EDWARDS
United Technologies

FW-UL6S FireWorks Server Installation Manual

Version This document applies to FireWorks version 8.2.

FCC compliance This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Contact information For contact information, see www.edwardsfiresafety.com.

Content

Important information

Regulatory information

The FW-UL6S has been investigated against, and found to be in compliance with, the following standards:

- CAN/ULC-S303-M91 *Standard for Local Burglar Alarm Units and Systems, first edition*
- CAN/ULC-S527-11 *Standard for Control Units for Fire Alarm Systems, third edition*
- CAN/ULC-S559-13 *Standard for Equipment for Fire Signal Receiving Centres and Systems, second edition*
- CSA C22.1-12 *Canadian Electrical Code, Part 1*
- UL 365 *Standard for Police Station Connected Burglar Alarm Units and Systems, fourth edition*
- UL 609 *Standard for Local Burglar Alarm Units and Systems, eleventh edition*
- UL 636 *Standard for Holdup Alarm Units and Systems, tenth edition*
- UL 864 *Standard for Control Units and Accessories for Fire Alarm Systems, tenth edition*
- UL 1076 *Standard for Proprietary Burglar Alarm Units and Systems, fifth edition*
- UL 1610 *Standard for Central-Station Burglar-Alarm Units, third edition*
- UL 1635 *Standard for Digital Alarm Communicator System Units, third edition*
- UL 2017 *Standard for General-Purpose Signaling Devices and Systems, second edition*
- UL 2572 *Standard for Mass Notification Systems, first edition*
- NFPA 11 *Standard for Low-Expansion Foam Systems, 2010 edition*
- NFPA 11A *Standard for Medium- and High-Expansion Foam Systems, 2010 edition*
- NFPA 12 *Standard on Carbon Dioxide Extinguishing Systems, 2011 edition*
- NFPA 12A *Standard on Halon 1301 Fire Extinguishing Systems, 2009 edition*
- NFPA 12B *Standard on Halogenated Fire Extinguishing Agent Systems Halon 1211*
- NFPA 13 *Standard for the Installation of Sprinkler Systems, 2013 edition*
- NFPA 15 *Standard for Water Spray Fixed Systems for Fire Protection, 2012 edition*
- NFPA 16 *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems, 2011 edition*
- NFPA 17 *Standard for Dry Chemical Extinguishing Systems, 2013 edition*
- NFPA 17A *Standard for Wet Chemical Extinguishing Systems, 2013 edition*
- NFPA 70 *National Electrical Code*
- NFPA 72 *National Fire Alarm Signaling Code*
- NFPA 2001 *Standard on Clean Agent Fire Extinguishing Systems, 2012 edition*
- FM 3010 *Approval Standard for Fire Alarm Signaling Systems, 2010 edition*

UL 2572 security and data protection

For UL 2572 first edition applications only:

- Approved Security Function for FIPS PUB 140-2: No encryption employed

- Communication Security: Level 1

- Stored Data Security: Level 0

- Access Control Security: Level 2

- Physical Security: Level 1

- Audit Control: Not provided

Industry Canada information

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. Industry Canada does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Limitation of liability

To the maximum extent permitted by applicable law, in no event will United Technologies Corporation be liable for any lost profits or business opportunities, loss of use, business interruption, loss of data, or any other indirect, special, incidental, or consequential damages under any theory of liability, whether based in contract, tort, negligence, product liability, or otherwise. Because some jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damages the preceding limitation may not apply to you. In any event the total liability of United Technologies Corporation shall not exceed the purchase price of the product. The foregoing limitation will apply to the maximum extent permitted by applicable law, regardless of whether United Technologies Corporation has been advised of the possibility of such damages and regardless of whether any remedy fails of its essential purpose.

Installation in accordance with this manual, applicable codes, and the instructions of the authority having jurisdiction is mandatory.

While every precaution has been taken during the preparation of this manual to ensure the accuracy of its contents, United Technologies Corporation assumes no responsibility for errors or omissions.

Advisory messages

Advisory messages alert you to conditions or practices that can cause unwanted results. The advisory messages used in this document are shown and described below.

WARNING: Warning messages advise you of hazards that could result in injury or loss of life. They tell you which actions to take or to avoid in order to prevent the injury or loss of life.

Caution: Caution messages advise you of possible equipment damage. They tell you which actions to take or to avoid in order to prevent the damage.

Note: Note messages advise you of the possible loss of time or effort. They describe how to avoid the loss. Notes are also used to point out important information that you should read.

Chapter 1
Introduction

Summary

This chapter provides a brief introduction to the FW-UL6S workstation.

Content

Introduction

This manual provides instructions for installing a FW-UL6S FireWorks Server. It is intended for authorized and product-certified distributors who are responsible for the installation of fire alarm equipment and are already familiar with multiplex fire alarm systems and the relevant codes and standards.

This document does not provide instructions for installing or using the FireWorks graphical command interface software, or for programming a FireWorks life safety system.

Description

The FW-UL6S provides the hardware platform for a FireWorks life safety system. See Figure 1.

Figure 1: FW-UL6S FireWorks server
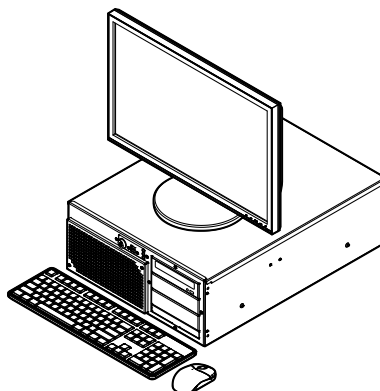
The FW-UL6S uses a hardware RAID 1 hard drive array consisting of two separate hard drives. Both hard drives store the same data. If one drive fails, the other drive continues to operate with all of the data intact.

