cro	up   Comigure by item   Send item File	Logging Con	figura	tion Manage User Table Ma	nage Shortlist	
Select Items	Allocate Log Memory	Log Configu	ration	Up Down	Ì	
Drag the desired Ite appropriate Items lis Double click the des	- im over to the Log Configuration tree and drop it onto the st or irred Item to add to the selected Items list.	● EC 350	Audit	RX 350 Trail Logs	100 -	Log 1
Item Number	Description	-	🗟 Log	1	- 80 -	
0	Corrected Volume		O	5 minutes 💌		
2	Uncorrected Volume	1	- 🛛	Items (11 of 20)		
113	Hi Res Cor Vol			225 - Incremental Cor Vol	60 -	
892	Hi Res Unc Vol			🕐 226 - Incremental Unc Vol		
90	Cor Volume Units			206 - P1 Interval Avg Press	- 40	
96	Corr Vol # of Digits			🕐 207 - Interval Avg Gas Temp		
92	Unc Volume Units			48 - Battery Voltage Reading	-	
97	Unc Vol # of Digits			O - Corrected Volume	20 -	
98	Meter Index Rate			2 - Uncorrected Volume	-	
114	Meter Scaling Factor			🕐 8 - P1 Gas Pressure		

The order of the items in the Log Configuration list determines the order in which the values are stored and thus the order in which they will later appear in a report. Items in the list can be moved up and down to change the order.

The selected items from a log can be removed by clicking 🗖

The configuration can be saved for future references to a configuration file (\*.cnfg) with the **Save setup to file** button. It can later be retrieved with the **Read setup from file** button. Only \*.cnfg files can be read; item files (\*.ie3) are not compatible.

In the 'Allocate log memory' tab, configure the percentage of available memory which can be allocated to each log.

Dashboard	View/ Edit										
<u>)</u> Site	Configure by G	roup   Co	onfigure by Ite	m   Send	Item File	ogging Configuration	Manage User Table   M	Manage Sho	ortlist		
View/ Edit	Select Items	Allo	cate Log Me	emory		Log Configuration		vn 🕅			
Calibrate		Percent	Days	Records	Enable	EC 350 ERX 350     ERX 100     ERX 350     EXX 350     EXX 350	js	Î	100 -	Log 1	
Read Data	Log 1	20.0 🔻	10	2898	<b>v</b>	<ul> <li>➡ Log1</li> <li>➡ Log2</li> </ul>			80 -		
Live Data	Log 2	15.0 🔻	18	2609	<b>v</b>	- V Items (9	rtes v		60 -	Log 3	
Administer	Log 3	10.0 🔻	16	1581	~	() 225 () 226	- Incremental Cor Vol		- - 40 -		
Ø Settings	Log 4	5.0 💌	33	790	~	···· () 206 ···· () 207	- P1 Interval Avg Press				
Security	Log 5	50.0 🔻	7905	7905	~	() 40- () 0-()	Corrected Volume		-		
<i>∜∲</i>						01	Read Setup from Devic	ce Read s	o	Send to instrument Save setup to file Clo	ose
Disconnect 🔘	Connected ( EC	350) 📮 ec3	350site   000000	00 - 0000000					19	Comm Monitor   Send Capture Buffer to	File

#### Note: The sum total of memory allocated for all logs must be equal to 100%.

The consequence of a particular allocation setting is reflected in the number of days' worth of data as well as the number of records that can be written before overwriting will occur. The smaller a log's allocation, the less data it will be able to store. When the limit is reached, the oldest records will be overwritten with the newer ones.

#### Note: A log's interval setting will impact days, but not record numbers.

The Enable check-boxes may be used to suspend data collection for one or more logs. A log's existing records will not be affected when the log is disabled.

Ensure that the device is connected to MasterLink. Click **Send to Instrument** to push the log configuration to the device. A few seconds will be required for the transfer. A window should appear indicating 'Successfully Configured'.

Click **Read setup from Device** to read logging configuration settings from the connected instrument.

Attention: When you change the log configuration by modifying the memory allocation, all existing logs will be erased.

Attention: It is recommended to save the item file and log configuration file before changing the memory allocation of the logs.

#### 3.4.5 Manage User Table

Access to an instrument can be controlled by defining users and assigning them Passcodes with defined privileges. Start by creating a role, then assign the role to the user and define Passcode.

User IDs and Passcodes are used to log-in to an instrument. When creating a user account, assign User ID, and a Passcode, and assign a role to the new user. Valid User IDs are 0 through 99 (decimal numeric). Valid passcodes are 00000 through 99999 (decimal numeric). The Passcode must be 5 digits in length.

Click on **Open** and load an existing saved .UTE (Manage User Table) file.

Dashboard	View	Edit									
Site	Configu	ire by Group	Configure by	y Item   Send Iter	n File   Loggir	ng Configuration	Manage Us	er Table   Manage Sho	rtlist		
() View/ Edit				Add User	Delete				Add Role	Update Delete	
	Enable	User ID	Password	Role		Role Name		tester - Privilege			
Calibrate		0		tester	•	tester		Modify Open Items	Modify Event Items	Modify Sealed Items	
Read Data		3	••••	tester	•	tech	Þ	Can Read Event Log HMI Level 3 Access	Can Change User Table	HMI Level 2 Access	
Live Data				2			P	Current Privilege 65609			
Administer											
Settings						0					
Security		ide Empty Privilens	ae Show Pae	sword							
<i>(</i> )	·	No Linky Filviloge		antolu	Oper	n Reset	Save As	Send to Device			
Disconnect	Connec	ted ( EC 350 )	C ec350site 00	000000 - 00000000					Comm Monitor   Se	and Capture Buffer to File	e

Based on the privileges assigned to the role, the value of the privilege changes or vice-versa.

		Add Role	Update Delete
Role Name	Technitian - Privilege		
Technitian 🕨	Modify Open Items	Modify Event Items	Modify Sealed Items
	Can Read Event Log	Can Change User Table	HMI Level 2 Access
	HMI Level 3 Access	Cloud Link Write	
	Current Privilege 8		

- 1. Click the check box under privileges to assign permissions to the role.
- 2. After a role is created, click **Add User** to create a new user.
- 3. After updating the privileges, click **Update** to save the changes.

The following privileges can be granted:

- Modify Open Items
- Modify Event Items
- Modify Sealed Items
- Can Read Event Log
- Can Change User table
- HMI Level 2 Access
- HMI Level 3 Access
- Cloud Link Write

#### To add a user:

1. Click Add User to add new users.

Add New User	$\otimes$
User ID	11
Password	••••
Role	Manager 🔹
	Add Cancel

- 2. Enter the User ID and Password.
- 3. Assign a role or change the role of an existing user by selecting a different role from the **Role** drop-down.
- 4. Click Add to complete the process of adding a new user.

Click **Save As** to save a copy of the user table created. This user table is encrypted and saved in .UTE format.

Click on Send to Device to send a user table to the connected instrument.

**Note:** For CNI4 device, the User Table must be created with only one user.
## 3.4.6 Manage Shortlist

A Shortlist is the same as the standard Item list (stores the current instrument's item values), except that you can customize it to include required items.

Dashboard	View/ Edit					
Q Site	Configure by Group Configu	re by Item   Send Item File   Logging Configuration   Manage Use	r Table   N	vlanage Shortlist		
G) View/ Edit	Shortlist item file download configura	ion				
$\bigcirc$	Instrument Type	Items		Selected Items		
Calibrate	EC 350	0 - Corrected Volume		0 - Corrected Volume		
କ୍ତ	Cloud Link	2 - Uncorrected Volume		6 - Ch-B Pulses Waiting		
Read Data	EC350 + Cloud Link	5 - Ch-A Pulses Waiting				
$\oslash$		6 - Ch-B Pulses Waiting	3			
Live Data		7 - Ch-C Pulses Waiting	Add			
\$		8 - P1 Gas Pressure	Remove All			
Administer		10 - P1 High Alarm Limit				
Ø		11 - P1 Low Alarm Limit				
Settings		12 - P1 Cal Atmos Pressure				
۲	•	13 - Base Pressure				
Security		14 - Atmospheric Pressure				4
4¢						
ø	Site ID All Site IDs • Site I	D2 AlsteDs •		Read setup from file	Save setup to file	Save
Disconnect	Connected (EC 350)   = ec350site	00000000 - 00000000		Comm Monitor   S	end Capture Buffer	r to File

To create a Shortlist:

- 1. Start by selecting the instrument type.
- 2. The items displayed in the '*Items*' column are populated based on the selected instrument type.
- 3. Use the Add button to move selections to the Selected Items pane.
- 4. Items listed in the 'Selected Items' column will be printed using Shortlist Report.

The Save option, saves the Shortlist to the database.

The Save Setup to file option exports the shortlist.

**Note:** By default, instrument specific short lists are created (all sites). Use the Site ID 1 and Site ID 2 drop-downs to create site specific short lists. The short list files are named as <SiteID1>\_ <SiteID2>\_yymmddhhmmss.CE3 file. Example: 44571111\_44571111\_161214120204

You can save and download the Shortlist as a file for later use. You can also read an existing Shortlist file.

**Note:** By default all shortlist files are stored in *C*:\*Pro-gramData*\*Honeywell*\*MasterLink*\*ShortListFiles*.

### 3.4.7 Manage AGA-8

AGA-8 calculations determine the compressibility of natural gas and other hydrocarbons based on it's components. These calculations are ideally designed to determine the compressibility of natural gas. These calculations can be gross or detailed. These (.aga) files can be generated using SuiteSQL (MasterLinkSQL) software. You can use the 'Manage AGA-8' tab to send .aga files to a connected instrument. This feature is supported by the following legacy Mercury devices:

- Mini-Max
- Mini-AT
- Accutest
- Turbo Corrector
- ECAT

On the Manage AGA screen, Browse and then select a .aga file.

Honeywel	MasterLink	Release: R510.1	Build Version: 11.1.18.0	()   (?)   (Q) a	dmin   🗕 🗖	×
Dashboard	View/ Edit					
<u>)</u> Site	Configure by Group Configure by Item Send Item File	.ogging Configuration   Ma	anage User Table   Ma	anage Shortlist	Manage AGA-8	
View/ Edit	AGA8 File Path: C:\Users\e842801\Desktop\Natgas_2012_12_20.AGA			E	Prowse Send	
Calibrate						
Read Data						
C Live Data						
Administer						
() Settings						
Security						
<i>π</i> Λ						
) Discussion	Connected ( Mini May )		Committee	itor   Cond Cont	uro Duffor to <del>Cile</del>	
Live Data Administer Settings Security Co Disconnect	Connected ( Mini Max )   📮 MiniMax-12345 13217894 - 13217894		Comm Moni	tor <sup> </sup> Send Capt	ure Buffer to File	

Finally click Send to send the .aga file to the connected legacy Mercury instrument.

# 3.5 Calibrate

# 3.5.1 kPressure Calibration P1

This procedure is used to calibrate the pressure transducer to a pressure calibration standard.

### UNDERSTANDING PRESSURE CALIBRATION:

This is a simple two-point calibration. First, calibrate pressure at a low scale pressure and then again at a high scale pressure. Each time, adjust the pressure calculated by the instrument to match the reading from your pressure standard (reference standard calibrator). Adjusting the low scale pressure is called "Zero Calibration" while adjusting the high scale pressure is called "Span Calibration." Span calibration actually uses some of the information determined from performing the zero calibration. For this reason, you will need to at least "sample" a low scale pressure before you can begin the span calibration. Sampling occurs when you indicate that the pressure is ready to be averaged.

### BEFORE STARTING THE PRESSURE CALIBRATION:

Make certain that the following items have been verified for correctness:

- Pressure Calibrator
- Pressure Unit Code (unit of measure)
- Transducer Serial Number (assigned at the factory)
- Type of Transducer (gauge or absolute)

P1 Calibration table displays current Calibration pressure and two previous pressure values along with Calibration date in mm-dd-yy format. Current span Calibration pressure and two previous pressure values are also displayed.

#### To calibrate pressure:

- 1. Apply a zero reference pressure (low range) to the P1 pressure transducer of the instrument, and wait for the instrument to stabilize.
- 2. Click Average Now to apply a zero reference pressure to the instrument.

	P2 Calibration   Tempe	oratare comprat							
Pressure 1 Zero Ca	alibration								
Item Number	Description	Value	Unit		Ju	Apply any 'zero n	eference' pressure to t	the instrument	t's pressure input and wait for the in
13	Base Pressure	14.6960	PSI	<b>^</b>	$\{ \mid \}$	to stabilize before press the NECT b	pressing the AVERA utton to enter a new Z	.GE NOW butte ZERO cal point	on. After the averaged pressure is d t.
14	Atmospheric Pressure	1.0000	PSI		> • <				
17	Calibration P1-Zero	-1.7918	PSI			Live Pressure	0.3506	4	PSI
18	Cal Prev-1 P1-Zero	-1.8146	PSI						
19	Cal Prev-2 P1-Zero	-0.0014	PSI				Average Now	Change	
20	Calibration P1-Span	0.9966							
21	Cal Prev-1 P1-Span	0.9989							
22	Cal Prev-2 P1-Span	1.0000							
23	Min PCal Point Diff %	50.0000							
24	Excess PCal Change %	2.0000							
87	P1 Pressure Units	PSI							
112	P1 Transducer Type	Gauge							
Connected ( EC 350) Calibrate	)  💭 EC350   00000000 - 000	000000		Done Spa	in Calibration		c	omm Moni	tor   Send Capture Buffer
Connected (EC 350) Calibrate P1 Calibration	P2 Calibration   Tempe	erature Calibrat	ion	Done Spa	an Calibration		c	omm Moni	tor <sup>i</sup> Send Capture Buffer (
Connected (EC 350) Calibrate P1 Calibration	i 💭 EC350   00000000 - 000 P2 Calibration   Tempe allbration	occooo   erature Calibrati	ion	Cone Span	an Calibration		c	omm Moni	tor <sup>i</sup> Send Capture Buffer i
Connected (EC 350) Calibrate P1 Calibration	I Calibration     Tempe       Bibration     Tempe       Description     Description	erature Calibrati	ion   Unit	Done Span	n Calbration	Apply any 'zero r	C ference pressure to t	comm Moni	tor i Send Capture Buffer i
Connected ( EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13	P2 Calibration   Tempe allbration Base Pressure	erature Calibrati Value 1234.000	unit PSI	Done Span	in Cathration	Apply any 'zero ro to stabilize before press the NEXT bi	C eference' pressure to t e. pressing the AVERA utton to enter a new Z	the instrument GE NOW butto ZERO cal point	tor   Send Capture Buffer ( spressure input and wait for the in on. After the averaged pressure is d
Connected (EC 350) Calibrate P1 Calibration   Pressure 1 Zero Ca Item Number 13 14	P2 Calibration   Tempe alibration Base Pressure Atmospheric Pressure	vooooo   erature Calibrati Value 1234.000 14.6960	ion   Unit PSI PSI	Done	in Catbration	Apply any 'zero n to stabilize before press the NEXT bi	C eference' pressure to t pressing the AVERA utton to enter a new 2	the instrument GE NOW butts ZERO cal point	tor   Send Capture Buffer   t's pressure input and wait for the ii n. After the averaged pressure is d t.
Connected ( EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17	P2 Calibration Tempe alibration Base Pressure Calibration P1-Zero	erature Calibrati Value 1234.000 14.6960 0.0000	unit PSI PSI PSI		in Calibration	Apply any 'zero n to stabilize before press the NEXT bi Live Pressure	C eference' pressure to t pressing the AVERA utton to enter a new 2 Averagin	the instrument GE NOW butts CERO cal point g	tor   Send Capture Buffer   t's pressure input and wait for the in on. After the averaged pressure is d t.
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18	P2 Calibration Tempe alibration Base Pressure Calibration P1-Zero Cal Prev-1 P1-Zero	vocooo   erature Calibrati Value 1234.000 14.6960 0.0000	ion   Unit PSI PSI PSI PSI		in Calibration	Apply any 'zero n to stabilize before press the NEXT bi Live Pressure	C eference' pressure to the pressing the AVERAG utton to enter a new 2 Averagin Average Now	the instrument GE NOW butts ZERO cal point ig	tor   Send Capture Buffer t's pressure input and wait for the i n. After the averaged pressure is d PSI
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18 19	P2 Calibration Tempe alibration Base Pressure Calibration P1-Zero Cal Prev-2 P1-Zero Cal Prev-2 P1-Zero	200000   erature Calibrati Value 1234.000 14.6960 0.0000 0.0000 0.0000	ion   Unit PSI PSI PSI PSI PSI	Done Span	in Cathration	Apply any 'zero r to stabilize before press the NEXT bi Live Pressure	C eference' pressure to to the pressing the AVERA station to enter a new 2 Averagin Averagin	the instrument GE NOW buttet ZERO cal point Ig Change	tor   Send Capture Buffer t's pressure input and wait for the in on. After the averaged pressure is d PSI
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18 19 20	P2 Calibration Tempe alibration Tempe Calibration Calibration Calibration P1-Zero Calibration P1-Zero Calibration P1-Zero Calibration P1-Span	200000   erature Calibrati Value 1234.000 14.6960 0.0000 0.0000 0.0000 1.0000	ion   Unit PSI PSI PSI PSI PSI	Done Span	in Calibration	Apply any 'zero r to stabilize before press the NEXT bi Live Pressure	C efference' pressure to to pressing the AVERA sutton to enter a new Z Averagin Averagin	the instrument GF NOW buttet ZERO cal point Ig Change	tor   Send Capture Buffer t's pressure input and wait for the in on. After the averaged pressure is d t. PSI
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18 19 20 21	P2 Calibration Tempe alibration Tempe alibration Calibration Calibration Base Pressure Calibration P1-Zero Calibration P1-Zero Calibration P1-Span Calibration P1-Span	000000   erature Calibrati 1234.000 14.6960 0.0000 0.0000 1.0000 1.0000	ion   Unit PSI PSI PSI PSI PSI	Done Span	in Calibration	Apply any 'zero r to stabilize before press the NEXT b Live Pressure	c eference' pressure to t e pressing the AVERA vitton to enter a new Z Averagin Average Now	the instrument GE NOW butt ZERO cal point Ig Change	tor   Send Capture Buffer ( t's pressure input and wait for the in on. After the averaged pressure is d PSI
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18 19 20 21 22	P2 Calibration Tempe alibration Tempe alibration Calibration Calibration Calibration Calibration Calibration P1-2ero Calibration P1-2ero Calibration P1-2ero Calibration P1-Span Calibration P1-Span Cal Prev-1 P1-Span Cal Prev-2 P1-Span	200000   erature Calibrati Value 1234.000 14.6980 0.0000 0.0000 1.0000 1.0000 1.0000	ion   Unit PSI PSI PSI PSI PSI 	Done Span	in Calibration	Apply any 'zero rr to stabilize before press the NEXT b Live Pressure	c eference' pressure to t e pressing the AVERAG utton to enter a new Z Averagin Average Now	the instrument GE NOW butt ZERO cal point g Change	tor   Send Capture Buffer t's pressure input and wait for the in on. After the averaged pressure is d t. PSI
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18 19 20 21 22 23	P2 Calibration       Tempe         allbration       Tempe         allbration       Escription         Base Pressure       Almospheric Pressure         Calibration P1-Zero       Calibration P1-Zero         Calibration P1-Span       Calibration P1-Span         Cal Prev-1 P1-Span       Cal Prev-2 P1-Span         Min PCal Point Diff %       Min PCal Point Diff %	200000   erature Calibrati   Value   1234.000   14.6960   0.0000   0.0000   1.0000   1.0000   1.0000   1.0000   1.0000	ion Unit PSI PSI PSI PSI PSI PSI 	Done Span	in Calibration	Apply any 'zero rr to stabilize before press the NEXT b Live Pressure	c eference' pressure to t e pressing the AVERA atton to enter a new Z Averagin Average Now	the instrument GE NOW butt ZERO cal point ig Change	tor   Send Capture Buffer ( t's pressure input and wait for the in on. After the averaged pressure is d b.
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18 19 20 21 22 23 24	P2 Calibration       Tempe         allbration       Tempe         allbration       Escription         Base Pressure       Calibration P1-2ero         Calibration P1-2ero       Calibration P1-2ero         Calibration P1-2ero       Calibration P1-Span         Calibration P1-Span       Cal Prev-1 P1-Span         Cal Prev-2 P1-Span       Min PCal Point Diff %         Excess PCal Change %       Excess PCal Change %	200000   erature Calibrati   Value   1234.000   14.6960   0.0000   0.0000   0.0000   1.0000   1.0000   1.0000   1.0000   1.0000   25.0000	ion Unit PSI PSI PSI PSI PSI PSI PSI PSI	Cone Span	in Calibration	Apply any 'zero n to stabilize before press the NEXT b Live Pressure	C efference' pressure to t e: pressing the AVERA utton to enter a new Z Averagin Average flow	the instrument GE NOW butt ZERO cal point ig	tor   Send Capture Buffer ( 's pressure input and wait for the in on. After the averaged pressure is d b
Connected (EC 350) Calibrate P1 Calibration Pressure 1 Zero Ca Item Number 13 14 17 18 19 20 21 22 23 24 87	P2 Calibration       Tempe         allbration       Tempe         allbration       Esscription         Base Pressure       Calibration P1-2ero         Calibration P1-2ero       Calibration P1-2ero         Calibration P1-2ero       Cal Prev-2 P1-2ero         Cal Prev-1 P1-Span       Cal Prev-2 P1-Span         Min PCal Point Diff %       Excess PCal Change %         P1 Pressure Units       P1	000000   erature Calibrati 234.000 14.6960 0.0000 0.0000 1.0000 1.0000 1.0000 1.0000 25.0000 25.0000 PSI	ion Unit PSI PSI PSI PSI PSI PSI 	Cone Span	in Calibration	Apply any 'zero n to stabilize before press the NEXT bi Live Pressure	C eference' pressure to t pressing the AVERA utton to enter a new Z Averagin Average Now	the instrument GE NOW butt ZERO cal point ig Change	tor Send Capture Buffer 1

The averaged pressure appears.