The FW-UL6S is suitable for use as:

• A workstation in a FireWorks stand-alone life safety network

• A workstation or client workstation in both redundant and nonredundant FireWorks life safety networks

• A primary server, a backup server, or a witness server in a redundant FireWorks life safety network

• The communication transmission medium between VESDA detectors and EST3/EST3X life safety systems. For releasing service applications, the FW-UL6S may not control, manipulate, or display any releasing device service features.

• A Firefighter Smoke Control Station (FSCS)

Figure 2: Typical stand-alone life safety network
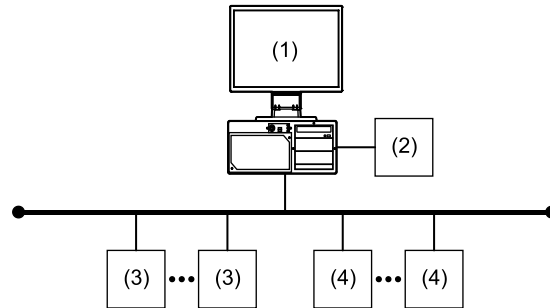
(1) FW-UL6S
(2) System event printer (if required)

(3) FireWorks nodes (125 max.)
(4) FireWorks remote clients (15 max.)

Figure 3: Typical nonredundant life safety network
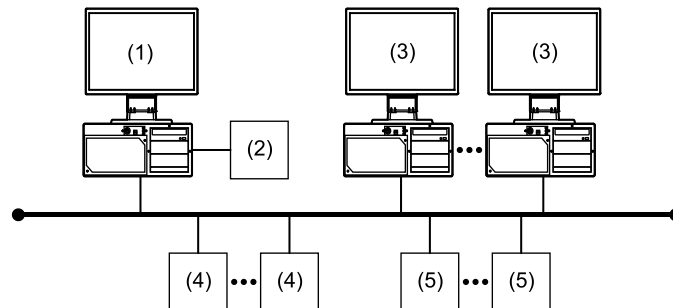
(1) FW-UL6S
(2) System event printer (if required)
(3) FW-UL6W client workstations (50 max.)

(4) FireWorks nodes (125 max.)
(5) FireWorks remote clients(15 max.)

Figure 4: Typical redundant life safety network
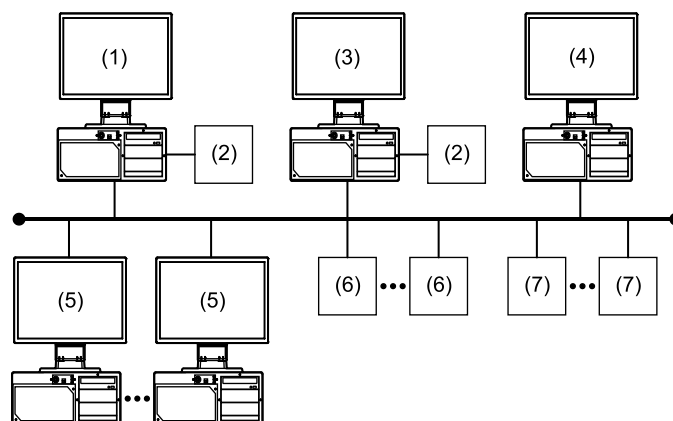
(1) FW-UL6S (primary server)
(2) System event printer (if required)
(3) FW-UL6S (backup server)
(4) FW-UL6W (witness)

(5) FW-UL6W client workstations (50 max.)
(6) FireWorks nodes (125 max.)
(7) FireWorks remote clients (15 max.)

Software product options

Table 1 lists the software products that you can install on the FW-UL6S. Software products are ordered and installed separately.

Access to the software products is controlled by a software key that has been activated with your personal initialization numbers (PINs).

Table 1: FireWorks software product descriptions

Product	Description
FW-CGSUL [1]	Stand-alone FireWorks software with command and control features (UL Listed).
FW-CGS [2]	Stand-alone FireWorks software without command and control features.
FW-DARCOM	Digital alarm receiver software for displaying Contact ID or SIA 4/2 formatted events from any fire alarm or security control panel. Requires a compatible digital alarm communicator receiver (DACR).
FW-IPMON1000	Digital alarm receiver software for displaying Contact ID formatted events from up to 1,000 iO Series fire alarm control panels.
FW-1S [3]	Display system information on one remote client computer connected to the Ethernet network.
FW-4S [3]	Display system information on up to five remote client computers connected to the Ethernet network. **Note:** Requires FW-1S. Activate FW-1S before you activate FW-4S.
FW-10S [3]	Display system information on up to five remote client computers connected to the Ethernet network. **Note:** Requires FW-1S and FW-4S. Activate FW-1S and FW-4S before you activate FW-10S.
FW-HSSD5	Allows up to five FW-HSSX1 (VESDA) node connections.
FW-HSSD20	Allows up to 20 FW-HSSX1 (VESDA) node connections.
FW-FAST	Automatically populate device maps with device information from AutoCAD files.
FW-NCZZFP	Optional client workstation software for nonredundant network systems (50 clients max.).
FW-RCZZFP	Optional client workstation software for redundant network systems (50 clients max.).
FW-NSZ5FP	Nonredundant server. Supports up to five nonredundant clients for a total of six workstations.
FW-NS15FP	Nonredundant server. Supports up to 15 nonredundant clients for a total of 16 workstations
FW-RSZ5FP [4]	Redundant server. Supports one primary, backup, and witness server, and five client workstations
FW-RS15FP [4]	Redundant server. Supports one primary, backup, and witness server, and 15 client workstations
FW-RS25FP [4]	Redundant server. Supports one primary, backup, and witness server, and 25 client workstations
FW-RS50FP [4]	Redundant server. Supports one primary, backup, and witness server, and 50 client workstations

[1] UL Listed when installed on an FW-UL6S or on an FW-UL6W.