3. Click **Change** to enter a zero cal point.

P1 Calibration	P2 Calibration Temps	erature Calibrat	tion					
Pressure 1 Zero	Calibration							
ltem Number	Description	Value	Unit		Jul	Apply any 'zero refere	nce' pressure to the instrum	ent's pressure input and wait for the
13	Base Pressure	14 6060 Change	Program Co	libertion Value	- 1   Y	to stabilize before pre	ssing the AVERAGE NOW b to enter a new ZERO cal po	utton. After the laveraged pressure is int.
14	Atmospheric Pressure	1.	e Pressure Ca	alibration value		$\otimes$		
17	Calibration P1-Zero	-1		Reference P	ressure		0.35064	PSI
18	Cal Prev-1 P1-Zero	-1		0.35064	PSI			
19	Cal Prev-2 P1-Zero	-0					werage Now Change	
20	Calibration P1-Span	0.9		ERROR ! Appl	ly Cancel			
21	Cal Prev-1 P1-Span	0.5505			-			
22	Cal Prev-2 P1-Span	1.0000						
23	Min PCal Point Diff %	50.0000						
24	Excess PCal Change %	2.0000						
87	P1 Pressure Units	PSI						
112	P1 Transducer Type	Gauge			*			

4. Change the value to accurately match the zero reference pressure applied to the pressure transducer. Click **Apply**.

		Do optimum in Tamar	and the contributed							
	Pi Calibration	P2 Calibration   Tempe	erature Calibrat	iou 1						
F	Pressure 1 Zero (	Calibration								
	Item Number	Description	Value	Unit	, yere	Apply any 'zero n	eference' pressure to t	he instrumen	it's pressure input and wait for the	instrume
	13	Base Pressure	14.6960	PSI		to stabilize before press the NEXT b	e pressing the AVERA utton to enter a new Z	GE NOW butt IERO cal poin	ion. After the averaged pressure is it.	displayed,
	14	Atmospheric Pressure	1.0000	PSI						
a	17	Calibration P1-Zero	-1.9424			× ressure	0.1965	5	PSI	
	18	Cal Prev-1 P1-Zero	-1.7918	Success !						
	19	Cal Prev-2 P1-Zero	-1.8146				Average Now			
	20	Calibration P1-Span	0.9966							
	21	Cal Prev-1 P1-Span	0.9989							
	22	Cal Prev-2 P1-Span	1.0000							
	23	Min PCal Point Diff %	50.0000							
	24	Excess PCal Change %	2.0000							
	87	P1 Pressure Units	PSI							
	112	P1 Transducer Type	Gauge		v					

5. Click **Span Calibration.** Apply a high pressure such that the pressure applied is at least 50% more than the zero reference pressure. Wait for the pressure reading displayed on the Pressure 1 dialog box to exceed the zero reference pressure by 50%.

**Note:** For example, if the zero reference pressure on a 100 PSI transducer equals 0.00 PSI, then the span reference pressure must be between 50.00 and 100.00 PSI. If the zero reference pressure on a 600 PSI transducer equals 0.00 PSI, then the span reference pressure must be between 300.00 and 600.00 PSI.

Dashboard	Calibrate								
Q Site	P1 Calibration	P2 Calibration   Tempe	rature Calibrat	ion					
€ Vievø⁄ Edit	Pressure 1 Zero C	Calibration							
0	Item Number	Description	Value	Unit		, <u> </u>	Apply any 'zero r	eference' pressure to the instru	ment's pressure input and wait for the instrument
Calibrate	13	Base Pressure	14.6960	PSI			to stabilize befor press the NEXT b	e pressing the AVERAGE NOW utton to enter a new ZERO cal p	button. After the averaged pressure is displayed, soint.
6	14	Atmospheric Pressure	1.0000	PSI		· • • •			
Read Data	17	Calibration P1-Zero	-1.9424	PSI			Live Pressure	0.2053	PSI
	18	Cal Prev-1 P1-Zero	-1.7918	PSI					
Live Data	19	Cal Prev-2 P1-Zero	-1.8146	PSI				Average Now Change	9
	20	Calibration P1-Span	0.9966						
Administer	21	Cal Prev-1 P1-Span	0.9989						
	22	Cal Prev-2 P1-Span	1.0000						
Settings	23	Min PCal Point Diff %	50.0000						
	24	Excess PCal Change %	2.0000						
Security	87	P1 Pressure Units	PSI						
	112	P1 Transducer Type	Gauge			Ŧ			
<i>49</i> 97									
Ĩ					Done	Span Calibration			
Disconnect C	) Connected ( EC 350	) EC350 00000000 - 000	00000					Comm M	Ionitor   Send Capture Buffer to File

6. Click Apply.

7. After the pressure stabilizes, click **Average Now**. MasterLink averages the reading and displays the average pressure.

Dashboard	Calibrate						
Q Site	P1 Calibration	P2 Calibration   Temper	rature Calibra	tion			
() View/Edit	Pressure 1 Span	Calibration					
0	Item Number	Description	Value	Unit	Apply a pressu	ire reference that exceeds that zero reference by atle	ast 50% and wait for the readings
Calibrate	18	Cal Prev-1 P1-Zero	-1.9424	PSI	• • • • • to stabilize.	_	
	19	Cal Prev-2 P1-Zero	-1 Restor	e Line Pressure		8 100.0046 PSI	
Read Data	20	Calibration P1-Span	0.3	To Complete the calibration process, instrument and click done. To return	first restore normal line pressure to the to calibration click Recalibration.		
	21	Cal Prev-1 P1-Span	0.1	P1 Gas Pressur	e : 100.0046 PSI	Average Now Change	
Live Data	22	Cal Prev-2 P1-Span	0.1				
2*5	23	Min PCal Point Diff %	50	Recalibrate	Done		
Administer	24	Excess PCal Change %	2.0000				
	87	P1 Pressure Units	PSI				
Settings	112	P1 Transducer Type	Gauge				
	120	Calibration Date P1 Press	12-22-16	MM-DD-YY			
• 🕵	87	P1 Pressure Units	PSI				
- C	112	P1 Transducer Type	Gauge		•		
\$D							
Ĩ				Done	Span Calibration		
Disconnect (	Connected ( EC 350	ווי EC350   00000000 - 0000	0000			Comm Monitor   Send	Capture Buffer to File

- 8. To complete the calibration process, restore the normal line pressure to the instrument, and then click **Done**.
- 9. For Recalibration, click **Recalibrate** and repeat the same process.

# 3.5.2 Pressure Calibration P2

P2 Calibration contains different calibration items. The procedure is same as performed for P1 calibration.

Dashboard	Calibrate								
Q Site	P1 Calibration	P2 Calibration Temper	ature Calibrati	on					
S) View Edit	Pressure 2 Zero C	albration							
0	Rem Number	Description	Value	Unit		,,	Apply any 'zero re	ference' pressure to the instrumen	It's pressure input and wait for the instrument
Calibrate	13	Base Pressure	14.6960	PSI	1	$\{ \downarrow \}$	to stabilize before press the NEXT bu	pressing the AVERAGE NOW butt itton to enter a new ZERO cal poin	on. After the averaged pressure is displayed, t.
6	14	Atmospheric Pressure	1.0000	PSI					
Read Data	23	Min PCal Point Diff %	50.0000				Live Pressure	100.006	PBI
	24	Excess PCal Change %	2.0000						
Live Data	407	P2 Transducer Type	Gauge					Average Now Change	
25	408	P2 Pressure Units	PSI						
Administer	410	Calibration Date P2 Press	12-14-16	MM-DD-YY					
	414	Calibration P2-Zero	-1.9972	PSI					
Settings	415	Cal Prev-1 P2-Zero	-1.7918	PSI					
	24	Excess PCal Change %	2.0000						
: (4): Secusity	87	P1 Pressure Units	PSI						
	112	P1 Transducer Type	Gauge		~				
ĩ				Done	Spa				
Disconnect 🥥	Connected ( BC 350	) 💭 EC350   00000000 - 0000	0000					Comm Mon	itor   Send Capture Buffer to File

# 3.5.3 Pressure Calibration P3

### [Applicable for ERX only]

P3 Calibration contains different calibration items. The procedure is same as performed for P1 calibration.

Honeywell	MasterLink		Rele	ase: R51	0.1   Build Ve	ersion: 11.1.18.0	000	(Q) admin	- • ×
Dashboard	Calibrate								
Q Site	P1 Calibration	P2 Calibration P3 Calibr	ation   Ten	nperature	Calibration	Calibration F	Parameter		
() View/ Edit	Pressure 3 Zero C	Calibration							
0	Item Number	Description	Value	Un	,	Apply any 'zero re	eference' pressure	to the instrumer	t's pressure
Calibrate	408	P3 Pressure Units	KGcm2		$\{ \downarrow \}$	input and wait fo AVERAGE NOW b	r the instrument t utton. After the a	o stabilize before iveraged pressure	pressing the is displayed,
	410	Pressure 3 Calibration Date	17-09-04	YY-	ΎΨ`	press the NEXT b	utton to enter a n	ew ZERO cal poin	t.
Read Data	414	Pressure 3 Zero Offset	0.0000	KG		Live Pressure	-(	).69	KGcm2
	415	P3 Prev Cal Zero	0.0000	KG					
Live Data	417	P3 Span Factor	1.0000				Average Now	Change	
	418	P3 Prev Span Factor	1.0000						
Administer	419	P3 Pressure Range User	7.03	KG					
	552	Press Disp Resolution	XXXXXXXX						
Settings	569	Transducer Type	Gauge						
Security									
			_						
(A)			Done	Sp					
Disconnect O	Connected ( ERX	)   📮 Direct Connect 1 132178	91 - 13217 <u>89</u> 1	1 _		Comm Mc	nitor   Se <u>nd</u>	Capture B <u>uff</u>	er to File 🔄

## 3.5.4 Temperature Calibration

### UNDERSTANDING TEMPERATURE CALIBRATION

This is a simple two-point calibration. First, calibrate the gas temperature sensor at a low scale temperature and then again at a high scale temperature. Each time, adjust the temperature calculated by the instrument to match the reading from your reference standard calibrator.

Adjusting the low scale temperature is called "Zero Calibration" while adjusting the high scale temperature is called "Span Calibration." A low temperature source, usually an ice bath (32 °F) is used to determine the Temperature Zero Calibration. A higher temperature source is used to determine the Temperature Span Calibration (gain). The default Calibration Parameters require the Span Temperature exceed the Zero Temperature by at least 10% of the instrument's temperature range.

Span calibration actually uses some of the information determined from performing the zero calibration. For this reason, you will need to at least "sample" a low scale temperature before you can begin the span calibration. Sampling occurs when you indicate that the temperature is ready to be averaged.

#### To calibrate temperature:

- Insert the temperature probe of the instrument, along with an accurately calibrated thermometer into a low temperature bath or dry well, which provides the temperature zero reference. Wait for the temperature reading displayed on the Temperature Calibration dialog box to be stabilized.
- 2. Click Average Now. MasterLink averages the reading and displays the average temperature.

Calibrate							
P1 Calibration	P2 Calibration Temp	perature Calibra	ation				
Temperature Zero	o Calibration						
Item Number	Description	Value	Unit		Jul.	Insert the temperatu	ure sensor in a low temperature calibration bath and wait for the tempe
31	Case Temperature	22.84	С	<b>A</b>	$\{1\}$	reading to stabilize t temperature.	before accepting or changing the temperature to match the zero refere
34	Base Temperature	15.56	С		<b>γψ</b> ς		
35	Calibration T-Zero	-0.9719	С			Live Temperature	-18.39 F
36	Cal Prev-1 T-Zero	-0.9019	С				
37	Cal Prev-2 T-Zero	-0.8699	С				Average Now Change
38	Calibration T-Span	1.0000	· <u></u>				
39	Cal Prev-1 Temp-Span	1.0000					
40	Cal Prev-2 Temp-Span	1.0000					
41	Min TCal Point Diff %	10.0000					
42	Excess TCal Change %	2.0000	·				
89	Temperature Units	C					
		v					
121 Connected ( EC 35 Calibrate	Calibration Date Temp	09-16-16	MM-DD-YY	Done Span	Calibration		Comm Monitor <sup>†</sup> Send Capture Buffer to
121 Connected ( EC 35 Calibrate P1 Calibration	Calibration Date Temp  o) i  calibration 0 00000000 - P2 Calibration Temp	09-16-16 00000000   Derature Calibra	ation	Done Span	Calbration		Comm Monitor   Send Capture Buffer to
121 Connected ( EC 35 Calibrate P1 Calibration Temperature Zero	Calibration Date Temp  O)    Calibration   Temp  D Calibration   Temp	09-16-16 00000000   Derature Calibra	ation	Done Span	Calbratión		Comm Monitor   Send Capture Buffer to
121 Connected ( EC 35 Calibrate P1 Calibration Temperature Zero Item Number	Calibration Date Temp  )     ec:350ate   00000000 -  P2 Calibration   Temp  c Calibration  Description	09-16-16 00000000   Derature Calibra	MM-DD-YY ation	Done	Calbration	Insert the temperatu	Comm Monitor   Send Capture Buffer to
121 Connected ( EC 35 Calibrate P1 Calibration Temperature Zero Item Number 31	Calibration Date Temp  )   P2 Calibration  P2 Calibration  Case Temperature	09-16-16 000000000   Decrature Calibra Value 22.84	ation Unit	Done Span	Calbration	Insert the temperature reading to stabilize temperature.	Comm Monitor   Send Capture Buffer to Common Monitor   Send Capture Buffer to ure sensor in a low temperature calibration bath and wait for the tempe before accepting or changing the temperature to match the zero refere
121 Connected (EC 35 Calibrate P1 Calibration Temperature Zero Item Number 31 34	Calibration Date Temp  )   P2 Calibration  P2 Calibration  Case Temperature  Base Temperature	09-16-16 00000000   Derature Calibra Value 22.84 15.56	ation Unit C C C	Done Span	Calibration	Insert the temperature reading to stabilize t temperature.	Comm Monitor   Send Capture Buffer to
121 Connected ( EC 35 Calibrate P1 Calibration Temperature Zero Item Number 31 34 35	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Case Temperature  Base Temperature  Calibration T-Zero	09-16-16 00000000   00000000   00000000   00000000	ation Unit C C C C C	Done Span	Calibration	Insert the temperature reading to stabilize I temperature. Live Temperature	Comm Monitor Send Capture Buffer to ure sensor in a low temperature calibration bath and wait for the tempe before accepting or changing the temperature to match the zero refere Averaging
121       Connected ( EC 3S       Calibrate       P1 Calibration       Temperature Zero       Item Number       31       34       35       36	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Description  Case Temperature  Base Temperature  Calibration T-Zero  Cal Prev-1 T-Zero	09-16-16 00000000   0erature Calibra Value 22.84 15.56 -0.9719 -0.9019	ation Unit C C C C C C C C C C C C C C C C C C C	Done Span	Calibration	Insert the temperature reading to stabilize I temperature. Live Temperature	Comm Monitor       Send Capture Buffer to         ure sensor in a low temperature calibration bath and wait for the tempe         before accepting or changing the temperature to match the zero refere         Averaging       F
121       Connected ( EC 3S       Calibrate       P1 Calibration       Temperature Zero       Item Number       31       34       35       36       37	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Description Case Temperature Base Temperature Calibration T-Zero Cal Prev-1 T-Zero Cal Prev-2 T-Zero Cal Prev-2 T-Zero	09-16-16 00000000   Derature Calibra 22.84 15.56 -0.9719 -0.9019 -0.8699	ation Unit C C C C C C C C C C C C C C C C C C C	Done Span	Calibration	Insert the temperature reading to stabilize I temperature. Live Temperature	Comm Monitor       Send Capture Buffer to         ure sensor in a low temperature calibration bath and wait for the tempe         before accepting or changing the temperature to match the zero refere         Averaging       F         Averaging       F         Average Now       Change
121       Connected (EC3S)       Calibrate       P1 Calibration       Temperature Zero       Item Number       31       34       35       36       37       38	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Case Temperature  Base Temperature  Calibration T-Zero  Cal Prev-1 T-Zero  Cal Prev-2 T-Zero  Calibration T-Span	09-16-16 00000000   0erature Calibra 22.84 15.56 -0.9719 -0.9019 -0.8699 1.0000	ation Unit C C C C C C C C C C C C C C C C C C C	Done Span	Calibration	Insert the temperature reading to stabilize I temperature. Live Temperature	Comm Monitor       Send Capture Euffer to         ure sensor in a low temperature calibration bath and wait for the tempe         before accepting or changing the temperature to match the zero refere         Averaging         F         Average how       Change
121       Connected ( EC 3S       Calibrate       P1 Calibration       Temperature Zero       Item Number       31       34       35       36       37       38       39	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Calibration  Case Temperature  Base Temperature  Calibration T-Zero  Cal Prev-1 T-Zero  Cal Prev-2 T-Zero  Calibration T-Span  Cal Prev-1 Temp-Span	00000000   00000000   00000000   00000000	ation Unit C C C C C C C C C C C C C C C C C C C	Done Span	Calibration	Insert the temperature reading to stabilize t temperature. Live Temperature	Comm Monitor       Send Capture Buffer to         comm Monitor       Send Capture Buffer to         ure sensor in a low temperature calibration bath and wait for the tempe before accepting or changing the temperature to match the zero reference Averaging         Averaging       F         Average Now       Charge
121       Connected (EC 35       Calibrate       P1 Calibration       Temperature Zero       Item Number       31       34       35       36       37       38       39       40	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Calibration  Case Temperature  Calibration  Case Temperature  Calibration  Cal Prev-1 T-Zero  Cal Prev-2 T-Zero  Calibration T-Span  Cal Prev-2 Temp-Span  Cal Prev-2 Temp-Span	00000000   00000000   00000000   00000000	ation Unit C C C C C C C C C C C C C C C C C C C	Done Span	Calibration	Insert the temperature reading to stabilize t temperature. Live Temperature	Comm Monitor       Send Capture Buffer to         ure sensor in a low temperature calibration bath and wait for the tempe before accepting or changing the temperature to match the zero refere         Averaging       F         Averaging Now       Charge
121       Connected (EC 35       Calibrate       P1 Calibration       Temperature Zero       Item Number       31       34       35       36       37       38       39       40       41	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Calibration  Case Temperature  Calibration  Case Temperature  Calibration T-Zero  Cal Prev-1 T-Zero  Cal Prev-2 T-Zero  Calibration T-Span  Cal Prev-2 Temp-Span  Cal Prev-2 Temp-Span  Min TCal Point Diff %	000000000   000000000   000000000   00000000	ation   Unit C C C C C C C C	Done Span	Calibration	Insert the temperature	Comm Monitor       Send Capture Buffer to         ure sensor in a low temperature calibration bath and wait for the tempe before accepting or changing the temperature to match the zero refere         Averaging       F         Average Now       Change
121       Connected (EC 35       Calibrate       P1 Calibration       Temperature Zero       Item Humber       31       34       35       36       37       38       39       40       41       42	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  Description  Case Temperature  Calibration T-Zero Cal Prev-1 T-Zero Cal Prev-2 T-Zero Cal Prev-2 T-Zero Calibration T-Span Cal Prev-2 Temp-Span Cal Prev-2 Temp-Span Min TC-2 Temp-Spa	000000000   000000000   000000000   00000000	ation	Done Span	Calibration	Insert the temperature reading to stabilize t temperature. Live Temperature	Comm Monitor   Send Capture Buffer to         ure sensor in a low temperature calibration bath and wait for the tempe before accepting or changing the temperature to match the zero refere         Averaging       F         Averaging Now       Change
121       Connected (EC 35       Calibrate       P1 Calibration       Temperature Zero       Item Number       31       34       35       36       37       38       39       40       41       42       89	Calibration Date Temp  Calibration Date Temp  P2 Calibration  P2 Calibration  P2 Calibration  Case Temperature Calibration T-Zero Calibration T-Zero Calibration T-Zero Calibration T-Span Calibration C	00000000   00000000   00000000   00000000	ation Unit C C C C C C C C C C C C C C C C C C C	Done Span	Calibration	Insert the temperature reading to stabilize I temperature. Live Temperature	Comm Monitor       Send Capture Buffer to         ure sensor in a low temperature calibration bath and wait for the tempe before accepting or changing the temperature to match the zero refere         Averaging       F         Averaging       F         Average Now       Charge

P1 Calibration	P2 Calibration Temp	erature Calibr	ation					
Temperature Zero	o Calibration							
Item Number	Description	Value	Unit	Ju	Insert the temperatu	ire sensor in a low tem	perature cal	ibration bath and wait for the te
31	Case Temperature	22.84	С		reading to stabilize I temperature.	before accepting or ch	anging the t	emperature to match the zero re
34	Base Temperature	15.56	С	· • ·				
35	Calibration T-Zero	-0.9719	С		Live Temperature	-20		F
36	Cal Prev-1 T-Zero	-0.9019	С					
37	Cal Prev-2 T-Zero	-0.8699	С			Average Now		
38	Calibration T-Span	1.0000	·			N		
39	Cal Prev-1 Temp-Span	1.0000				45		
40	Cal Prev-2 Temp-Span	1.0000						
41	Min TCal Point Diff %	10.0000						
42	Excess TCal Change %	2.0000						
89	Temperature Units	С						
121	Calibration Date Temp	09-16-16	MM-DD-YY	-				

3. Click **Next** to the change the value to accurately match the temperature measured by the calibrated thermometer placed in the low temperature bath. Click **Apply**.