[2] Not UL Listed.

[3] The FireWorks software installed on the workstation and the Remote Client software installed on the remote computer must be the same version number.

[4] Primary server can be used as a workstation; the backup and witness server cannot.

Front panel features

Figure 5 shows the features found on the front panel of the FW-UL6S.

Figure 5: Front panel features
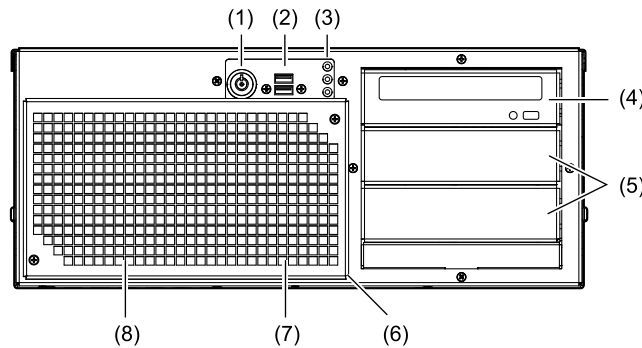
(1) ON/OFF switch
(2) USB 2.0/1.1 ports (2X)
(3) Status LEDs (see Table 2)
(4) Optical drive
(5) Empty drive bays
(6) Filter assembly
(7) Fan 2
(8) Fan 1

Table 2: Status LED descriptions

LED	Description
	Indicates the workstation is on
	Indicates hard drive activity
	Indicates internal faults reported by the watchdog card

Rear panel features

Figure 6 shows the features found on the rear panel of the FW-UL6S.

Figure 6: Rear panel features
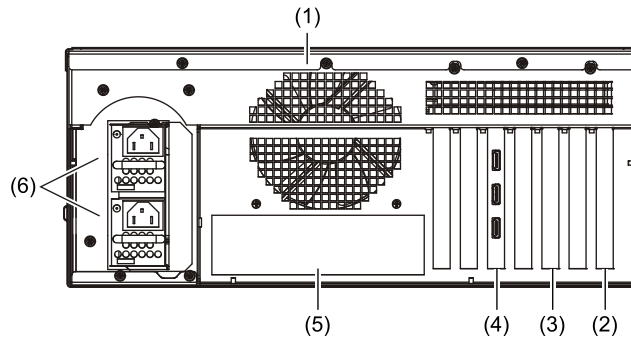
(1) Fan 3
(2) PCWD6 card
(3) Optional FW-ULVID3 card

(4) FW-ULVID3 card
(5) I/O panel (see Figure 7)
(6) Redundant power supplies

Figure 7: FW-UL6S I/O panel
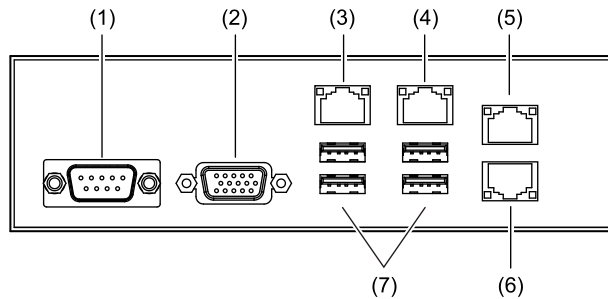
(1) Not used
(2) Not used
(3) RJ-45 Ethernet port (LAN 1)
(4) RJ-45 Ethernet port (LAN 0)

(5) RJ-45 Ethernet port (LAN 2)
(6) RJ-45 Ethernet port (LAN 3)
(7) USB 2.0/1.1 ports (4X)

Internal cable connections

Figure 8 and Figure 9 list the cable connections inside the FW-UL6S.

For additional information, see *FW-PCWD6 Replacement FW-UL6 Watchdog Card Installation Sheet* (P/N 3102219-EN).

Figure 8: FW-PCWD6 cable connections
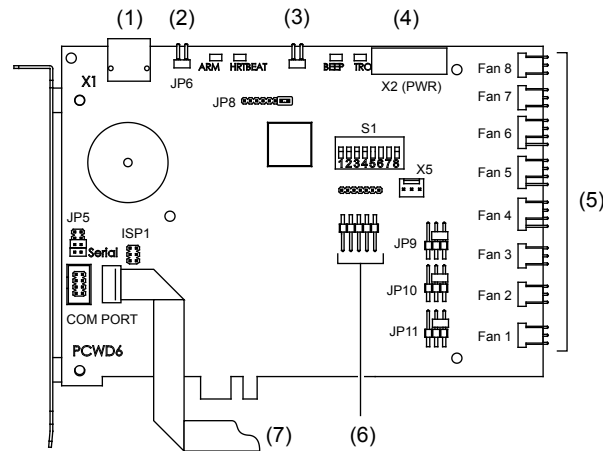
(1) Not used
(2) Not used (2X)
(3) From front panel Trouble LED
(4) From power supplies

(5) Fan cable connections (see Table 3)
(6) From power supplies
(7) From motherboard COM2 connector (see Figure 9)

Table 3: FW-PCWD6 cable connections

FW-PCWD6	FW-UL6S	Switch setting
Fan 8	Fan on FW-ULVID3 #2 [1]	S1-8: OFF
Fan 7	Fan on FW-ULVID3 #1	S1-7: ON
Fan 6	Not used	S1-6: OFF
Fan 5	Fan on CPU 0	S1-5: ON
Fan 4	Not used	S1-4: OFF
Fan 3	Rear fan	S1-3: ON
Fan 2	Front right fan	S1-2: ON
Fan 1	Front left fan	S1-1: ON

[1] Optional. If installed, set the corresponding switch segment to the ON position.

Figure 9: FW-UL6S motherboard cable connections
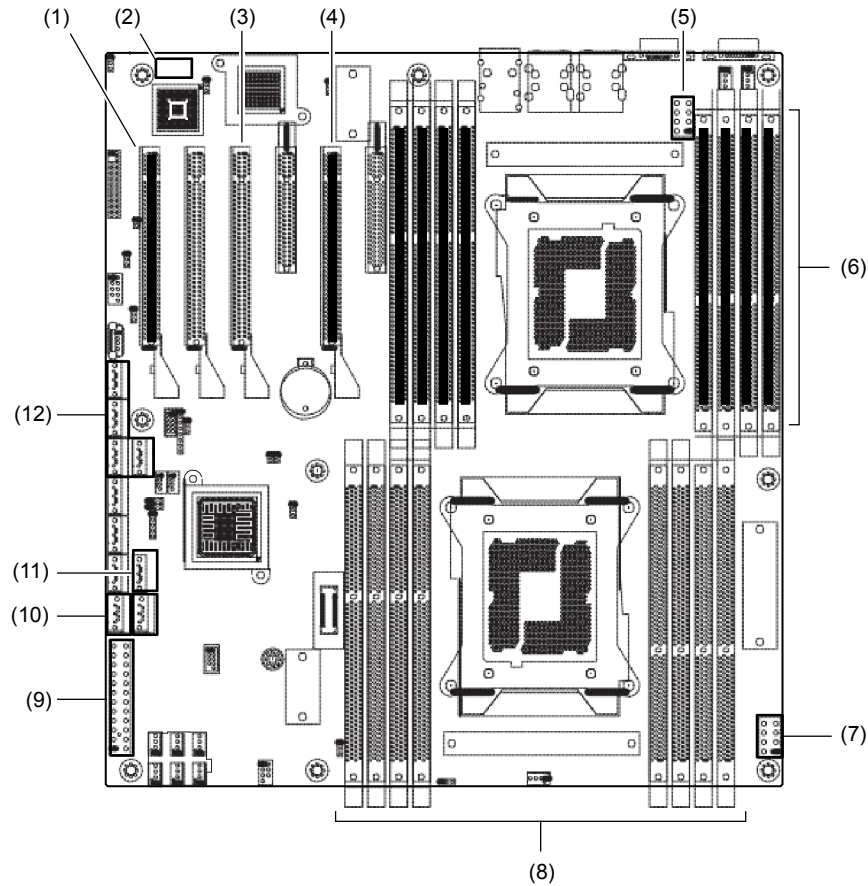
(1) FW-PCWD6 card slot (PCWD6 card installed)
(2) From FW-PCWD6 COM PORT connector
(3) Expansion slot for second FW-ULVID3 card
(4) FW-ULVID3 card
(5) From Power Supply 1
(6) Memory slots (128 GB installed)

(7) From Power Supply 2
(8) Not used
(9) From power supplies
(10) From Drive 0 and Drive 1
(11) From optical drive
(12) From switch and status LEDs on the front panel

Compatible monitors, option cards, and other accessories

Table 4 and Table 5 list the compatible monitors, option cards, and other accessories that you can use with the FW-UL6S .

Table 4: accessories

Model	Description
FW-19LCDWTS	19-inch widescreen LCD monitor with a base, a capacitive USB touch screen, and built-in speakers
FW-22LCDWTS	22-inch widescreen LCD monitor with a base, a capacitive USB touch screen, and built-in speakers
FW-42LCDWTS	42-inch widescreen LCD monitor with a surface acoustic wave (SAW) USB touch screen
FW-ULVID3	Graphics card with three HDMI video ports
FW-PCWD6	Replacement FW-UL6 watchdog card
FW-UL6CC1	Rear panel cable cover
FW-UL6SSSD500GB	Replacement blank solid state hard drive for FW-UL6 workstations/servers
FW-FILTER	Replacement filter
PT-1S	System event printer
MN-COM1S	RS-232 to Ethernet interface module
MN-FVPN	VoIP encoder/decoder module
MN-NETRLY4	Network relay module
MN-TK10	10-position, 4-pole DIN rail terminal block
MN-FNS4C2F3	Ethernet switch, four copper connections and two fiber optic connections
MN-FNS8C2F3	Ethernet switch, eight copper connections and two fiber optic connections
MN-FNS18C8F3	Ethernet switch, 16 copper connections and two fiber optic connections
Bosch D6600	Digital alarm communicator receiver
FW-HSSX1	VESDA Modbus High Level Interface
MFC-A	Accessory enclosure

Table 5: Rack mounting accessories

Model	Description
RKU-61-24B	19-inch rack mount enclosure, black, 35 EIA panel spaces
FW-19LCDWRACK	Rack mount kit for 19-inch widescreen LCD monitors
FW-RACKKB	Keyboard rack mount kit (requires two EIA panel spaces)
BP1	Blank plate, 1.75 × 19 in. (requires one EIA panel space)
BP2	Blank plate, 3.50 × 19 in. (requires two EIA panel spaces)
BP3	Blank plate, 5.25 × 19 in. (requires three EIA panel space)

Minimum system configurations

Proprietary Fire/Security

Note: Security listings include UL 365, UL 636, UL 1076, and UL 1610.