P1 Calibration	P2 Calibration Temp	erature Calib	ration					
Temperature Zer	o Calibration							
Item Number	Description	Value	Unit	ر		emperature senso	r in a low temperatur	e calibration bath and wait for the
31	Case Temperature	22.8 Char	Tomporature		I reading to	stabilize before ac	cepting or changing	the temperature to match the zer
34	Base Temperature	15.5	ige remperature			$\otimes$	156.43	F
35	Calibration T-Zero	-0.97		Reference Pressure		-		
36	Cal Prev-1 T-Zero	-0.90		158 F		Ave	rage Now Char	ige
37	Cal Prev-2 T-Zero	-0.86			_			_
38	Calibration T-Span	1.00	ER	ROR I Apply Car	cel			
39	Cal Prev-1 Temp-Span	1.00						
40	Cal Prev-2 Temp-Span	1.0000						
41	Min TCal Point Diff %	10.0000						
42	Excess TCal Change %	2.0000						
89	Temperature Units	С						
121	Calibration Date Temp	09-16-16	MM-DD-YY					

n enterii	ng incorrect v	alues,	an error message is displayed.
Calibrate			
P1 Calibration	P2 Calibration Temp	erature Calibi	ation
Temperature Spa	an Calibration		
Item Number	Description	Value	Unit Set the temperature input to exceed the zero reference temperature by atleast 15
31	Case Temperature	74.45	F temperature range and wait for the reading to stabilize.
34	Base Temperature	60.01	F
35	Calibration T-Zero	-1.3859	F A Marging
36	Cal Prev-1 T-Zero	-1.4949	F Attempting to write unacceptable data value to a Average Now Change
37	Cal Prev-2 T-Zero	0.0545	F particular Item number (format or range issues).
38	Calibration T-Span	1.0039	
39	Cal Prev-1 Temp-Span	1.0006	
40	Cal Prev-2 Temp-Span	1.0000	
41	Min TCal Point Diff %	10.0000	

4. Click **Span Calibration**. Insert the temperature probe of EC 350 and the calibrated thermometer into a high temperature bath, which provides the temperature span reference. The temperature reading displayed on the Temperature Calibration dialog box must exceed the zero reference temperature by at least 15% to proceed with span calibration.

Dashboard	Calibrate							
© Site	P1 Calibration	P2 Calibration Temp	perature Calibr	ration				
() View/Edit	Temperature Spar	n Calibration						
	Item Number	Description	Value	Unit	Set the	temperature i	nput to exceed the zero reference f	emperature by atleast 15% of the rated
Calibrate	31	Case Temperature	74.45	F	• ( ) } tempe	rature range ar	d wait for the reading to stabilize.	
6	34	Base Temperature	60.01	F		emnerature	156.91	F
Read Data	35	Calibration T-Zero	-1.4949	F	$\otimes$			
	36	Cal Prev-1 T-Zero	0.0545	F Success !	1		Average Now Change	
Live Data	37	Cal Prev-2 T-Zero	0.0545	F	ai.			
**	38	Calibration T-Span	1.0039					
Administer	39	Cal Prev-1 Temp-Span	1.0006					
	40	Cal Prev-2 Temp-Span	1.0000					
Settings	41	Min TCal Point Diff %	10.0000					
	42	Excess TCal Change %	2.0000		-			

5. After the reading stabilizes, click Average Now.

MasterLink averages the reading and displays the average temperature.

6. Click **Change**. Change the value to accurately match the temperature measured by the calibrated thermometer placed in the high calibration bath. Finally click **Apply**.

P1 Calibration	P2 Calibration   Temp	perature Calib	ration				
Temperature Zero	o Calibration						
Item Number	Description	Value	Unit		Jusert the ter	nperature sensor in a low temperatu	re calibration bath and wait for the
31	Case Temperature	22.8 Cha		Calibertian Malus	L reading to st	abilize before accepting or changing	the temperature to match the zer
34	Base Temperature	15.5	nge Temperature	Calibration value		156.43	F
35	Calibration T-Zero	-0.97		Reference Pressure		130.45	
36	Cal Prev-1 T-Zero	-0.90		158 F		Average Now Cha	nge
37	Cal Prev-2 T-Zero	-0.8€					
38	Calibration T-Span	1.00	E	RROR I Apply	Cancel		
39	Cal Prev-1 Temp-Span	1.00					
40	Cal Prev-2 Temp-Span	1.0000					
41	Min TCal Point Diff %	10.0000					
42	Excess TCal Change %	2.0000					
89	Temperature Units	С					
121	Calibration Date Temp	09-16-16	MM-DD-YY				

7. To complete the calibration process, first restore normal line temperature to the instrument, and then click **Done**.

Calibrate							
P1 Calibration	P2 Calibration Tempe	erature Calibr	ation				
Temperature Zer	o Calibration						
Item Number	Description	Value	Unit	بعو	Insert the temperate	ure sensor in a low temperature	calibration bath and wait for the tempe
31	Case Temperature	22.92	С	Ê (   )	reading to stabilize t temperature.	before accepting or changing t	ne temperature to match the zero refere
34	Base Temperature	1: Resto	re Temperature		$\otimes$	156.01	F
35	Calibration T-Zero	0.3	To Complete the Ca instrument and ther	alibration process, first restore normal line tem n click Done.To return to calibration .Click Rec	perature to the alibration	130.31	
36	Cal Prev-1 T-Zero	-0		Temperature : 156.9 F		Average Now Chang	
37	Cal Prev-2 T-Zero	-0					
38	Calibration T-Span	1.		Recalibrate Done			
39	Cal Prev-1 Temp-Span	1.0000				1	
40	Cal Prev-2 Temp-Span	1.0000					
41	Min TCal Point Diff %	10.0000					
42	Excess TCal Change %	2.0000					
	Temperature Units	С					
89	remperdure enne						

Note: Supported temperature range: -40 °C to 70 °C

8. For Recalibration, click **Recalibrate** and repeat the same process.

# 3.5.5 Calibration Parameter

This tab is used to configure calibration parameters for legacy Mercury devices, such as ERX, ER, and Mini.

Honeywell	MasterLink	R	elease: R510.1	Build Vers	ion: 11.1.18.0	(j)   ?)	(Q) admin	1 -		×
Dashboard	Calibrate									
Site	P1 Calibration P2 Calibration	P3 Calibration	Temperature Cali	bration	Calibration Pa	rameter				
View/ Edit										
Calibrate	Minimum TCal Point Difference %	15								
Baard Data	Excess TCal Change %	2								
	Minimum PCal Point Difference %	50								
Live Data	Excess PCal Change %	2								
Administer										
Ø Settings										
Security										
			Save							
Disconnect O	Connected ( ERX ) Direct Conne	ct 1 13217891 - 13217	891		Comm Mon	itor   Send	Canture Bu	iffer to	File	.:

Enter the values and click **Save** to calibrate the connected legacy Mercury device.

# 3.6 Read Data

The Read data functionality is now re-designed to read and report data from the same screen. Users can read the logs from the instrument and can also generate reports.

In integrated mode

- When connected to integrated EC 350 over IrDA, logs from MasterLink R510.4 cannot be downloaded.
- When connected through TCP/IP all logs can be downloaded

In EC 350 mode

 When connected to EC 350 tabs corresponding to cellular logs and diagnostic logs are disabled.

## 3.6.1 Item File

Use the 'Item File' tab to read the item numbers and their current values from the instrument. An Item File stores the connected site instrument's item values in a file (\*.IE3 for EC 350, \*.ICL for Cloud Link 4G Modem, \*.ECL for EC 350 + Cloud Link 4G Modem).

Item file can be read (online) from the connected instrument or can be viewed (offline) from a stored item file.

Dashboard	Read Data
<u>)</u> Site	Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular Logs   Shortlist   Activity Log
View/ Edit	Item File Name: Item Report Options
$\odot$	Sites
Calibrate	Read data from:
S)	Connected Site
Read Data	Report data from:
Live Data	Select item file File Location: Browse
Administer	
Ø Settings	
Security	
<i>∜</i> ∂∕	Read Raw Kem File View Kem Report View Site Report View Calibration Report
Í	

The Item File report appears.

tem File	Audit Trail Alarm Logs	Event Logs	Diagnostic Logs Cell	ular Logs   Shortlist   /	Activity Log		
iem File Report Name:	ltem Report						
Site ID: 0000000	0 00000000   Site Name: ec350s	ite   Serial Number:	Firmware Version: 1.1026   Iter	n File Name: EC350_0000000_1(	61213163938.IE3		
tem Number	Item Description	Item Value	Item Units	Item Number	Item Description	Item Value	Item Units
0000	Corrected Volume	00000011	CCF	1052	P1 Transducer Enable	Yes	
0002	Uncorrected Volume	00000010	CCF	1053	P2 Transducer Enable	Yes	
0005	Ch-A Pulses Waiting	00000005		1055	T1 Temp Probe Enable	Yes	
0006	Ch-B Pulses Waiting	00000004		1056	LCD Display On Time	06 00 00	
0007	Ch-C Pulses Waiting	00000017		1057	LCD Display Off Time	18 00 00	
0008	P1 Gas Pressure	0.000	PSI	1058	P1 Transducer Alarm	8	
0010	P1 High Alarm Limit	1422335.	PSI	1059	P2 Transducer Alarm	8	
0011	P1 Low Alarm Limit	-71.117	PSI	1061	Battery Pack Type	Alkaline (4 Cells)	
0012	P1 Cal Atmos Pressure	170.6803	PSI	1062	Tamper Status	Tamper Detected	
0013	Base Pressure	1234.000	PSI	1063	Extern Supply Alarm Tm	00 00 00	1

Export or Print the data.

Click View Site Report under Item File tab to generate site report.

Item File	udit Trail   Alarm Logs	Event Logs	Diagnostic Logs	Cellular Logs	Shortlist   Activi	ty Log	
Site Report Report Name: I	tem Report	site   Sorial Numbe	r ""   Firmwara Varsiaa:	1 1026   Hom File Name: Fi	2350 0000000 1513	13163030 153	
Volume	-00000000   Site Name, ecosos	site   Senar Number	.   Filmware version.	1.1020   item File Name. Et	,350_00000000_1012	13103936.IE3	
Item Number	Item Description	Item Value	Item Units				
0000	Corrected Volume	00000011	CCF				
0002	Uncorrected Volume	00000010	CCF				
0090	Cor Volume Units	CCF					
0092	Unc Volume Units	CCF					
	Corr Vol # of Digits	8 Digits					
0096							
0096 0097	Unc Vol # of Digits	8 Digits					
0096 0097 0098	Unc Vol # of Digits Meter Index Rate	8 Digits 10 CF					
0096 0097 0098 0113	Unc Vol # of Digits Meter Index Rate Hi Res Cor Vol	8 Digits 10 CF 11.0000	 CCF				
0096 0097 0098 0113 Pressure	Unc Vol # of Digits Meter Index Rate Hi Res Cor Vol	8 Digits 10 CF 11.0000	 CCF				

Click View Calibration Report under item file tab to view calibration report.

Dashboard	Read Data					
Q Site	Item File A	udit Trail   Alarm Logs	Event Logs	Diagnos	tic Logs   Cellular Logs   Shortlist   Activity Log	
View/ Edit	Calibration Report Name: Ite Site ID: 00000000	port am Report 00000000   Site Name: ec350site	Serial Number	r: ""   Firmwar	e Version: 1.1026   Item File Name: EC350_0000000_161213163938.IE3	
Read Data	Volume Item Number	Item Description	Item Value	Item Units		Î
	0000	Corrected Volume	00000011	CCF		
Live Data	0002	Uncorrected Volume	00000010	CCF		
	0113	Hi Res Cor Vol	11.0000	CCF		
Administer	Pressure					
Ø	Item Number	Item Description	Item Value	Item Units		
Settings	0008	P1 Gas Pressure	0.000	PSI		
<u>نې</u> :	0013	Base Pressure	1234.000	PSI		
Security	0014	Atmospheric Pressure	14.6960	PSI		
(f)	0017	Calibration P1-Zero	0 0000	PSI		Ŧ
	Print Destination	Adobe PDF	000000		Back Preview Print	
	Connected ( LC )					

Note: Application must be connected to an instrument to perform this operation.

### 3.6.2 Audit Trail

Use the 'Audit Trail' tab to view and download Audit Trail data from the instrument.

Dashboard Read Data								
Site	Trail Alarm Logs E	Event Logs   Diagno	ostic Logs   Cellular Lo	gs   Shortlist	Activity Log	1		
Audit Trail Name	Audit Trail Report						Graph Options	Report Options
Sites & Logs				Date Range				
Calibrate Read data from:			1	Select dates to use	when this report is p	rinted:		Date Range Options
Connected Site				O Today				Sort Latest Date First
Read Data Report data from:				O Yesterday				Start of Day Time
Selected Sites		Select Sites		O This Month				00:00:00
Live Data				O Last Month				Todays end time
<u>\$</u>				O Since Last Download	12/10/2016 07:15	5:00		00:00:00
Administer				🔵 Last N Days	1			<u> </u>
			-	O Since	13-12-2016	00:00:00		
Settings			Chack All	From/To	08-12-2016	00:00:00		
					13-12-2016	23:59:59		
Security								2
			2					
····			v	iew				
Ø								

Application must be connected to an instrument to view Audit Trail reports.

Relate the steps highlighted in the image above with the steps below:

- Start by selecting the site. Logs can be read from a connected site (online), or can be retrieved from exiting list of sites (offline). The connected site will be selected by default. For selecting multiple sites use Select Sites option.
- 2. Select the log or select Check All
- 3. Select the Date Range
- 4. Click View to view Audit Trail Report.

If required, click on **Report Options** to view or add more information in the report.

Audit Trail Report can be viewed without Summary - This function is used to provide a full report (without summary) of the audit trail data that pertains to a particular instrument.

Options	Units Selec	tions			
Use User Text		~	~	~	
User Text		~	~	~	
		~	~	~	
Beginning of report	2	~	~	~	
End of report		~	~	~	
					_

Relate the steps highlighted in the image above with the steps below:

- 1. Start by checking Use User Text, and entering the name of the report.
- 2. Select whether *start of gas day* is to be included in **Beginning of report** or towards the **End of Report**.
- 3. Select the Units Selections.
- 4. Click View.

The Audit Trail Report appears based on selected criteria.

Item File Audit 1	rail   Alarm	Logs   Ever	nt Logs   Di	agnostic Logs	Cellular Log	s Shortlist	Activity Log	1			
Papat Nama: Au	dit Troil Bonort				Audit T	rail Report					
Report Selections: 1 s	ite , From 2016-	11-01 00:00:00 To	2016-11-30 23:59	0:59				Site info :	0000000:0000000	) ▼ Log#:	1 •
Site ID: 0 0 Log1   Site I	Vame: ec350site	Site Location: hy	d								
			P1		Battery		Uncorrec				Batte
Log Date and Time	tal Cor Vol (CCF)	tal Unc Vol (CCF)	Avg Press (PSI-G)	Interval Avg Gas Temp (C)	Voltage Reading (VOLTS)	d Volume (CCF)	ted Volume (CCF)	P1 Gas Pressure (PSI-G)	Gas Temperat ure (C)	Case Temperat ure (C)	Low Limit (VOL
11/25/2016 4:10:00 PM	0	0	.000	-94.17	4.591	9	321322	.000	-94.17	24.18	4.60
11/25/2016 4:15:00 PM	0	0	.000	-94.16	4.591	9	321322	.000	-94.12	24.20	4.60
11/25/2016 4:20:00 PM	0	0	.000	-94.17	4.586	9	321322	.000	-94.26	24.23	4.60
11/25/2016 4:25:00 PM	0	0	.000	-94.17	4.586	9	321322	.000	-94.14	24.23	4.60
11/25/2016 4:30:00 PM	0	0	.000	-94.17	4.588	9	321322	.000	-94.19	24.23	4.60
11/25/2016 4:35:00 PM	0	0	.000	-94.16	4.588	9	321322	.000	-94.09	24.28	4.60
11/25/2016 4:40:00 PM	0	0	.000	-94.16	4.587	9	321322	.000	-94.16	24.33	4.60
4		1	1.								

You can choose to **Export** or **Print** the data.

### 3.6.2.1 Audit Trail Graphs

The Audit Trail Graph function displays selected report items in graph format. It is recommended that items with numeric values are used for plotting the graph.

Read Data								
Item File	Audit Trail   Ala	arm Logs   Event	Logs   Diagn	ostic Logs   Cellular	Logs   Shortlist	Activity Log	1	
Audit Trail	Name: Audit Trail	Report						Graph Options Report Opti
Sites & Logs					Date Range			
Read data from:					Select dates to use	when this report is pr	inted:	Date Range Optio
Connected Si	e				🔿 Today			✓ Sort Latest [
Report data from:					O Yesterday			Start of Day Ti
Selected Site	EC350 + Cloud L	ink 00000123 - 00000123	Select Sites		O This Month			00:00:00
	EC 350 000000	0 - 00000000			C Last Month			Todays end tin
					Download			00:00:00
				1	C Last N Days	1		
-					O Since	21-12-2016	00:00:00	
Log selection				Check Al	From/To	01-08-2015	00:00:00	
1001	Log 2	Log 3	Log 4	Log 5		21-12-2016	23:59:59	
Logi						Calculate	Date Ranne	

Relate the steps highlighted in the image above with the steps below:

- 1. Start by selecting the site from the Site and Logs section.
- 2. Select one log out of 5 logs.
- 3. Select the Date Range

Select the date range. Select the check box next to the date range choice.

- Selecting today, will report data from 12-hours up to the time the report is begun.
- Choosing Yesterday will print from a 24-hour span up to the time the report is begun.
- This Month reports only the data for the current month.
- The Last Month reports back 30 days.
- If Last N Days is chosen, enter the number of days.
- When selecting either Since or From/To, date and time fields appear on the screen for input.

Click Graph Options to customize the audit trail graph.

Audit Trail Graph				
Configuration				
Y Axis Item	Y Min	Y Max	Color	Line Style
Corrected Volume 🔻	0	100	e Red 🗸	Solid Line(Medium)
Uncorrected Volume	0	100	🔵 Blue 🗸 🗸	Solid Line(Medium)
P1 Gas Pressure 🔻	0	100	Green 🔻	Solid Line(Medium)
Gas Temperature 🔹	0	100	😑 Orange 🛛 👻	Solid Line(Medium)
				1
l og selection				2
				-

Relate the steps highlighted in the image with the steps below:

- 1. Configure the Y-Axis item, Y Min, Y Max, Color and Line Style
- 2. Select the required option from the Log selection

#### Audit Trail Graph - Y Axis Item

Toggle-click on the box to select/deselect the item(s) to graph. The items chosen will be displayed on the actual graph when the Preview button is clicked.

#### Audit Trail Graph - Y Min

This option sets the values for the minimum Y scale (vertical scale). To change these defaults, click on that field and enter the new value.

#### Audit Trail Graph - Y Max

This option sets the values for the maximum Y scale (vertical scale). To change these defaults, click on that field and enter the new value.

#### Audit Trail Graph - Color

For each of the 4 items, click on the down arrow next to the color fields for selectable options, then click on the selection. The color selections and item titles will be displayed on the actual graph legend when Preview is clicked.

#### Audit Trail Graph - Line Style

For each of the 4 items, click on the down arrow next to the line style field for selectable options, then click on the selection. Dashed or dotted line styles will not be noticeable on data lines unless the data points are fairly far apart.

### Log Selection

- Each item on separate graph Checking this box will draw one item per graph. If this is unchecked, more than one item will be drawn on a graph. A graph can have two Y scales (vertical); one on each side. If two items have the same unit of measure, they can share a Y scale. The Y scales are located along the left and right sides of the graph.
- Show data points on lines Data lines may be drawn with or without dots
- 3. Click Show Graph. The Audit Trail Graph appears based on the selected criteria.