*   FW-UL6S with FW-PCWD6, keyboard, and mouse
*   UL 864 Listed compatible monitor (see Table 4)
*   PT-1S system event printer (if required)

Proprietary Fire

*   FW-UL6S with FW-PCWD6, keyboard, and mouse
*   UL 864 Listed compatible monitor (see Table 4)
*   PT-1S system event printer (if required)
*   Radionics/Bosch D6600 (one per workstation)

Central Station Security

*   FW-UL6S with FW-PCWD6, keyboard, and mouse
*   UL 864 Listed compatible monitor (see Table 4)
*   PT-1S system event printer

Local Security

*   FW-UL6S with FW-PCWD6, keyboard, and mouse
*   UL 864 Listed compatible monitor (see Table 4)
*   PT-1S system event printer (if required)

Central Station Receiving

*   FW-UL6S with FW-PCWD6, keyboard, and mouse
*   UL 864 Listed compatible monitor (see Table 4)
*   PT-1S system event printer (if required)
*   Radionics/Bosch D6600 (one per workstation)

Emergency Signaling

*   FW-UL6S with FW-PCWD6, keyboard, and mouse
*   UL 864 Listed compatible monitor (see Table 4)
*   PT-1S system event printer (if required)
*   Radionics/Bosch D6600 (one per workstation)

Specifications

Operating system	Windows 7 Professional SP1, 64-bit
Processor	Intel Xeon
Memory	128 GB (not expandable)
Hard drive	500 GB (unformatted)
Optical drives	1
Video ports [1]	3 HDMI (expandable to 6)
Universal Serial Bus Ports (USB) ports	
Front	2 USB 2.0/1.1 ports
Rear	4 USB 2.0/1.1 ports
Ethernet ports	4 10/100/1000 Mbps, RJ-45
Serial ports	0
Watchdog card	Yes (FW-PCWD6)
ON/OFF key switch	Yes
Status LEDs	Yes
Power	120 V, 50/60 Hz, 5 A
Redundant supplies	Yes
Dimensions (W × H × D) [2]	17.0 × 7.0 × 22.7 in. (43.2 × 17.8 × 57.7 cm)
Operating environment	
Temperature	32 to 120°F (0 to 49°C)
Relative humidity	0 to 93% noncondensing

[1] For six video ports, install an additional FW-ULVID3 card, ordered separately.

[2] Add 5.5 in. (14.0 cm) to the depth if an FW-UL6CC1 is installed.

Chapter 2
Installation

Summary

This chapter provides instructions for installing your FW-UL6S.

Content

Package contents

The following items are included with the FW-UL6S:

• Y AC power cord (NEMA 5-15P to IEC 320 C13)
   Other power cord types are purchased locally

• UL 1449 Listed Type 2 SPD

• Keyboard and mouse

• HDMI to DVI adapter cable

• Motherboard driver CD

• Windows 7 media DVD and Certificate of Authenticity sticker

• Two barrel keys

Installation

Install the FW-UL6S in accordance with applicable national and local codes, ordinances, and regulations.

Installing the FW-UL6S on a bench

To install the FW-UL6S on a bench you need the following equipment:

• A workbench that provides adequate working space for the FW-UL6S, monitors, keyboard, and mouse (see Figure 10)

• An FW-UL6CC1

Position the workbench far enough from walls and other obstacles in order to allow air to move freely around the workstation, and within 3 to 5 ft. (92 to 152 cm) of a power junction box.

For ECS/MNS (emergency signaling) applications the FW-UL6S must be in the same room as the EST3/EST3X control panel and positioned so that both can be viewed at the same time.

Figure 10: Typical bench installation
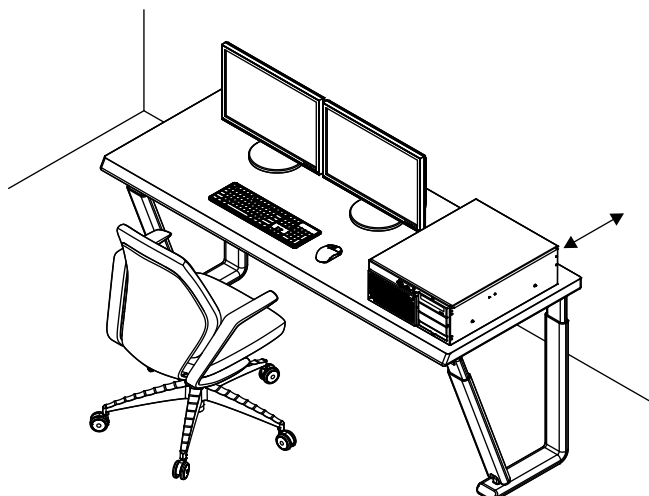
Installing the FW-UL6S in a rack

To install the FW-UL6S in a rack you need the equipment listed in Table 5 on page 9.

Rack-mount installations do not require an FW-UL6CC1. The rack must be dedicated to the FW-UL6S. No other equipment may be installed in the rack.

Connecting AC power

The FW-UL6S requires a permanent connection to a dedicated fire alarm branch-circuit supply by way of a UL 1481 Listed uninterruptible power supply (UPS) and a UL 1449 Listed Type 2 surge protection device installed at the power junction box.

WARNING: Electrocution hazard. Make sure that all power sources are disconnected and remain disconnected. Use accepted lockout/tagout practices.

To connect AC power:

1. Mount the surge protective device (SPD) on the AC power junction box.

2. Cut the plug end off of the AC power cord, and then pull the power cord through the conduit into the junction box.

    There must be 3 to 5 ft. (92 to 152 cm) of cable between the SPD and the workstation.

3. Connect the line (BK), neutral (WH), and ground (GN) wires together. See Figure 11.

    Strip the wires about 1/4-inch and use appropriately sized, UL approved fasteners to connect the wires.

4. Using a ground pigtail, connect the ground wires to the junction box. Make the ground pigtail from the SPD to the junction box as short as possible.