### Audit Trail Graph - Save Setup

Click this button to save the Audit Trail Graph Setup configuration. These defaults can be reused when you click the Load Setup button. The default file extension is .ags and is saved in the installation designated file folder for report/graph files.

### Audit Trail Graph: Load Setup

Click this button to load the Audit Trail Graph Setup configuration which is previously saved to file with the "Save Setup" feature. The file is saved in the installation designated file folder for report/-graph files.

After selecting a file, click the Open button to proceed with this function or Cancel to return to the currently displayed graph setup.

After customizing the graph, finally click **Show Graph** to view Audit Trail Graph.



You can choose to **Export** or **Print** the data.

### 3.6.3 Alarm Logs

Use the 'Alarm Logs' tab to read and view all alarm activity data from a connected instrument. An Alarm Log record is defined as any alarm activity, which includes new alarms, alarms acknowledged as well as alarms that have been cleared. Alternatively, you can choose to select a list of sites and then generate a report.

Dashboard	Read Data										
∑ Site	Item File Aud	it Trail Alarm Logs	Event Logs   Diagnostic Lo	gs   Cellular Log	gs   Shortlist	Activity L	og	I			
Gj View/ Edit	Alarm Logs Na	ame: Alarm Log Report							_		Report Options
Ø	Sites				Date Range						
Calibrate	Read data from:				Select dates to use	when this report	is printe	ed:			Date Range Options
କ	Connected Site				🔿 Today				- 1		✓ Sort Latest Date First
Read Data	Report data from:				O Yesterday				- 1		
C Live Data	O Selected Sites		Select Sites		C This Month						
\$					O Since Last Download	12/10/2016 07	7:19:58	В	- 1		
Administer					C Last N Days	1			- 1		
Ø					Since	21-12-2016	<u></u>	00:00:00	- 1		
Settings					From/To	01-12-2016	Î	00:00:00	- 1		
۰.						21-12-2016	Î	23:59:59			
Security										2	
ФŶ											
ø	Opposited / 50.550		00000000	Vie	3						

Start by selecting sites. You can either read alarm logs from a connected site or select a list of sites to read logs from.

Dashboard	Read Data							
2 Site	Item File Audit Trail Alar	rm Logs Event Logs	Diagn	ostic Logs   Cellular Logs   Shor	tlist   Activity	Log		
() View/ Edit	Selected Sites							
0	Instrument Select All	Site List				Selected Sites		
Calibrate	✓ EC 350	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name
6	Cloud Link	00000000 - 00000000	EC 350	ec350site		00000000 - 00000000	EC 350	ec350site
Read Data	C350 + Cloud Link							
$\bigcirc$								
Live Data								
Administer					Add All Remove Remove All			
Ø Settings								
Security				Select the instrument an	d the site	1		
- <del>(</del>					_			
<u>a</u>				OK Cancel				
2		0000000 0000000					man Manuface   Cound One	tion Duffer to File

Select the date range of the report and then click View.

The Alarm Logs appear based on your selected criteria. You can choose to **Preview** or **Print** the data.

	Read Data											
	Item File   A	Audit Trail	Alarm Log	s Eve	nt Logs   Diagnostic I	.ogs   Ce	llular Logs   Shortlist	Activity Log				
							Alarm Log Report					
	Report Name: Report Selections	Alarm Lo s: 1 site , I	og Report From 2016-11-0	I 00:00:00 To	2016-11-30 23:59:59				Site in fo :	00000000:0000000	•	View
	Site ID: 0 0 Site	Name: ec38	50site   Site Loc	ation: hyd								
	Date	Time	Alarm Type	Item #	Alarm Desc	Alarm Value	Alarm Limit					
	11/25/2016	16:53:15	Alarm Ack	1058	P1 Transducer Alarm	8	0000000					
	4410510040	16:53:15	Alarm Ack	1025	Supercompress Alarm	10	0000000					
	11/25/2016											
	11/25/2016	16:53:15	Alarm Ack	104	System Alarms	16384	0000000					
	11/25/2016 11/25/2016 11/25/2016	16:53:15 16:53:15	Alarm Ack Alarm Ack	104 1059	System Alarms P2 Transducer Alarm	16384 8	0000000					
	11/25/2016 11/25/2016 11/25/2016 11/25/2016	16:53:15 16:53:15 16:53:15	Alarm Ack Alarm Ack Alarm Ack	104 1059 107	System Alarms P2 Transducer Alarm Tamper Detected Alarm	16384 8 11111111	00000000 00000000 00000000					
	11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016	16:53:15 16:53:15 16:53:15 16:53:15	Alarm Ack Alarm Ack Alarm Ack Alarm Ack	104 1059 107 1335	System Alarms P2 Transducer Alarm Tamper Detected Alarm Temp Probe Alarms	16384 8 11111111 4	000000000000000000000000000000000000000					
	11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016	16:53:15 16:53:15 16:53:15 16:53:15 16:53:14	Alarm Ack Alarm Ack Alarm Ack Alarm Ack Alarm Ack	104 1059 107 1335 144	System Alarms P2 Transducer Alarm Tamper Detected Alarm Temp Probe Alarms Temperature Low Alarm	16384 8 11111111 4 -94.13	0000000 0000000 0000000 0000000 -37.22					
r.	11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016	16:53:15 16:53:15 16:53:15 16:53:15 16:53:14 16:45:40	Alarm Ack Alarm Ack Alarm Ack Alarm Ack Alarm Ack Alarm Ack	104 1059 107 1335 144 107	System Alarms P2 Transducer Alarm Tamper Detected Alarm Temp Probe Alarms Temperature Low Alarm Tamper Detected Alarm	16384 8 11111111 4 -94.13 1111111	00000000 0000000 00000000 -37.22 00000000					
	11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016	16:53:15 16:53:15 16:53:15 16:53:15 16:53:14 16:45:40 16:45:40	Alarm Ack Alarm Ack Alarm Ack Alarm Ack Alarm Ack Alarm	104 1059 107 1335 144 107 104	System Alarms P2 Transducer Alarm Tamper Detected Alarm Temp Probe Alarms Temperature Low Alarm Tamper Detected Alarm System Alarms	16384 8 11111111 4 -94.13 11111111 16384	00000000 00000000 00000000 -37.22 00000000 0					
	11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 11/25/2016 Print Destination	16:53:15 16:53:15 16:53:15 16:53:15 16:53:14 16:45:40 16:45:40	Alarm Ack Alarm Ack Alarm Ack Alarm Ack Alarm Ack Alarm Alarm	104 1059 107 1335 144 107 104	System Alarms P2 Transducer Alarm Tamper Detected Alarm Temp Probe Alarms Temperature Low Alarm Tamper Detected Alarm System Alarms	16384 8 11111111 4 -94.13 11111111 16384 Back	00000000 0000000 0000000 -37.22 0000000 0					

# 3.6.4 Event Logs

The Event Log records activity that is directly linked to and maintained within the instrument. An "event" documents an item change in the instrument or an instrument download. Event Log activities include:

- Calibration Changes
- Access Code Changes
- Shutdown
- Item Code Changes
- Event Log Downloads

Use the 'Event Logs' tab to read event data from a connected instrument.

**Note:** This log is different from the Activity Log because that log mainly focuses on software activity (and some firmware activity) where the Event Log function records activity that is directly linked to and maintained by the instrument.

Dashboard	Read Data					
2 Site	Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular Lo	ogs   Shortlist	Activity Lo	g		
Gj View/ Edit	Event Logs Name: Event Log Report					Report Options
$\bigcirc$	Sites	Date Range				
Calibrate	Read data from:	Select dates to use	when this report is	s printed:		Date Range Options
6	Connected Site	🔿 Today				Sort Latest Date First
Read Data	Report data from:	O Yesterday				
$\bigotimes$	Selected Sites     Select Sites	O This Month				
Live Data		O Last Month				
<b>\$</b>		Since Last Download	12/09/2016 04	:12:20		
Administer		🔵 Last N Days	1			
Ø		O Since	13-12-2016	00:00:00		
Settings		From/To	08-12-2016	00:00:00		
<u>ب</u>			13-12-2016	23:59:59	_	
Security			Calcul	late Date Range		2
₹\$						
~		/iew 3				
Disconnect O	Connected (EC 350)   📮 ec350site   00000000 - 00000000				Comm Monitor   Send C	apture Buffer to File

Relate the steps highlighted in the image above with the steps below:

1. Event Logs can be read from a connected site. Alternatively, user can select a site from the available list of sites and then generate a report.

Dashboard	Read Data							
∑ Site	Item File   Audit Trail   Alar	m Logs Event Logs	Diagnostic Lo	gs   Cellular Logs   Sl	hortlist   Activi	ty Log		
Gj View/ Edit	Selected Sites							
0	Instrument Select All	Site List				Selected Sites		
Calibrate	✓ EC 350	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name
6	Cloud Link	00000000 - 00000000	EC 350	ec350site		00000000 - 00000000	EC 350	ec350site
Read Data	C350 + Cloud Link							
Contraction Live Data					Add Add All			
Administer					Remove Remove All			
Ø Settings								
Security								
<i>€</i> ₽				OK Cance	0			
) Dimensional (		0000000 0000000				00	mm Monitor   Fond Co	nturo Buffor to Filo

- 2. Select the date range of the report.
- 3. Click **View**. The Event Logs appear based on your selected criteria.

Dashboard	Read Data													
<u>Q</u> Site	Item File	Audit Trail	Alarm L	ogs Ev	ent Logs   Diagnostic	Logs	Cellular Logs	Shortlist	Activit	/ Log				
View/ Edit	Report Name: Report Selection	EventLo s: 1 site ,	ng Report From 2016-12	-08 00:00:00 T	īo 2016-12-13 23:59:59		Event Log	Report				Site in fo : 000	00000:0000000	• View
Read Data	Site ID: 0 0 Site	e Name: ec3	50site   Site L	ocation: hyd Item #	Item/Event Description	UserID	Туре	As Found	As Left	CalUnit	Comm CRC	Calc CRC		
$\sim$	12/09/2016	04:12:20	3966	204	Date	0	Item Chg NC	01-01-01	12-09-16	0	992C	992C	10	
Live Data	12/09/2016	02:31:28	3967	203	Time	0	Item Chg NC	04 12 20	02 31 28	0	DD3D	DD3D		
Administer														
Security														
<i>∜</i> € <b>⊙</b>	Print Destinatio	n Adobe P	DF	¢		E	Back Previ	ew Pi	rint					
Disconnect	Connected ( EC	350)	c350site 000	0000 - 0000	0000						Comn	Monitor	Send Capture	e Buffer to File

4. **Preview** or **Print** the data.

### 3.6.5 Diagnostic Logs

Use the 'Diagnostic Logs' tab to read diagnostic data from a Cloud Link 4G Modem.

Diagnostic logs are applicable to Cloud Link 4G Modem only and would be available when connected to Cloud Link 4G Modem or in integrated mode.

Dashboard	Read Data		
Q Site	ttem File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular	Logs   Shortlist   Activity Log	
) View/ Edit	Diagnostic Logs Name: Diagnostic Log Report		
$\bigcirc$	Sites	Date Range	
Calibrate	Read data from:	Select dates to use when this report is printed:	Date Range Options
9	Connected Site	Today	Sort Latest Date First
Read Data	Report data from:	◯ Yesterday	
$\bigotimes$	Selected Sites     Select Sites	O This Month	
Live Data		Last Month	
2		Since Last 09/28/2016 19:56:21	
Administer		C Last N Days 1	
$\oslash$		Since 9/28/2016 00:00:00	
Settings		○ From/To	
<u>.</u>		9/28/2016 23:59:59	
Security			
少分 Liodata			
		Visw	

You can read Diagnostic logs from the currently connected site. Alternatively, you can choose to select a list of sites and then generate a report.

Dashboard	Read Data			
Site	Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular Log	igs   Shortlist	Activity Log	
Gj View/ Edit	Diagnostic Logs Name: Diagnostic Log Report			
$\bigcirc$	Sites	Date Range		
Calibrate	Read data from:	Select dates to use wi	hen this report is printed:	Date Range Options
କ	Connected Site	Today		Sort Latest Date First
Read Data	Report data from:	O Yesterday		
$\bigcirc$	Selected Sites     Select Sites	This Month		
Live Data		C Last Month		
\$		Since Last Download	09/28/2016 19:56:21	
Administer		🔵 Last N Days 🛛 1	1	
Ø		Since S	9/28/2016 00:00:00	
Settings		From/To	9/23/2016 00:00:00	
÷.		2	9/28/2016 🗰 23:59:59	
Security				2
4£				
Update				
Ø				

Relate the steps highlighted in the image above with the steps below:

- 1. Start by selecting the required site(s).
- 2. Then select the date range, and finally click **View** to read the Diagnostic log report.
- 3. You can also choose to **Export** or **Print** the data.

ka

### 3.6.6 Cellular Logs

Use the 'Cellular Logs' tab to read cellular data from a connected Cloud Link 4G Modem. Cellular Logs contain cellular connectivity and communication data of the connected modem.

Dashboard	Read Data			
Site	Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular Lo	gs Shortlist	Activity Log	
View/ Edit	Cellular Logs Name: Cellular Log Report			
$\odot$	Sites	Date Range		
Calibrate	Read data from:	Select dates to use	e when this report is printed:	Date Range Options
9	Connected Site	Today		Sort Latest Date First
Read Data	Report data from:	Yesterday		
$\bigotimes$	Selected Sites     Select Sites	This Month		
Live Data		O Last Month		
\$		Since Last Download	09/28/2016 20:03:30	
Administer		🔵 Last N Days	1	
Ø		O Since	9/28/2016 00:00:00	
Settings		From/To	9/23/2016 00:00:00	
÷			9/28/2016 23:59:59	
Security				
4D				
Update	v	iew		
Ø				

You can read Cellular logs from the currently connected site. Alternatively, you can choose to select a list of sites and then generate a report.

Dashboard	Read Data		
Q Site	item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs	Cellular Logs Shortlist Activity Log	
G) View/ Edit	Cellular Logs Name: Cellular Log Report		
$\bigcirc$	Sites	Date Range	
Calibrate	Read data from:	Select dates to use when this report is printed:	Date Range Options
କ୍ତ	Connected Site	Today	Sort Latest Date First
Read Data	Report data from:	◯ Yesterday	
C Live Data	Selected Stes	This Month Last Month	
¢.		Since Last 09/28/2016 20:03:30	
Administer		Last N Days 1	
Ø		Since 9/28/2016 00:00:00	
Settings		○ From/To 9/23/2016	
ġ.		9/28/2016 23:59:59	
Security			
лŵ		Calculate Date Rainge	2
\\ Update			
3		View	

Relate the steps highlighted in the image above with the steps below:

- 1. Start by selecting the required site
- 2. Then select the date range, and finally click View to read the Cellular log report.
- 3. You can also choose to **Export** or **Print** the data.

# 3.6.7 Shortlist

The Shortlist Template created using <u>Manage Shortlist</u> tab can be used to generate report for the corresponding shortlist.

Shortlist Name: Shortlist Report						3 Rep
Sites	4	Date Range				
Read data from:	•	Select dates to us	e when this repor	t is prin	rted:	Date Range (
Connected Site		🔿 Today				Sort Lab
O Select item file	Browse	O Yesterday				
		O This Month				
Report data from:		O Last Month				
Selected Sites	Solict Stee	O Last N Days	1			
		) Since	13-12-2016	610	00:00:00	
		From/To	08-12-2016	節	00:00:00	
			13-12-2016	60	23:59:59	
Report item from:			Calcula	te Date	Range	
C Salart Shortlist item file	Rooma					

Relate the steps highlighted in the image above with the steps below:

- 1. Select the site list or the item file.
- 2. Select the dates to use when the report is printed.
- 3. Click **Report Options** to enter user text. Check *Use User Text*, type the text that should appear in the report in the **User Text** box.
- 4. Click View to view the shortlist report.

item rue	Audit Trail   Alarm Logs   Ev	vent Logs Diagnosti	c Logs Shortlist	Activity Log			
Shortlist Report Name: Report Selections From: To:	Shortlist Report 1 site 04/08/2015 10:43:00 04/13/2015 10:43:00		_				
Site ID: 0000000	00 000000000   Site Name: EC350   Item Description	Reports   Site Location: Hy Value	ld Unit	Item Number	Item Description	Value	Unit
0000	Corrected Volume	00242990	CF	0013	Excess TCal Change %	2.0000	CF
0002	Uncorrected Volume	00266559	CF	0014	Total Correction Factor	1.0000	CF
0005	Ch-A pulses waiting	00000000	-	0015	Press Correction Factor	1.0000	-
0006	Ch-8 pulses waiting	00000000	-	0016	Temp Correction Factor	1.0000	
0007	Ch-C pulses waiting	00000000	PSI	0017	Aux Correction Factor	1.0000	PSI
8000	P1 gas pressure	13.775	PSI	0018	Unsquared Supercompress	1.0000	PSI
0010	P1 high alarm limit	99999.99	PSI	0019	Battery Voltage Reading	2.372	PSI
0011	P1 low alarm limit	-1.000	PSI	0020	Battery Low Volt Limit	4.600	PSI
0012	P1 Cal atmos pressure	0.0000	PSI	0021	Shutdown Voltage Limit	4.000	PSI

You can choose to **Preview** or **Print** the data.

**Note:** In Shortlist report, firmware version and serial number are not be displayed until the user selects Firmware version (**item #122**) and serial number (**item#62**) in Shortlist.

### 3.6.8 Activity Log

Use the 'Activity log' tab to read data on software activity.

Select the date range of the report and then click **Report Options**.

Read Data	i.					
Item File	Audit Trail	Narm Logs   E	event Logs   Diagnos	tic Logs   Cellular Logs   Shortlist   Activ	ity Log	
Activity Log	Name: Adivit	Log Report				Report Options
Date Range						
Select dates to u	se when this report is j	printed:		Date Range Options		
🔿 Today				Sort Latest Date First		
Dota Vesterday						
O This Month						
a 🔿 Last Month						
🔿 Last N Days	1					
er 🔿 Since	13-12-2016	00:00:00				
From/To	08-12-2016	00:00:00				
	13-12-2016	23:59:59				
	Calculate	Date Range				
ity .						
\$						
				View		
)						

Customize the report in the **Report Options** page.

Honeywell	I MasterLink		⑦   ◎ admin   = 5° ×
Dashboard	Read Data		
©. Site	Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular L	ogs Shortlist Activity Log	
() View' Edit	Activity Log Name: Adivity Log Report		
Ø	Options		
Calibrate	User Text User Text	Sort Order + Activity Date	
Cive Data	Messages to include	+ Activity Type + Activity Description + Activity Description	
Administer	AI · Z		
Ø Settings	DisplayAchty Duration in Minutes O Seconds		
Security			
<i>€\$</i>	Вка	View	
Disconnect 🥥	Connected ( EC 350)   = ec350#te   00000000 - 00000000   Release: R500.1 Build Version: 9.2.3.0	Comm Monit	or   Send Capture Buffer to File

Relate the steps highlighted in the image above with the steps below:

- 1. Start by checking Use User Text. Type the text that should appear in the report in this box.
- 2. Select the Messages to include. There are 3 options for message reporting.
- 3. Select the Display Activity Duration in.
- Select the Sort Order. This list shows the data columns that will be used in the report. Double click on the data type to change the sort order for that column: + (ascending) or - (descending).
- 5. Finally click **View** to view activity log report.

# 3.7 Live Data

The Live Data Graph function will graph data read directly from connected instruments.

- The computer/laptop must be connected to an instrument in order to display a live graph.
- You select which items to graph as well as other graph configuration items.
- The 'Live Data Graph' screen will display previously selected actual graph items in two graph sections when this function first begins. The device adjusts the upper and lower limits for each items from the settings provided.

ve Data Grap	n									
em to Graph							Graph Configura	ation		
Axis Item	Y Min	Y Max	Alarm Low	Alarm High	Graph N	umber	Y Axis Item	Color		Line Style
P1 Pressure	0	100	-71.117	1422335	1	*	P1 Pressure	🔵 Blue	•	Solid Line(Thick)
Gas Temp	-40	170	-37.22	73.89	1	٣	Gas Temp	Green	٠	Solid Line(Thick) •
Case Temp	-40	170	22.06	27.63	1	Τ.	Case Temp	😑 Orange		Solid Line(Thick) •
Flow Rate	0	500	0	0	1	Ψ.	Flow Rate	🔴 Magenta	٠	Solid Line(Thick) •
Dial Rate	0	20000	0	0	1	Ψ.	Dial Rate	e Red	•	Solid Line(Thick) •
P2 Pressure	0	100	-1	99999.99	1	*	P2 Pressure	Black	*	Solid Line(Thick) •
ng selection Each item on sep	arate graph	Show Data Point o	n Lines	Draw alarm lines			Reading Interval	X Axis Width		

Click Show Graph to view the graph.



Click **Save Graph** to save the Live Graph Setup. By default, .LGV file is saved in the C:\*Pro-gramData*\*Honeywell*\*MasterLink* \*LiveGraphSettings* folder.

You can view graphs offline as well.