5. Plug the AC power cord connectors into the power supplies. See Figure 12.

Figure 11: SPD wiring diagram

(1) Dedicated fire alarm branch-circuit supply from UL 1481 Listed UPS
(2) UL 1449 Listed Type 2 SPD (supplied with the FW-UL6S)
(3) Junction box
(4) AC power cord in conduit
(5) 3 to 5 ft. (92 to 152 cm)
(6) Ground pigtail tied to the junction box

Figure 12: AC power connection
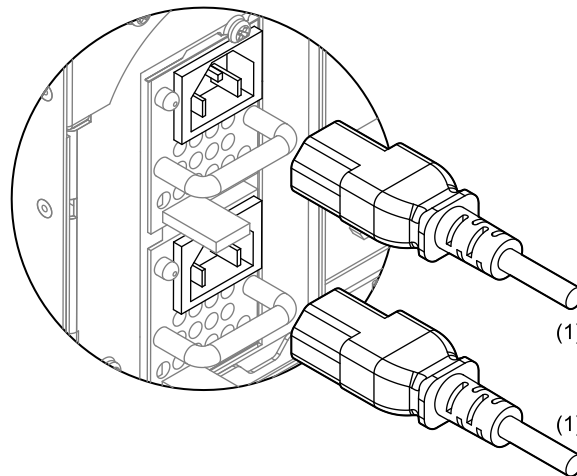
(1) Permanent connection to a dedicated fire alarm branch-circuit supply by way of a UL 1481 Listed UPS.
      Enclose in conduit or equivalent protection against mechanical injury.

Figure 13: AC power connection using the FW-UL6CC1
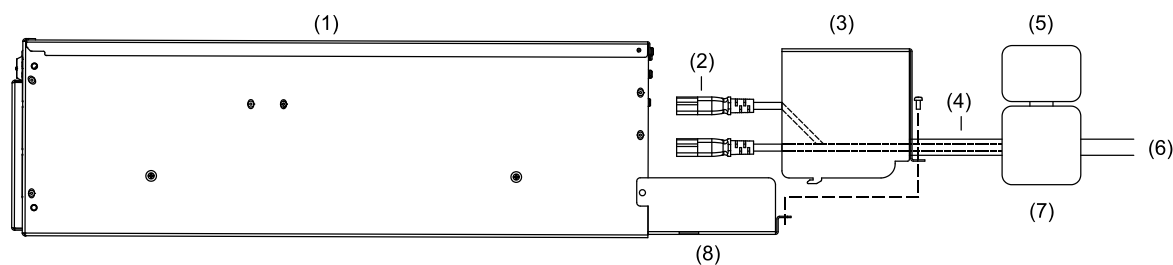
(1) FW-UL6S
(2) AC power cord
(3) FW-UL6S power cover. For details, see
    FW-UL6CC1 Cable Cover Installation Sheet
    (P/N 3102212-EN)
(4) Conduit
(5) UL 1449 Listed Type 2 SPD (supplied with the
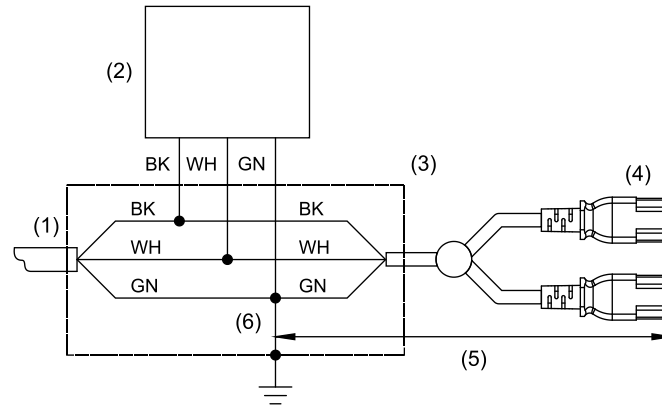   FW-UL6S)

(6) Permanent connection to a dedicated fire alarm
    branch-circuit supply by way of a UL 1481 Listed
    UPS
(7) Junction box
(8) FW-UL6CC1 cable tray

Connecting the keyboard and mouse

Connect the keyboard and the mouse to the USB ports. See Figure 14.

Figure 14: Keyboard and mouse connections
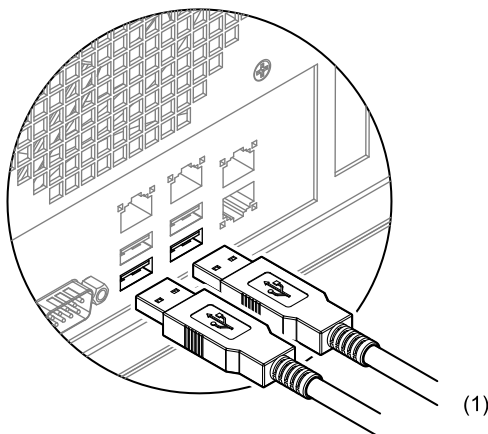
(1) Limit connections to the same room, and within 8 ft. (2.4 m).

Connecting monitors

Connect monitors to either of the video ports on the back of the FW-UL6S. See Figure 15.

Use the DVI cable supplied with the monitor or use the HDMI adapter cable supplied with the FW-UL6S.

Dual monitor systems may require additional setup. See "Setting up the monitors" on page 22.

Figure 15: Monitor connections
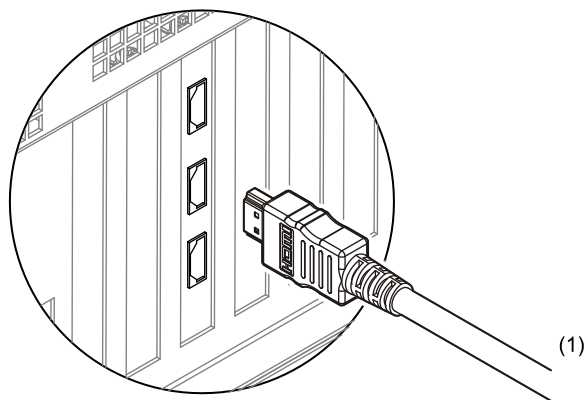
(1) Limit connections to the same room, and within 8 ft. (2.4 m).