Dashboard	Live Data					
Q Site	Live Data Graph		P1 Pressure Gas Te	emp Case Temp	Flow Rate Dial Rate	Live Data Options
Gj View/ Edit	Site ID: -   Site Name:   Site Location:					
Calibrate						
Read Data						
Contraction Live Data						
Administer						
Ø Settings						
Security						
<i>(</i> 5)		use/Resume Print	Save Graph Load Grad	h		
Ø						

Click **Load Graph** to load saved graphs.

Dashboard	Live Data		
Q Site	Live Data Graph		
View Edit	Site ID: -   Site Name:   Site Location:	Organize     New folder       Favorites     Date modified       Downloads     21.6V       12/15/2016 6:11 PM     LGV File       2.6V     12/16/2016 10:15 LGV File       Desktop     4 inputs 2.LGV       12/16/2016 10:15 LGV File       12/16/2016 10:15 LGV File       12/16/2016 10:15 LGV File	
Read Data		Ibraries     ≦     Inputs.LGV     12/12/2016 4:30 PM     LGV File       Documents     S     Sinputs.LGV     12/22/2016 4:33 PM     LGV File       Music     Sinputs.LGV     12/16/2016 10:04     LGV File       Videos     Videos     Sinputs.LGV     Sinputs.LGV	
Administer		Elia parae / // // // // // // // // // // // //	
Security		Open V Cancel	
¢¢		PauseViesume Print Save Graph Load Graph	

Select the desired graph and click **Open**.



Attention: Load Graph is disabled when we have an active connection to the instrument. Please disconnect from the instrument to use this option.

#### Items to Graph

The availability of items depends on the instrument linked to the computer. Toggle-click on the box to select/deselect the item(s) to graph. The default values for the minimum and maximum Y scale (vertical scale) correspond to the alarm limits. To change these defaults, click on that field and enter the new value.

**Note:** You can select numbers in the Graph Number column to group the items together. For example, if you want to view the Gas temperature and the Case temperature on the same graph, you can assign a value of 1 for both the items, and they will be displayed on the same graph. If you do not assign a graph number, then all 4 items will be displayed on the same graph. Viewing all 6 inputs is possible in 2 or more graphs.

#### **Graph Configuration**

Pressure 1, Pressure 2, Gas Temperature, Case Temperature, Dial Rate, and Flow Rate items are available for graph configuration. For each of the 6 items, click on the down arrow next to the color or line style fields for selectable options, then click on the selection. Dashed or dotted line styles will not be noticeable on data lines unless the data points are fairly far apart. Toggling this box next to the following options on the Live Graph Setup dialog screen can activate other selections that affect the display of the graph.

#### Log selection

1. Each item on separate graph: Checking this box will draw one item per graph. If this is unchecked, more than one item will be drawn on a graph. A graph can have two Y scales (vertical); on each side. If two (up-to 4) items have the same unit of measure, they can share a Y scale . The Y scales are located along the left and right side of the graph.

Dashboard	Live Data										
<u>©</u> Site	Live Data Graph										
6	Item to Graph						Graph Configuration	1			
View/Edit	Y Axis Item	Y Min	Y Max	Alarm Low	Alarm High	Graph Number	Y Axis Item	Color	Line Sty	/le	
Ø	P1 Pressure	0	100	10	100	1 •	P1 Pressure	🛑 Red	▼ Dot Line	e v	
Calibrate	Gas Temp	-40	70	-22	122	1 •	Gas Temp	🔴 Magenta	▼ Dash D	ot Line 🔹	
) Read Data	<ul> <li>Case Temp</li> </ul>	-40	70	69.79	81.21	1 •	Case Temp	😑 Orange	▼ Solid Li	ine(Thick) •	
	Flow Rate	0	20000	0	0	1 •	Flow Rate	Green	▼ Dash D	ot Dot 🔹	
Live Data	✓ Dial Rate	0	6000	0	0	2 🔻	Dial Rate	<ul> <li>Blue</li> </ul>	▼ Dashed	d Line 🔻	
¢	P2 Pressure	0	100	5	120	2 •	P2 Pressure	Black	▼ Solid Li	ine(Thick) 🔻	
Administer Ø Settings Security	Log selection	rate graph	Show Data Point on	Lines	Draw alarm lines		Reading Interval	(Axis Width			
<i>(</i> \$}											
~						Save	Show Graph				
(ڡؚ											
) Disconnect	Connected ( EC 350	) 🔲 EC350   0	0000000 - 00000000	)					Comm M	onitor   Send C	apture Buffer to File
Disconnect	Connected ( EC 350	) 💭 EC350 0	0000000 - 00000000						Comm Mo	onitor   Send C	apture Buffer to File
Disconnect Dashboard	Connected ( EC 350 Live Data Live Data Graph	)  💭 EC350   O	0000000 - 0000000						Comm Me	onitor   Send C	apture Buffer to File
Disconnect Dashboard	Connected ( EC 350 Live Data Live Data Graph Started : 12/22/2016 4	) C350 0	0000000 - 0000000 • EC350 Site Loca	eton -			P1 Pressure Gas 5.0411 21.5 Pres	Temp Flow Rate	Comm Me Dial Rate 744.7	P2 Pressure	apture Buffer to File Live Data Options
Disconnect	Connected ( EC 350 Live Data Live Data Graph Started : 12/22/2016 4 Site ID : 00000000 - 00	) 📮 EC350 0 27:44 PM 20000000   Site Name	0000000 0000000 9: EC350  Smelece	tion :			P1 Pressure Gas <b>5.0411</b> 21.5 PSI F	Femp Flow Rate 5 1682.3 CFAtr	Comm Me Dial Rate 744.7 CFAtr	onitor   Send C P2 Pressure 0 PSI	apture Buffer to File Live Data Options
Disconnect Dashboard Q Site	Connected ( EC350	) 💭 EC350 0 27:44 PM 30000000   Site Neme	0000000 - 00000000 9 : EC350   Site Loce	D   tion : [			P1 Pressure Gas 5.0411 21.50 PS1 21.50	femp Flow Rate 6 1682,3 CF/tir	Comm Me Dial Rate 744.7 CFAir	P2 Pressure O PSI	apture Buffer to File Live Data Options
Disconnect Dashboard Q Site View/Edit Calibrate	Connected ( EC 350 Live Data Live Data Graph Started : 12/22/2016 4 Site D : 0000000 - 00	)   = EC350   0 27:44 PM 20000000   Site Name 2016   12, 5   04,	cccccccc - ccccccccc ccccccccc - cccccccccc	)   tion : [ 2/22/2016 4/28/05	12/22/2016 04/28:10	12/22/2016 042/815	P1 Pressure 5.0411 P51	Temp Flow Rate <b>1682.3</b> CFAtr 12/22/2016 04:28:00	Comm Mr Dial Rate 744,7 CFAir 12/22/201 04/28:05	P2 Pressure P2 Pressure PSI 16 12/22, 04.242 04.242	Abture Buffer to File
Disconnect Dashboard Dashboard Site Calibrate Calibrate Dochoad	Connected ( EC330 Live Data Started : 12/22/2016 4 Ster D : 00000000 - 00	)   💭 EC350   0 27:44 PM 0000000   Site Name 2016   12, 5   04;	e: EC350 Site Loce	1)   stion :   2/22/2016 4/28/05 te and Time	12/22/2016 04:28:10	12/22/2016 04:28:15	$\begin{array}{c} P1 \ Pressure \\ \hline 5.0411 \\ PSI \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $	Flow Rate 5 5 5 5 5 5 5 5 5 5 5 5 5	Comm Mu Dial Rate 744.7 CF.Air 12/22/201 04:28:05 Log Date and Tr	P2 Pressure         O           P3 Pressure         0           P5 Press	Apture Buffer to File Live Data Options Alarm High 2016 12/22/2016 10 04:28:15
Dashboard Dashboard Site Site Calibrate Read Data	Connected ( EC 350 Live Data Started : 12/22/0164 Ster D : 00000000 - 00 $\frac{12}{12}$ 0 $\frac{12}{12}$ 0 12/22/04/275	)     EC350   0 227:44 PM 20000000   Site Name 2016 12 5 04:	0000000 - 0000000 ⇒: EC350  Ste Loce 1 22/2016 1 28:00 Log Da	tion : 1 2/22/2016 4/28/05 te and Time	12/22/2016 04:28:10	12/22/2016 04:28:15	P1 Pressure <b>5.0411</b> PSI $\frac{5}{F}$ 5	Femp Flow Rate <b>1682.3</b> CF/fir 12/22/2016 04:28:00	Comm Mr Dial Rate 744.7 CFAir 12/22/201 04/28/05 Log Date and Tr	P2 Pressure P2 Pressure PSI 16 12/22, 04/28; ime	Alarm High
	Connected ( EC 350 Live Data Started : 12/22/2016 4 Ster D : 0000000 - 00 $\frac{12}{12}$ $\frac{10}{12}$ $\frac{10}{12}$ $\frac{10}{12}$ $\frac{10}{12}$ $\frac{10}{12}$	)     EC350   0 27:44 PM 30000000   Site Name 2016   12: 5 04: 1 2/2016   1 5 0; 1 5 0; 1 1 5 0; 1 1 5 0; 1 1 1 5 0; 1 1 1 1 1 1 1 1 1 1 1 1 1	cccccccc ccccccccccccccccccccccccccccc	tion : 1 2/22/2016 428/05 te and Time 12/22/2016 42/2015 4te and Time	1 12/22/2016 04:28:10 12/22/2016 04:28:10	12/22/2016 04:28:15 12/22/2016 04:28:15	P1 Pressure 5 0411 Pst $\frac{5}{60}$ $\frac{1}{21.51}$ $\frac{5}{60}$ $\frac{1}{12/22/2016}$ $\frac{2}{60}$ $\frac{1}{12/22/2016}$ $\frac{2}{12/22/2016}$ $\frac{2}{12/22/2016}$ $\frac{2}{12/22/2016}$ $\frac{2}{12/22/2016}$	Temp Flow Rate <b>1682.3</b> CF/Hr 12/22/2016 04:28:00 12/22/2016 04:28:00	Comm Mr Dial Rate 744.7 CF/Hr 12/22/201 04:28:05 Log Date and Tr 12/22/201 04:28:05 Log Date and	onitor Send C P2 Pressure O PSI 16 12/22 04/28 12/22 04/28 Time	Abture Buffer to File
Dathboard Dathboard Site Site Calibrate Calibrate Read Data Live Data	Connected ( EC330 Live Data Started : 12/22/2016 4 Ster D : 00000000 - 00	27:44 PM 2016 12 5 04 1/55 0	e: EC350 Site Loce 22/2016 1 28:00 0 Log Da	tion :   1/2/22/2016 4/28/05 te and Time 12/22/2016 04/28/05 ate and Time	12/22/2016 04:28:10	12/22/2016 04:28:15 12/22/2016 04:28:15	P1 Pressure Cas <b>5.0411</b> P51 $\frac{1}{3}0$ <b>1.21.8</b> <b>F</b> <b>1.2727/2016</b> 0427:55 <b>1.2722/2016</b> 0427:55	Temp Flow Rate 1682.3 CFAtr 12/22/2016 04:28:00	Comm Mu Dial Rate 744.7 CFAir 12/22/201 04:28:05 Log Date and Tr 12/22/20 04:28:05 Log Date and	P2 Pressure 0         P2 0           P2 Pressure 0         0           P3 Pressure P3 Pressure 0         0           0         12/22 04/28:           0         12/22 04/28:           0         12/22 04/28:           0         12/22 04/28:           0         12/22 04/28:           0         12/22 04/28:	Alarm High 2016 12/22/2016 10 04:28:15 10 04:28:15
Databoard Databoard Site Site Calibrate	Connected ( EC 350 Live Data Live Data Graph Started : 12/22/2016 4 Site D : 0000000 - 00 $\frac{12}{12}$ 0 	)     EC350   0 227.44 PM 2000000   Site Name 2016   12, 5   04 2/2016   12, 5   0 22-2016   12-22- 52:40   02:52:	cococco c EC350   Sile Loce 122/2016 1 128:00 0 Log Da 122/22/2016 12:22-2016 12:22-2016 02:53:00 Log D	1)   tion :   2/22/2016 12/	12/22/2016 04:28:10 12/22/2016 04:28:10 	12/22/2016 04:28:15 12/22/2016 04:28:15 04:28:15 04:28:15	$\begin{array}{c} P1 \ Pressure \\ 5.0411 \\ Psi \\ \hline \\ $	Temp Flow Rate <b>1682.3</b> CF/Hr 12/22/2016 04:28:00	Comm Me Dial Rate 744.7 CFAir 12/22/201 04:28:05 Log Date and T 12/22/21 04:28:05 Log Date and	P2 Pressure O PSI         P2 PSI           16         12/22 04/28:           016         12/22 04/28:           Time         04/28:	Abture Buffer to File
Databoard Databoard Site Site Calibrate Calibrate Calibrate Calibrate Calibrate Calibrate Calibrate Calibrate Calibrate Calibrate	Connected ( EC350 Live Data Started : 12/22/2016 4 Ster D : 00000000 - 00 $\frac{10}{22}$ $\frac{10}{22}$ $\frac{10}{22}$ $\frac{10}{22}$ $\frac{10}{22}$ $\frac{10}{22}$ $\frac{10}{22}$ $\frac{10}{22}$	)         EC350         0           227:44 PM         2016         12           2016         12         2           5         04         2           2/2016         1         1           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2016         1         2           2/2         1         1           2/2         1         1           2/2         1         1           2/2         1         1           2/2         1         1           2/2	<ul> <li>cooccocc</li> <li>cocccccc</li> <li>coccccccc</li> <li>cccccccccc</li> <li>cccccccccccc</li> <li>cccccccccccccccccc</li> <li>cccccccccccccccccccccccccccccccccccc</li></ul>	tion :   2/22/2016 4/28/05 te and Time 12/22/2016 04/28/05 ate and Time 12/22/2016 12/22/20 12/22/20 12/22/20 12/22/20 12/22/2	12/22/2016 04:28:10 12/22/2016 04:28:10 -22-2016 12	12/22/2016 04:28:15 04:28:15 04:28:15 04:28:15	P1 Pressure <b>50411</b> $\frac{1}{5}$ $\frac{1}{6}$	Temp Flow Rate 1622.3 CFAtr 12/72/2016 04:28:00	Comm Mu Dial Rate 744.7 CF/Hr 12/22/201 04:28:05 Log Date and Tr 12/22/20 04:28:05 Log Date and	P2 Pressure O PSI         P2 Pressure O PSI           0         12/72, 04/28;	Alarm High 2016 12/22/2016 10 04:28:15 10 04:28:15
Darabaard Darbbaard Site Site Calibrate Calibr	Connected ( EC 350 Live Data Started : 12/22/2016 4 Sate D : 0000000 - 00 $\frac{12}{4}$ 0 $\frac{12}{2}$ 04/27:5 $\frac{12}{4}$ 0 $\frac{12}{4}$ 0 $\frac$	)     EC350   0 227:44 PM 20000000   Site Name 2016 12, 5 04; 7,2016 1 7,55 0 22-2016 12-22- 22-2016 12-22- 22-2016 12-22- 22-2016 12-22- 22-2016 12-22-	cococco c EC350   SRe Loce	tion : 2/22/2016 2/22/2016 4/28/05 te and Time 12/22/2016 12/22/20 12/22/20 12/22/20 12/22/2	12/22/2016 04:28:10 12/22/2016 04:28:10 12/22/2016 04:28:10 12-22-2016 12-3 53:20 02:5 Pause\Resume	12/22/2016 04/28:15 04/28:15 04/28:15 04/28:15 04/28:15 04/28:15	P1 Pressure Gas 5.0411 Gas $\frac{1}{6}0$ $\frac{1}{12/22/2016}$ $\frac{1}{12/22/2016}$ $\frac{1}{12/22/2016}$ $\frac{1}{12/22/2015}$ $\frac{1}{12$	Flow Rate 1682.3 CFAtr 12/22/2016 04:28:00 12/22/2016 04:28:00	Comm Mu Dial Rate 744.7 CFAir 12/22/201 04:28:05 Log Date and Ti 12/22/20 04:28:05 Log Date and	onitor Send C P2 Pressure P51 16 12/22 04:28: 16 04:28: 17 0	Alarm High 2016 12/22/2016 10 04-28-15 10 04-28-15

- 2. Show data points on lines: Data lines may be drawn with or without dots.
- 3. Draw alarm lines: Check this box if the alarm lines are to be drawn on the graph.
- 4. **Reading Interval**: Enter a number for the Reading Interval (in seconds). This option controls the frequency with data is read from the instrument and thus, how often points are plotted.

Please note that point-to-point spacing may vary somewhat due to rounding and screen resolution.

5. X-Axis Width: Enter a number for the X-Axis Width (in seconds). The X-axis is located across the bottom of the graph. This option controls the number of data points shown on the graph at one time. Please note that a slightly different number of data points may actually be shown due to rounding and screen resolution.

Click **Show Graph** to view the graph.

# 3.8 Administration

### 3.8.1 sActivity Log - Purge

Use Activity log – Purge to permanently delete the activity logs of the MasterLink. Please note that this log is different from the Event Log because this log mainly focuses on software activity (and some firmware activity) where the Event Log function records activity that is directly linked to and maintained within the instrument.

Dashboard	Administer	
Q Site	Activity Log Export Instrument Data Import Instrument Data Item Temp	late Configuration
G) View/ Edit	Administer Activity Log	
$\bigcirc$	Manual Purge	Automatic Purge
Calibrate	All Dates	No Maximum
9	Date Range:	Maximum Log Size:
Read Data	Start Date 13-12-2016	Number of Days
C Live Data	End Date 14-12-2016	Number of Data Records 0
Administer	Calculate Date Range	Save
Ø Settings	Purge activity logs between set dates	Configure a logic to automatically purge activity logs
Security		-1 [
<b>Ø₽</b>		
) Discussed	Connected / E 350 \ 1 e #350###   00000000 - 00000000	Purge Now

**Manual Purge** - This method requires that a date parameter be set. The default setting is *All Dates*. If this is set, every record in the activity log will be purged. To de-select this option and open the fields for starting and ending date entries, uncheck on the **All Dates** box. Enter the desired dates, or click the **Calculate Date Range** button to automatically retrieve the database starting and ending dates. After the date range has been set, click the **Purge Now** button to execute this function.

Automatic Purge - Although the default setting is No Maximum (which means that no records are removed until the manual method is executed), records may be automatically removed without user intervention. Records can be removed after the file has reached a set number of days or number of data records. To set one of these two limits, de-select the No Maximum option by clicking on that radio button, and then select the radio button next to *Number of Days* or *Number of Data Records*. Next, enter the number of days for data records in the box for the option that was chosen. Finally click **Save**.
Click **Purge Now**, to manually remove activity logs.

Dashboard	Administer			
© Site	Activity Log Export Instrument Data Import Ins	strument Data   Item Template Configuratio	ation	
Gj View/ Edit	Administer Activity Log			
$\bigcirc$	Manual Purge		Automatic Purge	
Calibrate	All Dates		No Maximum	
Read Data	Date Range: Start Date 13-12-2016 End Date 14-12-2016 Calculate Date Range	Warning Are you sure you want to delete records from the Activity Log?           Yes         No	lete the specified p2 ecords 0 Save	
Security	) Connected ( 55 350 ) □ 4535045   85500000 - 85500000	Purge Nov	Now	

Dashboard	Administer			
Q Site	Activity Log   Export Instrument Data   Import Inst	trument Data   Item Template Configura	tion	
Gi View/ Edit	Administer Activity Log	Ç,		
$\bigcirc$	Manual Purge		Automatic Purge	
Calibrate	All Dates		O No Maximum	
Read Data	Date Range:           Start Date         13-01-2016           End Date         14-02-2016	Success I Specified Activity Log records	s deleted.	
Administer	Calculate Date Range			Save
Security				
\$£		Purge 1	Now	
Discoursed				Comm Monitor   Send Canture Buffer to File

### 3.8.2 Export Instrument Data

The 'Export Instrument Data' tab can be used to export instrument data.

Dashboard	Administer								
Q Site	Activity Log Export Instrumer	nt Data   Import Instrur	ment Data	Item Template Configuration	Clear Logs				
6)	File Type: 🔿 LAN   💿 SOLIte	⊖ csv 1				Only Site Data	Instrument Data		
Calibrate	Export to:			2 Brows	•		<ul> <li>Log Data</li> <li>Shortlist Data</li> </ul>	3	
1	Instrument Select All	Site List				Selected Sites			
Read Data	Accutest	Site ID +	Туре	Site Name		Site ID +	Type Site	Name	
$\otimes$	Cloud Link	10020030 - 10020030	CNI4	-/:;0?&@*_\\~<>\$£€•][]#%^*+=	1				
Live Data	🗹 CN14	00000000 - 00000000	EC 350	0_EC350	Add Add All				
2	C 350	30000000 - 40000000	CNI4	100001:200002					
Administer	COSO + Cloud Link	00000123-00000000	EC 350	110011:220022					
Ø	Z ECAT	00132333 - 00132333	CNI4	123456:123456					
Settings	ER 🗸	00123456 - 00654321	EC 350	123456 EC350 Modem					
~~		Date Range:						All Dates	
Security		Start Date 8	8/10/2017	00:00:00 🕓 End Da	ate 8/10/2017	23:59:59 🕒	6	Calculate E	ate Range
4P									
a				ОК					
<u> </u>	Not Connected						Comm Honitor	Const Construct Duffered	

Relate the steps highlighted in the image with the instructions for exporting instrument data.

- 1. Select the export file type. LAN, SQLite, and CSV are supported when MasterLink is installed.
- 2. Browse and select the **Export To** location.
- 3. Select the **Only Site Data** option to export only the site data or select the **Instrument Data** option to be able to export log data for the selected sites.
- 4. Select Instrument type. To select all instruments, click Select All.
- 5. A **Site List** gets populated based on your selected instruments. Select the site(s) and use **Add/Add All/Remove/Remove All** to add or remove sites.
- 6. Select the Date Range.
- 7. Click OK to export instrument data.

**Note:** In all of the supported exported file types, if Only Site data is chosen, only sites are exported but not logs/data/Shortlist.

#### Export instrument or Site Data to a remote SQL Server over LAN:

 Select the LAN option. The application would load all available SQL Server on the same network. The user performing this operation must have db\_admin privilges on the remote SQL Server.

Dashboard	Administer										
2 site	Activity Log   Export Ir	nstrument Data   Import In	strument Dat	a   Item Template	Configuration	Clear Logs					
6)	File Type: 🔘 LAN   🔾	Salite   🔘 CSV					Only Site Data		Data		
View/Edit	Select a LAN Server Name:	· ·						Log D	ata		
$\odot$		E1FLT7XJY5Z1	<b></b>					Shorti	st Data		
Calibrate		E1ELT7X1YSZ1\SQLSERVER2014									
କ୍ତ	Instrument 🗸 s	E111TC6C7571					Selected Sites				
Read Data	<ul> <li>Accutest</li> </ul>	F1FDT28879F2	Туре	Site Name		Add Add All	Site ID +	Туре	Site Name		
$\otimes$	Cloud Link	E1EDT3N1BVD1	CNI4	-/:;0?&@*_\\~	<>\$£€•[]{}#%^*+=	Remove Remove All					
Live Data					► F						
2		E1FD13YVB9F2								All Dates	
Administer		E1FDT6DYQWQ1	8/21/2017	00:00:00 🕚	End Date	8/21/2017	23:59:59 🛞			Calculate Date Ra	
Ø		E1FW6HLXYY1	Ŧ								
Settings					ОК						
-izi-	Comm Monitor										$\otimes$
Security	Incoming										
<i>Æ</i> ₽											-
	Outgoing										
ø	Evaluate Trigger	Errors Retries							Recording Communic	ations Baud rate:	
	Not Connected							Comm Hou	iter   Cond Co	nture Duffer to Fil	-

- 2. Choose appropriate SQL Server. The selected SQL Server must have the MasterLink Database for successful export.
- 3. Select the **Only Site Data** option to export only the site data or select the **Instrument Data** option to be able to export log data for the selected sites.
- 4. Select Instrument type. To select all instruments, click Select All.
- 5. A Site List gets populated based on your selected instruments. Select the site(s) and use Add/Add All/Remove/Remove All to add or remove sites.
- 6. Select the **Date Range**.
- 7. Click **OK** to export instrument data.

#### Export instrument or Site Data to SQLite

1. Select SQLite fie type option.

Dashboard	Administer										
© Site	Activity Log Export Instrume	nt Data   Import Instru	ment Data	Item Template Configuration	Clear Logs						
6)	File Type: O LAN   @ Salke   O CSV O Nay Site Data @ Instrument Data										
Calibrate	Export to: C:IProgramDatalHoneywellMasterlink/SqlitelExport_AccuTest. Browse CIProgramDatalHoneywellMasterlink/SqlitelExport_AccuTest.										
9	Instrument Select All	Site List				Selected Sites					
Read Data	Accutest	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name			
$\odot$	Cloud Link	10020030 - 10020030	CNI4	-/:;()?&@"_\\~<>\$£€•[]{}#%^*+=	1						
Live Data	✓ CN14	30000000 - 40000000	CNI4	100001:200002	Add Add All						
2	✓ EC 350	00000123 - 00000000	EC 350	110011:220022							
Administer	EC350 + Cloud Link	00132333-00132333	CNI4	123456:123456							
Ø	✓ ECAT	00123456 - 00654321	EC 350	123456_EC350_Modem							
Settings	✓ ER _	13163584 - 13163584	Mini-AT	13163584/Gasnet	*						
÷.		Date Range:							All Dates		
		Start Date	8/21/2017	00:00:00 🕑 End Date	e 8/21/2017	23:59:59 🕓					
				ОК							
Ø	Not Connected						Comm Hor	ites I found Our	ture Duffer to File		
Conhect	Horeonnected   g =   =						Comm Mon	ntor i send cap	fure Buller to File		

- 2. Browse and select the location for the SQLite file. Give a name to the SQLite file. If an existing SQLite file is chosen, it will be overwritten.
- 3. Select the **Only Site Data** option to export only the site data or select the **Instrument Data** option to be able to export log data for the selected sites.
- 4. Select Instrument type. To select all instruments, click Select All.
- 5. A Site List gets populated based on your selected instruments. Select the site(s) and use Add/Add All/Remove/Remove All to add or remove sites.
- 6. Select the Date Range.
- 7. Click OK to export instrument data.

### Export instrument or Site Data to CSV

1. Select the CSV file type.

	Administer											
Dashboard © Site	Activity Log   Export Inst	trument Di	ata   Import Instru	ment Data   I	tem Template Configuration	Clear Logs						
6)	File Type: O LAN   O SOLEE   CSV Only SEe Data Instrument Data											
Calibrate	Export to: C	:\ProgramE	ata\HoneywellMasteriin)	(SiteListReport)Sit	B.CSV Browse			Log Da	ta t Data			
9	Instrument 🗸 Seis	ect All	Site List				Selected Sites					
Read Data	Accutest	1	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name			
$\oslash$	Cloud Link		10020030 - 10020030	CNI4	-/:;()?&@*_\\~<>\$£€•(){}#%^*+=	ì						
Live Data	CNI4		3000000 - 40000000	CNI4	100001:200002	Add Add All						
<u>×</u>	✓ EC 350		00000123-00000000	EC 350	110011:220022							
Administer	C350 + Cloud Link		00132333 - 00132333	CNI4	123456:123456							
Ø	ECAT		00123456 - 00654321	EC 350	123456_EC350_Modem							
Settings	V ER		13163584 - 13163584	Mini-AT	13163584/Gasnet	·						
承			Date Range:							All Dates		
Security			Start Date	8/21/2017	00:00:00 🕓 End Date	8/21/2017	23:59:59 🔞					
Ø					OK							
Connect	🕽 Not Connected   🔲							Comm Mon	itor   Send Cap	ture Buffer to File		

- 2. Browse and select the location you need instrument data to be exported to CSN file. Give a name to the CSV file..
- 3. Only Sites are exported to CSV file. Instrument data cannot be exported to CSV file and hence disabled.
- 4. Select Instrument type. To select all instruments, click Select All.
- 5. A Site List gets populated based on your selected instruments. Select the site(s) and use Add/Add All/Remove/Remove All to add or remove sites.
- 6. Select the Date Range.
- 7. Click OK to export instrument data.

oka

### 3.8.3 Import Instrument Data

The 'Import Instrument Data' tab can be used to import instrument data.

Dashboard	Administer									
Q Site	Activity Log   Export Instrumen	nt Data   Import In	strument Data	Item Template Config	uration   C	lear Logs				
6)	File Type: O Access File   O LA	AN   🔿 SQL File   🖲	SOLIte		Only Site Data   instrument Data					
	Import From: Browse	2					Log Data	Data		
Calibrate										
(G) Read Data	Instrument Select All	Site List					Selected Sites			
	4	Site ID +	Туре	Site Name			Site ID +	Туре	Site Name	
Live Data										
Administer										
Ø										
Settings										
Security		Date Rang	e:					-	All Dates	
LA		Start Date	8/21/2017	00:00:00 🕓	End Date	8/21/2017	23:59:59 🕓	•	Calculate D	ate Range
					ок					
Connect	🔵 Not Connected   🔲							Comm Monitor	Send Capture Buffer t	o File

Relate the steps highlighted in the image with the steps below:

- 1. Start by selecting select the import file type. Access File, LAN, SQL File and SQLite file types are supported when MasterLink is installed.
- 2. Select the physical location of the file to be imported.
- 3. Select the type of data source.
- 4. Select Instrument type. To select all instruments, click Select All.
- 5. A Site List gets populated based on your selected instruments. Select the site(s) and use Add/Add All/Remove/Remove All to add or remove sites.
- 6. Select the Date Range.
- 7. Click **OK** to import instrument data.

#### Import from Access File

1. Select Access file type option and browse the access file (.ARC or .mdb file).

Dashboard	Administer								
Q Site	Activity Log   Export Instrumen	t Data   Import Instrur	ment Data   It	em Template Configuration	Clear Logs				
6)	File Type:      Access File        LA	N   🔿 SQL File   🔿 SQL	Lite		Only Site	Data 💿 Instrument Da	ita		
View/ Edit	Import From: C:\ProgramData\Honeyv	vell/Masterlink/Archives/hilarc	Browse			Log Data	Data		
କ	Instrument Select All	Site List				Selected Sites			
Read Data	Accutest	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name	
$\odot$	Cloud Link	00000000 - 00000000	Mini-AT	attetminiat	ì				
Live Data	CNI4	00000000 - 00000000	Mini Max	fdgf	Add Add All				
2	✓ EC 350	00000000 - 00000001	Pulse Acc	PA_MM					
Administer	C350 + Cloud Link	00000035 - 43543545	Mini-AT	zxdvf					
Ø	✓ ECAT	00004966 - 00454656	EC 350	hits					
Settings	✓ ER	00011111 - 00022222	ERX	_honeywe_ltp_ovt					
凉		Date Range:						All Dates	
Security		Start Date	8/21/2017	00:00:00 💿 End Date	8/21/2017	23:59:59 🔘			
a				OK					
Connect 🧧	Not Connected   📮						Comm Monitor	Send Capture Buffer to File	

- 2. Sites in the selected archive access database would be listed out.
- 3. By default, site data option is selected. If sites in the archive file does not have logs only Site Data options is enabled.
- 4. Select Instrument type. To select all instruments, click Select All.
- A Site List gets populated based on your selected instruments. Select the site(s) and use Add/Add All/Remove/Remove All to add or remove sites.
- 6. Select the Date Range.
- 7. Click **OK** to import instrument data.

#### Import from LAN

1. Select LAN option, application would list out the SQL Server over LAN.

Dashboard	Administer										
Q Site	Activity Log   Export Instrumen	t Data   Import Instru	ment Data   Ite	em Template Configu	ration   C	lear Logs					
6)	File Type: 🔿 Access File   🖲 LA	N   🔿 SQL File   🔿 SQ	Lite			Only Ste Data     Instrument Data					
Calibrate	Select a LAN Server Name:	• Go			Log Data	Data					
9	Instrument Select All	Site List					Selected Sites				
Read Data		Site ID +	Туре	Site Name			Site ID +	Туре	Site Name		
$\oslash$											
Live Data						Add Add All					
2											
Administer											
© Settings											
at a											
Security		Date Range:								All Dates	
<i>a</i>		Start Date	8/21/2017	00:00:00	End Date	8/21/2017	23:59:59 🛞				
490°											
Ø											
Connect	Not Connected   📮							Comm Monitor	Send Captur	e Buffer to File	

- 2. Select appropriate server or type in the right SQL Server and click on Go.
  - Make sure the SQL Server chosen has proper MasterLink Database
- 3. Sites from the LAN would be listed out.
- 4. Select Instrument type. To select all instruments, click Select All.
- 5. A **Site List** gets populated based on your selected instruments. Select the site(s) and use **Add/Add All/Remove/Remove All** to add or remove sites.
- 6. Select the Date Range.
- 7. Click **OK** to import Site/instrument data.

#### Import from SQL File

1. Select the SQL File option.

Dashboard	Administer											
2 Site	Activity Log Export Instrument Data Import Instrument Data Item Template Configuration Clear Logs											
6)	File Type: O Access Fie O LAN O SQL Fie O SQL Fie O SQL te O Only Ste Data O Instrument Data											
View/ Edit	Import From: C/ProgramData/Honeywell/Masterlink/SQL/19June.mdf Browse C/ProgramData/Honeywell/Masterlink/SQL/19June.mdf											
9	Instrument Select All	Site List				Selected Sites						
Read Data	Accutest	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name				
$\odot$	Cloud Link	00000123-00000000	EC 350	110011:220022								
Live Data	CNI4	00000011 - 00000011	PT Modbus	DKu	Add Add All							
2	🗸 EC 350	00110011-00220022	EC 350	Tester								
Administer	EC350 + Cloud Link	12345678 - 87654321	EC 350	Tester3								
Ø	ECAT											
Settings	✓ ER											
÷.		Date Range:						All Da	ites			
- Security - SA		Start Date	8/21/2017 🗐 00:00:00	© End Date	8/21/2017	23:59:59 🕓						
Ø				ОК								
Connect 🧧	Not Connected   📮 –   –						Comm Monitor	Send Capture Buffe	r to File			

- 2. Browse an appropriate .MDF file to import sites.
- 3. Pre-requisite for importing from SQL file to MasterLink application installed with Sqlite.
  - Make sure there is a proper SQL Server is running and able to attach the SQL .mdf file chosen.
  - Make changes in MLR510 config file AppSettings.xml file. It should have proper SQL Server connection string with master as the default. initial catalogue. This is mandatory to connect to that SQL Server and attach the selected .mdf file to perform Import.
  - Note: Do not try to import from any SQL .mdf which is already attached to SQL Server.
- 4. Select Instrument type. To select all instruments, click Select All.
- 5. A **Site List** gets populated based on your selected instruments. Select the site(s) and use **Add/Add All/Remove/Remove All** to add or remove sites.
- 6. Select the Date Range.
- 7. Click **OK** to import Site/instrument data.

#### Import from SQLite

1. Select the SQLite File option.

田	Administer											
Dashboard Q Site	Activity Log   Export Instru	iment Data   Import Instru	ment Data   Item Tem	plate Configuration   0	Clear Logs							
6)	File Type: O Access File	File Type: O Access Fie O LAN O SOL Fie O SOL te O Only Ste Data O Instrument Data										
View/ Edit	Import From: C:\ProgramData\Ho	oneywell/Masterlink/Sqlite/Export_	AccuTest Browse			<ul> <li>Log Data</li> <li>Shortlist (</li> </ul>	Data					
କ	Instrument Select	All Site List				Selected Sites						
Read Data	<ul> <li>Accutest</li> </ul>	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name				
$\odot$	<ul> <li>Cloud Link</li> </ul>	00007037 - 00000000	Accutest	7037_AccuTest								
Live Data	V CNI4				Add Add All							
2	✓ EC 350											
Administer	EC350 + Cloud Link											
Ø	ECAT											
Settings	✓ ER	-										
*		Date Range:							All Dates			
LA		Start Date	8/21/2017 🛗 00:00:00	C End Date	8/21/2017	23:59:59 🔘						
a				ОК								
Connect C	Not Connected   📮						Comm Monitor	Send Capture	Buffer to File			

- 2. Browse an appropriate .sqlite file to import sites.
- 3. Select the type of data source.
- 4. Select Instrument type. To select all instruments, click Select All.
- A Site List gets populated based on your selected instruments. Select the site(s) and use Add/Add All/Remove/Remove All to add or remove sites.
- 6. Select the Date Range.
- 7. Click **OK** to import Site/instrument data.

**Note:** While importing or exporting shortlist Data, only shortlist Item Data is exported/imported but not the shortlist items configuration.

## 3.8.4 Item Template Configuration

Item Template Configuration screen can be used to create and save a template containing item numbers (related to the device integrity) along with reference values.

Dashboard	Administer				
Site	Activity Log Export Instrument Data	mport Instrument Data Item Template Configuration			
G) View/ Edit	Item Template Configuration				
0	Instrument Type	Items		Template Items	Reference Value
Calibrate	EC 350	0 - Corrected Volume	<b>^</b>	90 - Cor Volume Units	CCF •
R	Cloud Link	2 - Uncorrected Volume		89 - Temperature Units	F 🔹
Read Data	EC350 + Cloud Link	5 - Ch-A Pulses Waiting			
0		6 - Ch-B Pulses Waiting			
Live Data		7 - Ch-C Pulses Waiting	644		
상		10 - P1 High Alarm Limit	Remove		
Administer		11 - P1 Low Alarm Limit	Remove All		
6		12 - P1 Cal Atmos Pressure			
Settings		13 - Base Pressure			
		14 - Atmospheric Pressure			
Security		15 - Press used at P1-Zero			
		16 - Press used at P1-Span	*		
¢У					
Í	Site ID All Site IDs   Site ID 2 00002424	Ť	Save Template File		
Disconnect	Connected (EC350 + Cloud Link)   Test   0000242	4 - 00002424		Comm Monitor   Send	Capture Buffer to File

While MasterLink is connecting to an instrument, the values (default) from this template are compared with the values(actual) read from the instrument. If there is a mismatch, then an error is displayed on the *Dashboard* - *Config Check* widget, and drill down on the widget will display further details.

Refer Dashboard Configuration check for more details.

Start by selecting the instrument type. Based on the selected instrument type, the applicable items appear on the screen. Select and **Add** the required items to your list. Add a reference value for the selected items.

Click Save Template File to save a copy of the template that you just created.

Item Template Configuratio	n ×			(?	)   🔘 Admin   🗕 🗗 🗙
( <i>(<i>) → ↑ ↓ ≪ Masterlink → ItemTemplates ∨</i></i>	Search ItemTemplates 👂				
Organize 🔻 New folder	)== <b>-</b> ()				
🖫 Recent places 🔷 Name	Date modified Type	ate Configuration			
Homegroup	12/21/2016 6:33 PM TE3 File				
This PC Desktop					
Documents				Template Items	Reference Value
📱 Music		Î		90 - Cor Volume Units	CCF *
E Pictures				89 - Temperature Units	F T
Local Disk (C:)					
Carl Backup (D:) ■ DVD Drive (F:) IB: ✓ <	>				
File name: EC350_CloudLink	v		Add		
Save as type: Item template file (*.TE3)	~		Remove Remove All		
) Hide Folders	Save Cancel				
Settings	13 - Base Pressure	-			
	14 - Atmospheric Pressure				
Security	15 - Press used at P1-Zero				
πA	16 - Press used at P1-Span	-			
\$₽ 					
Site ID All Site IDs   Site ID 2 00002424	·		Save Template File		

**Note:** By default, instrument specific Item Templates are created (EC 350.TE3, Cloud Link.TE3, EC350\_Cloud Link.TE3). Use the Site ID 1 and Site ID 2 fields to create site specific Item templates. The item template files are named as <SiteID1>\_<SiteID2>.TE3 file. Ensure that the file is saved in *C:\ProgramData\Honeywell\MasterLink \ItemTemplates* folder.

Dashboard	Administer				
<u>)</u> Site	Activity Log   Export Instrument	Data   Import Instrument Data   Item Template	Configuration		
Gj View/ Edit	Item Template Configuration				
$(\mathcal{O})$	Instrument Type	Items		Template Items	Reference Value
Calibrate	EC 350	0 - Corrected Volume	<b>^</b>	90 - Cor Volume Units	CCF -
R	Cloud Link	2 - Uncorrected Volume		89 - Temperature Units	F 🔹
Read Data	EC350 + Cloud Link	5 - Ch-A Pulses	$\otimes$		
		6 - Ch-B Pulses Success 1 Items has been s	aved successfully		
Live Data		7 - Ch-C Pulses			
Ċ.		10 - P1 High Alarm Limit	Remove Demove All		
Administer		11 - P1 Low Alarm Limit			
Q		12 - P1 Cal Atmos Pressure			
Settings		13 - Base Pressure			
		14 - Atmospheric Pressure			
Security		15 - Press used at P1-Zero			
πΔ		16 - Press used at P1-Span	v		
\$71/ 		00003434	Saua Tamalata Fit		
Í	Site ID Air Site ID 2	00002424	Save Template File		
Disconnect	Connected (EC350 + Cloud Link)      Te   Te	est 00002424 - 00002424		Comm Monitor   Ser	nd Capture Buffer to File

## 3.8.5 Clear Logs

You can use the 'Clear Logs' screen to clear logs from the connected site. the logs are cleared from the MasterLink database, and not from the connected device or site.

Since the purpose of the 'Clear Logs' feature is to clean the MasterLink database without archiving the data, it is recommended to <u>Export Instrument Data</u> before performing this action.