Note: The bottom connector is HDMI Port 1 and the top connector is HDMI Port 3.

Ethernet port connections

The FW-UL6S provides four RJ-45 Gigabit Ethernet ports for making local area network connections. See Figure 16.

Figure 16: Ethernet port connections
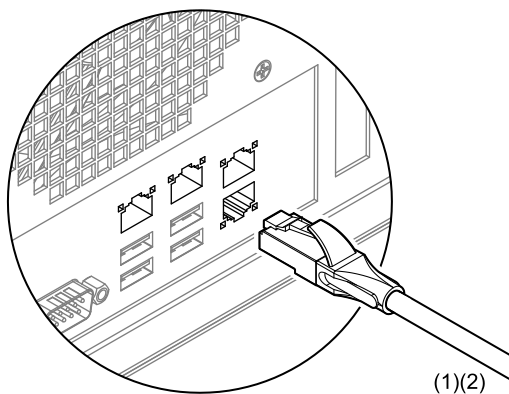
(1) UL 2572 Communication Security Level 1.
(2) RJ-45 Ethernet patch cable, Cat 5e or better. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.

Securing I/O cable connections

Use nylon cable ties to secure the I/O cable connections to the FW-UL6CC1 cable tray. See Figure 17.

For installation instructions, see *FW-UL6CC1 Cable Cover Installation Sheet* (P/N 3102212-EN).

Typically, only USB cables and HDMI cables need to be secured. The power cord and the Ethernet cables are enclosed in conduit.

Figure 17: Securing I/O cable connections
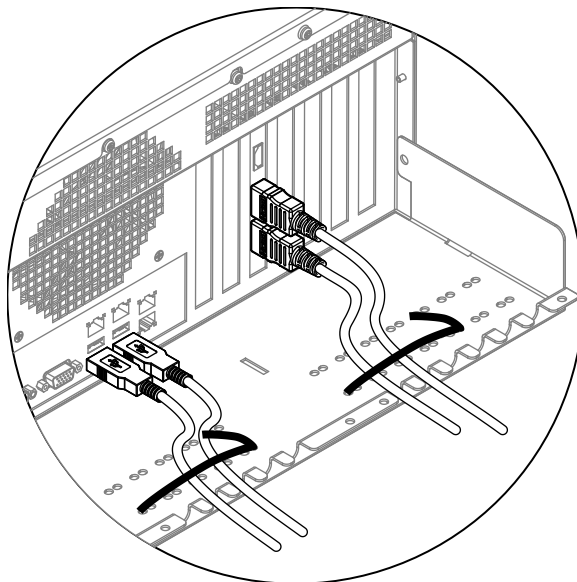
Setting up the FW-UL6S

The general steps for setting up an FW-UL6S are:

1. Turn on the FW-UL6S.

2. Log on to the FW-UL6S.

3. Change the Windows user account passwords.

4. Set up the monitors.

5. Set up the monitor touch screens.

Details of each step are given below.

Turning on the FW-UL6S

To turn on the FW-UL6S, insert the barrel key into the ON/OFF switch, and then momentarily turn the key to the right until the Power LED lights.

Logging on to the FW-UL6S

The FW-UL6S is preconfigured with the Windows user accounts described below.

Administrator: A system administrator account that allows users to install software and shut down the Windows operating system, but does not allow them to change the account password.

Note: UL requirements prohibit installing third party applications on the FW-UL6S.

Maintenance: A standard user account that allows users to shut down the Windows operating system, but does not allow them to install software or change the account password.

User: A standard user account that does not allow users to install software, shut down the Windows operating system, or change the account password.

EstSupport: A special administrator account used by the Edwards technical support team. Do not change the password or any other properties for this account.

Each user account is password protected. Table 6 lists the default passwords.

Table 6: Windows user account default passwords

User account name	Password
Administrator	ESTFW
Maintenance	Admin
USER	USER
EstSupport	Reserved for technical support use only

Note: User account names and passwords are case sensitive.

To log on to the FW-UL6S:

1. In the User Name box, type the user account name.

2. In the Password box, type the user account password.

3. Press Enter.

Changing the Windows user account passwords

Requiring a user to enter their name and password is an important part of securing your FW-UL6S.

Consult your local IT professional if you have stricter requirements for managing user accounts than those discussed here. We recommend that you at least change the Administrator account password.

Note: By default, users are not allowed to change their user account passwords, not even the system administrator.

Changing the Administrator account password

You must first change the Administrator user account properties to allow changing passwords before you can change the Administrator user account password.

To change the Administrator account password:

1. Log on to the Administrator user account.

2. Click Start, right-click Computer, and then click Manage.

3. In the Computer Management navigation pane, double-click Local Users and Groups, and then click the Users folder.

4. Double-click Administrator, and then on the General tab, clear the User Cannot Change Password check box.

5. Click OK, and then close the Computer Management window.

6. Press Ctrl + Alt + Delete, and then click Change Password.

7. In the Old Password box, type the current password.

8. In the New Password box, type the new password.

9. In the Confirm New Password box, type the new password again.

10. Press Enter.

Changing other user account passwords

The system administrator can change other user account passwords without allowing them to change their own account passwords.