Honeywe	ell   MasterLink		Relea	ise: R510.1	Build Version:	11.1.18.0   (i)   (?)	Q Admin	- = ×
Dashboard	Administer							
<b>Q</b> Site	Activity Log   Expo	ort Instrument Data   Im	port Instrument E	Data   Iter	n Template Co	nfiguration Clear Lo	ogs	
<b>(</b> )	🔘 Logs 🔵 Sites							
View/ Edit	✓ Audit Trail Logs ✓	Alarm Logs Vent Log	gs Diagnos	tic Logs	Cellular Logs	Shortlist Logs		
0								
Calibrate	Instrument V Select All	Site List				Selected Sites		
Baad Data	✓ Accutest	Site ID +	Туре	Site Name		Site ID +	Туре	Site Name
	Cloud Link	00000000 - 00000000	EC 350	Direct Con		0000000 - 0000000	EC 350	Direct Con
C Data	✓ CNI4	13217891 - 13217891	ERX	Direct Con	Add Add All	13217891 - 13217891	ERX	Direct Con
	✓ EC 350	00395506 - 00395506	EC 350	EC350_39	Remove Remove All	00395506 - 00395506	EC 350	EC350_39
Administer	<ul> <li>EC350 + Cloud Lin</li> </ul>	13217894 - 13217894	Mini Max	MiniMax-1:				
Administer	✓ ECAT							
() Sottings	🖌 ER 🚽	•				•		•
	Date F	Range:					All Date	s
Security	Start D	Date 9/3/2017	12:00:00 🕒	End Date	9/14/2017	12:00:00	Calculate	Date Range
<i>#</i> ^				Clear Loos				
Ø				Little Logo				
Connect	🕽 Not Connected   📮	-			(	Comm Monitor   Send	Capture Buffer	to File 🔡

To clear logs:

- 1. Start by selecting **Logs** or **Sites**. Then select the logs that you want to clear. If you select Sites, then all logs in the selected site will be cleared.
- 2. Select the instrument type, and then a list of sites will be displayed. Click on the required site (s) and click **Add**.
- 3. Select the required date range.
- 4. Finally click **Clear Logs** to clear the selected logs.

# 3.9 VAS

# 3.9.1 TAC (Technical Assistance Center) Support

Assistance in planning, trouble shooting, installation, training and maintenance of the site instruments is rendered through TAC. A member with TAC chat client is available for the user in predefined times only.

Dashboard application is accessible only in the Internet Explorer browser.

#### Prerequisites

It is required that the MasterLink Dashboard should be open (offline or online mode) for the chat client application to commence with the user at the site.

Honeywell	MasterLink		Release: R510.1   Build Version: 12.1.3.	.0   ()   (?)   (Q) Admin   _ 5	×
Dashboard					
Q Site					
() View/ Edit					
Ø		YOU ARE OFFL	INE		
Calibrate		Currently no device is conr	nected.		
Read Data		Connect to a site.			
C Live Data					
Administer					
() Settings					
- ( <b>i</b> ):	Comm Monitor				$\otimes$
Security	Incoming				
<i>4</i> £	Outgoing				
Ø	Evaluate Trigger Errors Retries			Recording Communications Baud rate:	

On launching the remote client, you will see a screen to sign in.

Honeywell TAC Chat Client Build version 1.0.0		e	$\otimes \otimes$
	Honeywell   TAC Chat Client Build version 1.0.0		
	SIGN IN		

Login with your details.

Honeywell   TAC Chat Client	d version 1.0.0.0	$\odot \oslash \otimes$
	Honeywell   TAC Chat Client Build version 1.0.0.0	
	SIGN IN	
-		

When there are no new requests from the site, this is how the dashboard appears with zero lined below the different modes of requests.



### 3.9.2 Requests

- Total : Number of requests that the TAC member receives from the site
- Open : Request that the member has to initiate to resolve
- In Progress: Request that the member is currently working on
- Closed : That which has been resolved and closed

When the user at the site faces some technical glitch then, he initiates the TAC support from his mobile device which redirects to the remote client as below. A new request pop-up window appears to the left bottom.

Honeywell	TAC We	b Supp	ort						
Sharath Technical Ass Hooywell link	sistance Center mational		Total Tickets 07	Open 02	,	Assigned 00	In Progress 00	Closed 05	
TICKETS									Q Search
Reg ID †	Customer Name	Reported	Description	Assigned To		Status	Logged Date		Online Members
07721211-abe0-4/63-bcb4-8b9c	Honeywell	Fasiga	audit issue	raju	•	Closed	01/16/2018 5:51	pm	Rob Duch
7e6d8b7-43a7-4274-a003-807()	Honeywell	Qumyny	data issue	raju1	•	Closed	01/16/2018 6:00	)pm	TAC Member
179b2ed-e6c9-484b-b1aa-79cd	Honeywell	Сехаеру	log		•	Open	01/17/2018 12:0	5 pm	TAC Member
(baf4356-ecdb-45c3-9f95-0007()	Honeywell	Qodavi	data issue		•	Closed	01/17/2018 12:4	3 pm	
edfae8b-22f5-41a4-9035-a2e1a	Honeywell	Cikuke	data		•	Closed	01/17/2018 12:4	4 pm	
		Tasaela	audit issue		•	Closed	01/17/2018 3:58	pm	
A new request 3cc175bf a0c6-34ef675c6ca4 add Technician Tusoce recen	-d310-45e2- ed by 10y	Tusoce	logger data		•	Open	01/17/2018 4:00	)pm	

Once the new request pops up, assigning a member to resolve the corresponding request can be done in three different ways:

- 1. Drag and drop : Tap on the request issue, drag it with the cursor or mouse pointer and assign it to the members available online on the right of the screen.
- 2. Search : Tap on the issue request, when it gets highlighted unlike the image below then, type the name of the chosen online members to assign.

Sharath Technical Assistance Center Honeywell International       Total Tickets       Open       Assigned       In Progress       Closed         05       00       01       01       03         TICKETS       Customer Name       Reported       Description       Assigned To       Status       Logged Date       Online Members         1c765bf8-cb7c-4f9d-8f2a-8cc878 Kasype       Kasype       ABCD        Closed       01/12/2018 4:00 pm       Bob Rush         802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae       SHaraegae       Goud        Other Closed       01/12/2018 4:00 pm       Bob Rush         802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae       SHaraegae       Cloud       Bob Rush       TaC Member       Ing Else         26c2da40-0dce-4c7f-s9e8-fd5451 Revohl       Revohi       Cloud       Bob Rush       Ing Else       Ing Else	Sharah Technical Assistance Center Theseywell International       Total Tickets       Open       Assigned       In Progress       Closed         05       00       01       01       03		Web Supp	ort						
ICKETS     O5     O0     O1     O1     O3       ICKETS     Customer Name     Reported     Description     Assigned To     Status     Logged Date       1c765br8-cb7c-4f9d-8f2a-8cc876     Kasype     Kasype     ABCD     Closed     01/12/2018 4:00 pm       802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae     SHaraegae     cloud     01/12/2018 4:00 pm     TAC Member       96c2da40-0dce-4c7f-a9e8-fd545IRevohl     Revohl     cloud     Bob I     Image Status     01/12/2018 4:00 pm	Discription     Os     O0     O1     O1     O3       TICKETS     Req ID *     Customer Name     Reported     Description     Assigned To     Status     Logged Date       1c765b76-cb7c-4f79d-8f2a-8cc878 Kasype     Kasype     ABCD     Closed     01/12/2018 4:00 pm     Bob Rush       802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae     SHaraegae     Cloud     Bob I     Online Members       96c2da40-0dce-4c7f-a9e8-fd5451 Revohi     cloud     Bob I     Sh     Image: Sh       8058 e9b-9-b709-4f94-bf13-82557 Faebyso     Faebyso     CloudLink is not wor Rame     Sh       287d0721-255f-42d2-bc2a-e14d     Kekaetu     ZHyrolae     CloudLink is not wor Ramesh     In Progress     01/12/2018 4:42 pm	sharath Technical Assistance Cen Honeywell International		Total Tickets	Оре	en	Assigned	In Progress	Closed	
TICKETS         Req ID *       Customer Name       Reported       Description       Assigned To       Status       Logged Date       Online Members         1c765bf8-cb7c-4f9d-8f2a-8cc878 (Kasype       Kasype       ABCD       Closed       01/12/2018 4:00 pm       Bob Rush         802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae       SHaraegae       cloud       01/12/2018 4:02 pm       TAC. Member         96c2da40-0dce-4c7f-a9e8-fd545I Revohl       Revohl       cloud       Bob I       Image: Status       Image: Status	TICKETS         Req ID *       Customer Name       Reported       Description       Assigned To       Status       Logged Date       Online Members         1c765br8-cb7c-4f9d-8f2a-8cc878       Kasype       ABCD       Closed       01/12/2018 4:00 pm       Bob Rush         802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae       SHaraegae       cloud       Outland Bob       Outland 00 (43/0019 4:02 mm)       TAC. Member         96c2da40-0dce-4c7f-s9e8-fd545I Revohi       Revohi       cloud       Bob       Shi       Bob Rush         802       CloudLink is not wor       Ramesh       Shi       Bob Rush       TAC. Member         828700721-255f-42d2-bc2a-e14d       Kekaetu       Z Hyrolae       CloudLink is not wor       Ramesh       01/12/2018 4:42 pm       Ramesh							01		
Req ID +     Customer Name     Reported     Description     Assigned To     Status     Logged Date       1c765bf8-cb7c-4f9d-8f2a-8cc878 Kasype     Kasype     ABCD     Closed     01/12/2018 4:00 pm     Bob Rush       802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae     SHaraegae     cloud     Closed     01/12/2018 4:02 pm     Bob Rush       96c2da40-0dce-4c7f-a9e8-fd5451 Revohi     Revohi     cloud     Bob I     Image: Control of the point of the poi	Req ID +     Customer Name     Reported     Description     Assigned To     Status     Logged Date       1c765bf8-cb7c-4f9d-8f2a-8cc878     Kasype     ABCD     • Closed     01/12/2018 4:00 pm     Bob Rush       802e46eb-ba4-401d-a4f5-f620     SHaraegae     SHaraegae     cloud     • Closed     01/12/2018 4:02 pm     Image: Comparison of the temperature of temperate of temperature of temperature of temperature of temper	TICKETS			_	_				Q Search
1c765bf8-cb7c-4f9d-8f2a-8cc878 Kasype ABCD Closed 01/12/2018 4:00 pm 802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae Cloud Closed 01/12/2018 4:02 pm 96c2da40-0dce-4c7f-a9e8-fd5451 Revohi Revohi Cloud Bob Q sh	12765bf8-cb7c-4f9d-8f2a-8cc878 Kasype Kasype ABCD Closed 01/12/2018 4:00 pm Bob Rush 802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae cloud Cloud 96c2da40-0dce-4c7f-a9e8-fd545I Revoli Cloud eb83e9b9-b709-4f94-bf13-82557 Faebyso Faebyso CloudLink is not wor Ramesh In Progress 01/12/2018 4:42 pm Ramesh Something Else	Req ID 🗢 Customer	Name Reported	Description	Assign	ned To	Status	Logged Date	2	Online Members
802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae SHaraegae cloud TAC Member	802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae cloud TAC Member 96c2da40-0dce-4c7f-a9e8-fd5451 Revohi cloud Bob t eb83e9b9-b709-4f94-bf13-82557 Faebyso Faebyso CloudLink is not wor Ramesh 287d0721-255f-42d2-bc2a-e14d Kekaetu ZHyrolae CloudLink is not wor Ramesh In Progress 01/12/2018 4:42 pm	1c765bf8-cb7c-4f9d-8f2a-8cc878 Kasype	Kasype	ABCD			Closed	01/12/2018 4:0	0 pm	Bob Rush
P6c2da40-0dce-4c7f-a9e8-fd545IRevohi Revohi cloud Bob1	P6c2da40-0dce-4c7f-a9e8-fd545l Revohi     Revohi     Cloud     Bot     Q     Sh     Ramesh       ab83e9b9-b709-4f94-bf13-82557 Faebyso     Faebyso     CloudLink is not wor     Ramesh     Bob Rush     Ramesh       287d0721-255f-42d2-bc2a-e14d     Kekaetu     ZHyrolae     CloudLink is not wor     Ramesh     01/12/2018 4:42 pm	802e46eb-ba4a-401d-a4f5-f6e20 SHaraegae	SHaraegae	cloud				01/10/2019 4-2	12 nm	TAC Member
	Bob Rush     Bob Rush       Ramesh     Ramesh       287d0721-255f-42d2-bc2a-e14d     Kekaetu       ZHyrolae     CloudLink is not wor       Ramesh     In Progress       01/12/2018 4:42 pm	96c2da40-0dce-4c7f-a9e8-fd545I Revohi	Revohi	cloud	Bob F	Q	sh			
eb83e9b9-b709-4f94-bf13-82557Faebyso Faebyso CloudLink is not wor Ramer Ramesh TAC Member TAC Member	287d0721-255f-42d2-bc2a-e14d Kekaetu ZHyrolae CloudLink is not wor Ramesh  In Progress 01/12/2018 4:42 pm Something Else	eb83e9b9-b709-4f94-bf13-82557Faebyso	Faebyso	CloudLink is not wo	r Rames	Bob R Rame	lush Ish			Ramesh TAC Member
287d0721-255f-42d2-bc2a-e14d Kekaetu ZHyrolae CloudLink is not wor Ramesh • In Progress 01/12/2018 4:42 pm		287d0721-255f-42d2-bc2a-e14d Kekaetu	ZHyrolae	CloudLink is not wo	r Rames	sh	<ul> <li>In Progress</li> </ul>	01/12/2018 4:4	2 pm	Something Else

3. Direct Online : Select the request and click on the members who are online and then, tap on 'Assign' to assign the request

sharath Technical As	sistance Center	1	Total Tickets	Open	Assigned	In Progress	Closed	
	mational		07			00	05	
ICKETS								Q Search.
Reg ID *	Customer Name	Reported	Description	Assigned To	Status	Logged Date		
721211-abe0-4f63-bcb4-8b9	Honeywell	Fasiga	audit issue	raju	Closed	01/16/2018 5:51	pm	Online Members
e6d8b7-43a7-4274-a003-807	Honeywell	Qumyny	data issue	raju1	Closed	01/16/2018 6:00	) pm	sharath TAC Member
179b2ed-e6c9-484b-b1aa-79c	Honeywell	Сехаеру	log		Open	01/17/2018 12:0	5 pm	
baf4356-ecdb-45c3-9195-0007	Honeywell	Qodavi	data issue		Closed	01/17/2018 12:4	3 pm	
dfae8b-22f5-41a4-9035-a2e1	Honeywell	Cikuke	data		Closed	01/17/2018 12:4	4 pm	
:4c04f5-6624-4f84-9dae-d9d1	Honeywell	Tasaela	audit issue		Closed	01/17/2018 3:58	pm	
cc175bf-d310-45e2-a0c8-34ef	Honeywell	Tusoce	logger data	sharath	In Progress	01/17/2018 4:00	pm	

Once the request is assigned to one of the TAC member, issue with a brief technical description pops up at the bottom right of the screen along with the user information from the site. This will update the request number accordingly. The TAC member can accept/ignore the request and can also forward the request to another member when he chooses to 'Ignore'.

sharath TACMember Online *	Total O 1	pen In Progress 0 1	Closed 0		
My Tickets	0	New Ticket Arrived			
CloudLink is not workin Customer ID Kekaetu	ng User ID ZHyrolae	Device Type EC350			
				Type your me	ZHyrolae Hi TAC I am facing Issu Reply Ignore

If he is accepting the request then, the chat communication between the member and the user at the site is initiated. All the technical specifications are exchanged via chat communication regarding the issue. If the request is meagre then, chat communication is sufficient to resolve the issue if

Honeywell   TAC Cha	t Client Build version 1.0.0.0					$\odot \oslash \otimes$
sharath	Total	Open li	n Progress	Closed		A
Online V				1		Take Control
My Tickets	(i) Re	mote device con	inection is in p	rogress	Today , 17 Jan	Take Scotterer
logger data				×	<b>N</b> 4.01 PM	
Customer ID Honeywell	User ID Tusoce	( 6	Device Type C350			401 PM Hello
					what is your firmware version? 402 PM	0
						4:02 PM 1.099
						0
					Type your message hear	

not, a remote server request has to be initiated through 'Take Control'.

The MasterLink application dashboard will be initiated with Remote access request as below



Remote connection established

Honeywell	MasterLink			lease: R510.1   Build Version: 12.1.3.	0 (0) (0) Quana  = ♂ :
Destioned	Dashboard			Integrated EC350 +	Cloud Link Serial No. Retrest
2	Instrument Data			Alarms	Clear All
Gi View Edit	_	—	_		NA
Cantorn	_		_		
S) Read Date	Configuration Check	Time Sync	± Firmware	Audit Trail	Battery
Contraction Contraction					
Aminister					
() Saminga					
*	Comm Monitor				(
Security	Incoming				
- 69	Outgoing				
ø	Evaluate Trigger Errors	Retries			Recording Communications Baud rate:

Once the issue is resolved, the request is closed by 'Disconnect' on Dashboard application or Logging out of TAC chat client or the user at the site can close the chat support.

# 3.10 Settings

# 3.10.1 Communications Setup

The 'Communications Setup' tab can be used to define the relevant communication settings required for connecting to the instrument.

Q Site	Settings								
Gj View/ Edit	Communication Setup   Time-Sync Properties   Auto Download Settings								
Calibrate	Communications S	etup							Advanced Settings
9	Serial Port Connection		Modem Connection		Special Connection				
Read Data	Connector	Baud Rate	Connector	Baud Rate	Connector	Baud Rate			
Live Data	COM3 *	9600 •	* Modem Init String	Tial Prefix	Special Init String	Dial Prefix	•		
¢			Modern Introducing		opedarinit during				
Administer			Modern Type	Dial Type					
Ø Settings			Standard_Hayes_Comp	al Tone 🔻					
Security									
्रि Update									
ø					ОК				

Communication settings can be defined for:

- Serial Port
- Modem

Special Connectivity option

**Serial Port Connection** type connects the PC directly to the instrument using a serial cable. Follow the steps to communicate using a serial port connection:

- 1. Connector: Select the COM port
- 2. Baud Rate: Select the applicable baud rate from the drop down list.
- 3. IrDA: Check IrDA only for IR communication and uncheck for serial communication

**Modem Connection** type connects the PC to a Hayes modem using POTS (plain old telephone service) to another Hayes modem then to the instrument. Follow the steps to communicate using a modem connection:

- 1. Connector: Select the COM port
- 2. Baud Rate: Select the applicable baud rate from the drop down list.
- 3. **Dial Prefix:** If required, enter a dial prefix. These characters will precede the site list phone number in the site list. This is commonly used to access an outside line (9,) or on a portable computer, to temporarily enter an area code without modifying the site list.
- 4. Modem Type: Select either Standard Hayes Compatible (default) or the Racal Radio Pad from the drop down list.
- 5. Dial Type: Select either Tone (default) or Pulse from the drop down list.
- 6. Modem Init String: Enter the modem initialization string. This string is modem specific.

**Note:** Please note that a description of the modem configuration settings are detailed in the operation manual that was supplied with modem. Please refer to modem manual and find the command that turns off error control. This command, following the command to reset the modem to factory defaults, is usually all that is needed for the modem initialization string.

Attention: For Racal Radio Pad configuration, set the Modem Init String to: &FQ0E0V0S0-0=0S12=0X0

**Special Connection** type can be used to support standard modems (i.e., a second standard modem), which may have special configuration requirements. In addition, they can support some models of wireless TCP/IP modems (CDPD modems for example.) They are connections that have modems on both the PC (host) and instrument ends. Follow the steps to communicate using a modem connection:

- 1. Connector: Select the COM port
- 2. Baud Rate: Select the applicable baud rate from the drop down list.
- 3. **Dial Prefix:** If required, enter a dial prefix. These characters will precede the site list phone number in the site list. This is commonly used to access an outside line (9,) or on a portable computer, to temporarily enter an area code without modifying the site list.
- 4. Special Init String: Select the special initialization string from the drop down list.

Click **Advanced Setup** to use default settings. These are additional settings used for serial connection for all Honeywell devices. If required, change these values to establish communication with 3rd Party devices.

MasterLink strongly encourages the use of the default settings.							
Parity		Data Bits					
None	•	Bit8	•				
Stop Bits							
One	•	Defau	It Setting				

The default settings will be automatically read and entered. Click on each of the drop-down boxes and select a choice from those lists.

The **Default Setting** check box will reset the parity, data bits, and stop bits to their original configuration.

**Note:** Please note that more description of the modem configuration settings are detailed in the operation manual that should have been supplied with modem.

After configuring the communications settings, click **OK** to save the changes.

## 3.10.2 Time-Sync Properties

Time-Sync Properties' tab can be used to configure the Time Sync settings. The Time Sync function is used to synchronize instrument time with host time.

Q Site	settings	
G) View/ Edit	Communication Setup   Time-Sync Properties   Auto Download Settings	
Calibrate	Time Sync Properties	
Read Data	Enable Time-Sync function	
Live Data	Instrument DST Compensation Options Using the PC's date and time as the reference, MasterLink will adjust the instrument's time to maintain Standard Time DST	
Administer	Time Difference Trigger Point	
Settings	HH         MM         SS         3           0         :         2         :         0         3	
√ŷ⁄ Update	\$} Parie	
	ок	
Disconnect	) med O Connected (EC 350)   📮 ec350ste   00000000 - 00000000	Comm Monitor   Send Capture Buffer to File

To configure Time Sync properties:

- 1. Check Enable Time-Sync function
- 2. Select either Standard Time or DST.
- 3. View or modify **Time Difference Trigger Point**. A Time Sync will be triggered based on the time difference configured in this field.

Click **OK** to save the changes.

**Note:** It is recommended that for any change in settings, you need to disconnect and then reconnect the instrument, for the settings to take effect. You can verify time-sync from the dashboard.

### 3.10.3 Auto Download Settings

The 'Auto Download Settings' tab is used to configure the number of days for which dashboard data is loaded.

### Note: It is applicable only for Dashboard data.

2 Site	Settings							
() View/ Edit	Communication Setup	Time-Sync Proper	ties Auto Download Set	tings				
() Calibrate	Auto Download Setti	ngs					1	
9	Alarm Log		Audit Trail	£	Event Log			
Read Data	From Last Download	Max. of 35 Days	From Last Download	Max. of 35 Days	From Last Download	Max. of 35 Days		
Live Data	Number of Days	0 Days	Number of Days	0 Days	Number of Days	0 Days		
Administer								
Ø Settings								
Security								
اللہ) Update								
ø	Connected ( EC 350)	ac250e#a 00000000	0000000		ок		Ocean Manitan   Com	Conture Duffer to File

Edit or modify the auto download settings for the following logs:

- Alarm
- Audit Trail
- Event

Check either From Last Download or Number of Days , enter the number of days and then click OK.

**Note:** Configure the Number of days as 0 to disable auto download of logs on dashboard.

## 3.10.4 Device Properties

The Device Properties include the **User ID** and the **Access Code** used to connect to a site in case of Direct Connect.

While using the 'Direct Connect' feature, enter the **User ID** and the **Access Code** of the intrument, and then click **Save** to continue connecting to the site.

Honeywell	MasterLink	Release: R510.1   Buil	d Version: 11.1.18.0   🤇	)   ?   @ admin	- ¤ ×
Dashboard	Settings				
Q Site	Communication Setup   Time-Sync Properties	Auto Download Settings	Device Properties		
View/ Edit	Device Properties				
0	Default Auto Connect settings				
Calibrate	User ID * 0				
Read Data	Access Code *				
Contraction Live Data					
Administer					
Settings					
ġ.					
Security					
<u>j</u>		Save			
Disconnect 🔘 🤇	Connected ( EC 350)   💭 Direct Connect 00000000 -	0000000	Comm Monito	r   Send Capture	Buffer to File

# 3.11 Security and User Management

MasterLink supports a role based access control mechanism. A MasterLink administrator can create roles and assign permissions to the role. The administrator can then create users and assign roles to users. With this role based access mechanism, user is restricted to the operations that are associated with assigned role. This is a mechanism used to control access to different MasterLink operations.

User Management enables the utilities to secure the access to different MasterLink functionalities by its Technicians / operators. This should not be confused with the User Table functionality as User Table helps to manage access to device functionalities.

User Management is typically an administrative function. It allows an Administrator to

- Create Users who could log into MasterLink application
- Restrict the user's operation capabilities by assigning roles with specific privileges
- Group different operational privileges in terms of roles.

A role defines a set of permissions that are assigned to a user, which allow them to perform a set of actions. Example of a role could be "Level 1 Technician" who can only read information from the device using MasterLink and a "Level 2 Technician" who can read and write information. The created roles can then be assigned to different users needing similar access privileges.

### 3.11.1 User Roles

A role is a collection of permissions that defines a function, such as the Administrator or a Field Service Engineer. Users who are placed in this role will inherit these permissions. Roles are created by users (usually administrators) and are used to group together privileges or other roles. They are a means of facilitating the granting of multiple privileges or roles to users.

On the 'User Roles' screen, you can view a list of all the roles configured in the system, and the list of users assigned to a selected role.

2 Site	User Management			L,	
View/ Edit	User Configuration User Roles				
Calibrate	Admin_Role	Admin_Role			×
Read Data	user 🕨	Full Name Email Admin	Last Accessed 12/12/2016 6:24:41 PM		Delete the selected role
Contraction Live Data					Modify the selected role
Administer					
Ø Settings					
Security					
∜Ĵ⁄ Update				_	
			Add New		
Disconnect	◯ Connected (EC 350) │ 💭 ec350site │ 0000000	10 - 00000000			Comm Monitor   Send Capture Buffer to File

To create a new role:

- 1. On the 'User Roles' screen, click Add New.
- 2. Type the name and description of the role.
- 3. Select the check-box next to a privilege to assign it to the role being created.
- 4. Click Save.

site	User Management				
View/ Edit	User Configuration User Roles	5			
() Calibrate	User Role * test	Role Decription			
Read Data	Configuration	Calibration	Firmware Download	Administer	÷
Live Data	Write Items	Calibration	Firmware Download	Shut Down Device	
Administer	Send Log Configuration			Administer Data	
Settings	Send User Table			Edit Audit Trail	
Security					
Update					
~			Save Discar	d	*
(Q)					

The new role will appear in the list of roles on the 'User Roles' screen.

Using the table, you can then edit the role name, the description, and the role privileges.

To delete a role, select the role from the list of roles and then click  $\overline{\boxtimes}$  on the top-right corner of the screen.

# 3.11.2 User Configuration

The 'User Configuration' screen shows a list of all existing MasterLink users and this screen also allows you to create new MasterLink users.

Attention: Before creating a new user, ensure that you have already created a user role, and necessary permissions are assigned to that role. To learn more about creating a new role, refer to the section on <u>Creating User Roles</u>.

To create a new user:

- 1. On the 'User Configuration' screen, click Add New.
- 2. Type the user name of the new user.
- 3. Select a role from the **Assigned Role** drop-down list. Roles configured in the <u>User Roles</u> tab, appear in this drop-down list. If you need to change permissions assigned to this role, or if you need to create a new role, then you can make the required changes in the <u>User Roles</u> tab.
- 4. Type a password for the user account, and then re-type it to confirm the password.
- 5. Click Save.

Dashboard	User Management					
© Site	User Configuration User	Roles				
View/ Edit	Add New User					
Calibrate	$\frown$	User Information		Password Information		
Bood Data		User Name *	test123	Password *	********	
		Assigned Role	Admin_Role •	Confirm Password *	****	
Live Data		Email ID *	test123@abc.com			
Administer	Username					
Ø Sottinger	User Role					
-						
Security						
<i>4</i> D				Save Discard		
Disconnect	Connected (EC350 + Cloud Link)	Test 00002424 - 0	0002424			Comm Monitor   Send Canture Buffer to File

The newly created user is added to the list of users.

### 3.11.2.1 Passkey Generation

A Passkey contains encrypted information of user name and privileges. For a user to be effected in other MasterLink instances a Passkey needs to be generated by the Administrator and sent to the user. The site Administrator can create the following passkey files:

- User Registration This is used to create license files to allow new users to register to the MasterLink application.
- Update Account This is to change privileges of an existing user. Privileges can be added/removed based on the business requirement.
- **Forgot Password** If a user forgets their password, site administrator can create passkey files allowing users to reset their password.

Dashboard	User Management								
<u>)</u> Site	User Configuration	Jser Roles							
Ciew/ Edit	Admin Admin_Role	×				User Role Admin_Role			*
Calibrate	test123 Admin_Role	Ì			User Information	test123			
Contraction Live Data					Assigned Role Email ID *	Admin_Role test123@abc.com	•		
Administer					Passkey Generation				
Ø Settings					Register		ণ্দ		
Security					Update Account Forgot / Reset Password		°ग °ग		
<i>\$</i> }				Save	Cancel				
Disconnect (	Connected (EC350 + Cloud Li	ink)   🛄 Test   00002424 -	00002424				Comm M	onitor   Send Captu	ire Buffer to File

To generate a passkey:

- 1. On the User Configuration screen, select a user account to view details of the user.
- 2. Under Passkey Generation, click on the key icon next to the activity. You can generate the following keys:
  - Register: A key to register a new MasterLink user
  - Update Account: A key to update an existing MasterLink user account.
  - Forgot/Reset Password: A key to reset a forgotten or lost password.
- 3. Browse and select a location to save the passkey.
- 4. Send the passkey as an attachment to the user through an email.

	User Role Tech	
User Information		
User Name *	James	
Assigned Role	Tech	•
Email ID *	James@honeywell.com	
Passkey Generation		
Register	٥ <sub>π</sub>	
Update Account	ο <sub>π</sub>	
Forgot / Reset Password	੦ਜ	
User Configuration	Masterlink 🕨 LicenseFiles	× to Search LicenseFiles Q
Organize  View folder		
Recent Places Creative Cloud Files	Name	Date modified Type
<ul> <li>□ Libraries</li> <li>□ Documents</li> <li>□ Pictures</li> <li>□ Subversion</li> <li>□ Videos</li> </ul>	E	itens maten your search.
P Computer S OSDisk (C:) MyDrive_E842801 (\\ie1av	M + 4	
File name: James_pas Save as type: PasskeyFile	skey e (*.MLK)	 
Hide Folders		Save Cancel

# 4 Update

You can use MasterLink to update the EC 350/ERX 350 device or Modem firmware, and can also load the instrument with security certificates. This chapter describes the process of updating field instrument firmwares and loading security certificates.

# 4.1 EC 350/ ERX 350 Firmware Update

You can use MasterLink to upgrade EC 350/ ERX 350 firmware.

To get started, click **Browse** and select the firmware file.

<u>Q</u> Site	Update							
() View/ Edit	EVC 1.1032	Modem Certificate	I.					
$\bigcirc$						Step	Status	
Calibrate	Firmware Filename:	File Location:			Browse	Validate FW file		
Ð						Send Firmware		
Read Data						Validate Firmware		
$\bigotimes$	Versions		Selected Firmware D	etails		Sync date and time		
Live Data	Current Firmware	1.1032	Firmware Type					
<b>*</b>	Loader	3.1000	New Firmware					
Settings								
Security								
Update								
ø				Start Up	R	3581		
Disconnect	Connected (EC 350)	Site 045   11111111-2	2222222					

Click **Start Upgrade** to upgrade the EC 350/ ERX 350 firmware. As the firmware upgrade progresses, you can observe the status on the right pane.

# 4.2 Cloud Link Modem Firmware Update

You can use MasterLink to upgrade Cloud Link Modem firmware.

To get started, Click **Browse** and select the firmware file.

∑ Site	Update					
G View/ Edit	EVC   Modem	Certificate				
Ø	_				Step	Status
Calibrate	Firmware Filename:	File Location:		Browse	Validate Firmware	
9					Send Firmware	
Read Data					Validate Firmware	
$\bigotimes$	Versions		Selected Firmware Details		Sync date and time	
Live Data	Current Firmware		New Firmware			
¢						
Administer						
() Settings						
Security						
.∉∲						
ø				Start Upgrade	Reset	

Click **Start Upgrade** to upgrade the Cloud Link Modem firmware. As the firmware upgrade progresses, you can observe the status on the right pane.

# 4.3 Upload Cloud Link Modem Certificates

This tab is enabled if application is connected to EC 350 MasterLink R510.4 or integrated EC 350.

To enable SSL communication, **Security Enable** check box under certificate tab must be checked. Then upload a valid security certificate to the MasterLink R510.4 and host. These certificates can be self-signed or signed by a third party.

2 Site	Update												
View/ Edit	EVC   Modem	Certificate	I										
Ø	Security Enable							Step		Status			
Calibrate	Start Data	0/15/2016	P=0	End Date	0/15/2017	P=0		Valida Soud (	te Certificate File				
Read Data	Statt Date	5/15/2010		End Date	5/15/2017			Valida	te Certificate				
C Live Data	Certificate												
ġ	Certificate Type	Client Certificate	•										
Administer	Certificate File Name	File Location:					Browse						
Ø Settings													
Security													
لي¢ Update													
Ø	Connected (EC 250)	D She Official	111111 22	222222				Update			Correct Monitor	Sand Canbura Duffer to File	

Select the certificate type from the dropdown.

Browse and select a certificate file.

The certificate can be a:

- Client Certificate,
- Server Certificate,
- Private Key, or
- Ca Certificate

Click Update to send the certificate to the instrument.

Loading certificates to a MasterLink R510.4

**Note:** It is Mandatory to load security certificates to Cloud Link using Serial interface. Renewal of certificates can be done using any of the supported interfaces.

- 1. The following order to must be followed to load certificates to Cloud Link:
  - Key Certificate
  - Client Certificate

- Server Certificate
- CA certificate
- 1. Configure SSL private key in Cloud Link (Item Number: 3086)
- 2. Enable SSL in Cloud Link (Item Number: 3017)
- 3. Restart Cloud Link
- 4. Make sure that Time Sync is applied after restart of Cloud Link. This step is not required if SIM card with static IP address is used.
- 5. Add/Edit site as IPv4 with SSL enable as shown in below screen.

**Note:** The IP address and the port number can vary based on the customer network settings.

- 6. Configure SSL Private Key. This key should match the one configured in Cloud Link (Item Number: 3086)
- 7. Configure IP address and port number.

Internet/Phone	IPv4 -
	UDP SSL
SSL Private Key	*****
Site Phone/IP Address *	192.168.1.1 : 40000

Note: Place the certificates (CA, Client and Private Key file) in C:\Pro-

*gramData*\*Honeywell*\*MasterLink* \*Certificates*. Certificate names should match with following naming convention:

CA Certificate SiteId1\_SiteId2\_ca.pem

Client Certificate SiteId1\_SiteId2\_clientcertificate.pem

Private Key file SiteId1\_ SiteId2\_keyfile.pfx
# 4.4 Legacy Devices Firmware Upgrades

Mercury Instruments legacy devices include:

1. Accutest	8. Mini-Max
2. CNI4	9. PTModbus
3. ECAT	10. Pulse Accumulator
4. ER	11. TCI
5. ERX	12. Turbo Corrector
6. Mini	13. Turbo Monitor
7. Mini-AT	

For Mercury Instruments legacy devices, you need to use the **Firmware Upgrader** tool to upgrade firmware.

MasterLink displays the following message if you try to update firmware of legacy devices:

Bangwei	MasterLeik R51	0.1 Build Version 11.1.16.0				5.91	U			0.0	Que 1 - 1	ж
<u> </u>	Update											
8	DIC   Moor	Centure										
0												
(C) Read Data												
0												
2												
۲					Please use Firm	ware Upgrader tool from th	e start men	a to upgrade in	atrument Firmware.			
*												
10												
	(anni Nankar											0
	Names 25(027)		104		. HISTORICS		pospaging	appropriate provide the second s		poleatingrouport	polativolation	
	Curgang.	po-page gas as a second s				po-posnipiagnorment			po-galeging.see17.0163.se17.01623(7.0463)07			
	1-0-0	Tage: the later								Recenting Community	stre Bad an \$10	
	Converted ( Put	le Accenditor   🖾 Devel Connect (02700)	100 - 0070	1800						Comm Muniter Sand	Capture Buffer to File	

The **Firmware Upgrader tool** is installed along with MasterLink R510.4, and an icon will be available on your desktop.

Firmware Upgrader							×
Firmware Filename:							
					Brov	vse	
Versions		l					
Current firmware:	,	Instrument lype:	EC 350 IrDA V	Step Validate FW file		Status	
New firmware:	,	Serial Port:	USB IrDA $\sim$	Send firmware			
Loader:	,	Baud Rate:	9600 🗸	Sync date and time			
Upgrader:	2.01.31						
		Set inst	rument's date and time				
		R6	estore saved item values				
		Exte	ernal flash memory copy				
			Access Code:			Start Upgrade	Exit
		Unlinked			ОК		
1	,		1				

# 5 Troubleshooting scenarios

Scenario	001
Problem	MasterLink stops communication with EVC over IrDA though Link is con- nected.
Environment	All OS
Resolution	Remove IrDA link and connect back.

Scenario	002
Problem	Connection fails over serial.
Environment	All OS
Decolution	<ul> <li>It could be mismatch of baud rate of MasterLink and device.</li> </ul>
Resolution	<ul> <li>It could be mismatch of comm port selection.</li> </ul>

Scenario	003
Problem	Load graph button is disabled when a user is connected to the site.
Environment	All OS
Resolution	Disconnect the instrument to activate the Load Graph button.

Scenario	004
Problem	User is unable to view certain dash board and Instrument data when con- nected to Android mobiles.
Environment	All OS
Resolution	Double tap the item to view the details.

Scenario	005
Problem	Application does not display device ID in 'Add/Pair' tab of MasterLink Android application once instrument session is timed out .
Environment	All OS
Resolution	Use Site Management screen to connect to the device.
Seconaria	006
Scenario	006

# 5 Troubleshooting scenarios

Problem	Application does not display device ID in "Add/Pair tab of MasterLink Android application once instrument session is timed out .
Environment	All OS
Resolution	Use Site Management screen to connect to the device.

Scenario	007
Problem	Item value/description is not completely visible in the Dashboard/Configure by Group screens.
Environment	All OS
Resolution	Tap the item value field to view the data

Scenario	008
Problem	User is unable to abort send log configuration file transfer.
Environment	All OS
Resolution	The transfer would be completed in a minute. Please wait till the operation is done.

Scenario	009
Problem	Sometimes site id's are duplicated in Add/Pair site screen.
Environment	iOS and Android
	This issue usually happens if site ID's Cloud Link 4G Modem are changed after an instrument is paired with the mobile. Advised to not to change the site IDs of Cloud Link 4G Modem once they are installed in the field. To resolve the issue:
	1. Download any Bluetooth Low Energy app from App Store / Play Store
Resolution	2. Scan for Cloud Link
	3. Still you can see the Cloud Link site id as previous names.
	4. Try to connect the Cloud Link
	5. Scan once again. You will able to see new site id's
	6. Now connect from MasterLink
Scenario	010
Problem	In TCP/IP connection, the device is not responding

Environment	All OS
Resolution	Then check the session timeout. By default the item is set to 30 seconds. Increase the session timeout.

Scenario	011
Problem	Device connectivity issue after a application is force closed or hanged
Environment	All OS
Resolution	If the device is not connecting, wait for 10-15 minutes until the com- munication session timeout of Cloud Link expires.

ants
/ou rom

Scenario	013
Problem	Post uninstallation of MasterLink installed with SQLite, if the user wants to delete existing MasterLink SQLite Database
Environment	All OS
Resolution	Delete MLConfig.sqlite file from the below locations:
	<ul> <li>C:\Program Files (x86)\Honeywell\MasterLink</li> </ul>
	<ul> <li>C:\ProgramData\Honeywell\Masterlink\Sqlite</li> </ul>
Scenario	14
Problem	Configuration check functionality not working for Integrated EC350 and CL
Environment	Desktop and Mobile
Resolution	Ensure you have the template file with new file extensions
Scenario	15

Problem	Preview of log data results in error or truncation of report data
Environment	All OS
Resolution	Change the default printer to "Microsoft XPS Document Writer" or ensure the default printer page size is configured as A4

Scenario	16
Problem	Communication buffer is not showing any data
Environment	Desktop
Resolution	Open the Communication Buffer window to start capturing the communication log in the file

Scenario	17
Problem	Edit Audit Trail button disabled
Environment	All OS
Resolution	Ensure user has the privilege to edit audit trail data. If user has privilege but still disabled then logoff and login to get it enabled.

Scenario	18
Problem	Memory allocation options for Log 4 and Log5 are not visible
Environment	All OS
Resolution	Ensure user has the privilege to edit audit trail data. If user has privilege but still disabled then logoff and login to get it enabled.

# 6 Glossary

#### Α

# **Activity Log**

This function is used to quickly view the Activity Log on screen. Please note that this log is different from the Event Log because this log mainly focuses on software activity (and some firmware activity) where the Event Log function records activity that is directly linked to and maintained within the instrument.

# Alarm Log

The alarm log contains descriptions of all significant problems detected by the system

# Audit Trail

You can use the 'Audit Trail' tab to view and download Audit Trial data from the instrument. The term "Audit Trail" has different meanings in MasterLink Software Application that depend on the type of connected instrument.

# D

# DBO

Database Owner. dbo is the default schema in SQL Server. You can create your own schemas to allow you to better manage your object namespace.

# Diagnostic log report

Displays log files containing messages that record all types of events, including startup and shutdown information, errors, warning messages, and access information

#### Е

# **Event Log**

The Event Log records activity that is directly linked to and maintained within the instrument.

#### L

# **Item File**

An Item File stores the current instrument's item code values on your computer in a file.

## **Item Report**

Displays comprehensive information for items

#### Κ

# key

Passkey generated by the site Administrator

#### L

# Load Graph

Loads saved graphs when offline

# Log trigger

A log trigger is an action that caused a record to be written to the audit trail log in the instrument.

# S

# Serial port

Port of your system to which the device is connected

# Short List

A Short List is the same as the standard Item List (stores the current instrument's item code values), except that you can customize it.

# Site Report

Displays the number of workers/employees and work equipment at the construction site

# SSL

SSL (Secure Sockets Layer) is the standard security technology for establishing an encrypted link between a web server and a browser. This link ensures that all data passed between the web server and browsers remain private and integral.