To change the other user account passwords:

1. Log on to the Administrator user account.

2. Click Start, and then click Control Panel.

3. Change the View By option to Large Icons, and then click User Accounts.

4. On the main User Accounts page, click Manage Another Account.

5. Click the account whose password you want to change, and then click Change the Password.

6. In the New Password box, type the new password for the account.

7. In the Confirm New Password box, type the new password again.

8. Click Change Password.

Allowing others change their own user account passwords

The system administrator can allow others to change their own user account passwords.

To allow users to change their own password:

1. Log on to the Administrator user account.

2. Click Start, right-click Computer, and then click Manage.

3. In the Computer Management navigation pane, double-click Local Users and Groups, and then click the Users folder.

4. For each user account, double-click the user name, and then on the General tab, clear the User Cannot Change Password check box.

5. Click OK, and then close the Computer Management window.

The next time a user logs on to their account, they can change their password by pressing Ctrl+Alt+Delete, and then clicking Change Password. Afterwards, the system administrator can prevent them from changing it again by selecting the User Cannot Change Password option.

Setting up the monitors

The FW-UL6S supports the use of one or two monitors. In dual monitor systems, you can use monitors that are the same size or you can use monitors that are different sizes.

When you power up the FW-UL6S, Windows automatically sets your monitors for their optimal resolution. See Table 7.

Table 7: Monitor optimal resolutions

Monitor	Resolution
FW-19LCDWTS	1440 × 900
FW-22LCDWTS	1680 × 1050
FW-42LCDWTS	1920 × 1080

Single monitor systems

There is nothing to set up on single monitor systems.

Extending the desktop on dual monitor systems

On dual monitor systems, you can extend the Windows desktop across both monitors. When you power up a dual monitor system, the workstation automatically:

- Identifies the monitor connected to the HDMI 1 port as first monitor

- Identifies the monitor connected to the HDMI 2 port as the second monitor

- Extends the Windows desktop across both monitors with the first monitor as the primary desktop and second monitor as the extended desktop

Typically, when you extend the Windows desktop across two monitors, the monitors are the same size, and they are placed next to each other with the primary desktop on the left and the extended desktop on the right. See Figure 18.

Figure 18: Typical dual monitor setup
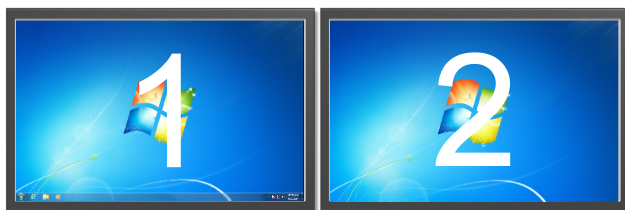
To identify the displays:

1. Right-click the Windows desktop.

2. Click Screen Resolution.

3. On the Screen Resolution page, click Identify.

If the monitors are not in the left-right order shown above and you cannot easily move them or change the cabling, you can just change which monitor is the main display.

To change the main display:

1. Right-click the Windows desktop.

2. Click Screen Resolution.

3. On the Screen Resolution page, select the second monitor, and then click the Make This My Main Display check box.

When you extend the Windows desktop from a smaller monitor to a larger monitor, the extended desktop does not fill the screen of the larger monitor. See Figure 19.

Figure 19: Extending the desktop to a larger monitor

When you extend the Windows desktop from a larger monitor to a smaller monitor, the smaller monitor does not display the entire extended desktop. See Figure 20.

Figure 20: Extending the desktop to a smaller monitor

If you extend the desktop across different size monitors, make the smaller monitor the primary desktop, the larger monitor the extended desktop, and then reduce the resolution of the larger monitor to match smaller monitor. See Figure 21.

Figure 21: Reducing the resolution on the larger monitor

To change the screen resolution:

1. Right-click the Windows desktop.

2. Click Screen Resolution.

3. On the Screen Resolution page, select the display, and then select a value from the Resolution list.

Setting up the monitor touch screens

Touch screens are considered supplementary. When deployed in the field, you must also connect a mouse and a keyboard to use as primary input devices.

The general steps for setting up the monitor touch screens are:

1. Connect the touch screen USB cables.

2. Install the eGalaxTouch touch screen driver.

3. Map the touch screen controllers.

4. Calibrate the touch screens.

Details of each step are given below.

Connecting the touch screens

Connect the monitor touch screens to any of the USB ports on the back of the FW-UL6S. See Figure 22.

Use the touch screen USB cables supplied with the monitors.

Figure 22: Touch screen connections

(1)
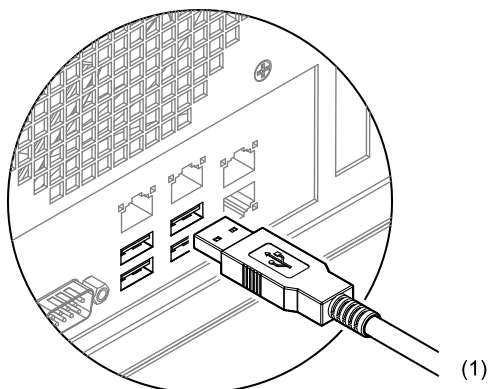
(1) Limit connections to the same room, and within 8 ft. (2.4 m).

Installing the eGalaxTouch touch screen driver

1. Turn on the monitors, and then turn on the workstation.

2. Log on to the Administrator user account.

3. Open the C:\Fireworks\Tools\Touch Screen and Monitor, and then unzip the contents of eGalaxTouch_5.12.0.12204-Release131204.zip.

4. Open the eGalaxTouch_5.12.0.12204-Release131204 folder, double-click setup.exe, and then follow the on-screen instructions.

   Use the default settings, except Clear the Install RS-232 interface driver check box.

5. At the end of the installation, click No when you are prompted to perform the 4-point calibration.

Mapping the touch screen controller to the monitor

Before you can calibrate the touch screens you must map the touch screen controllers to their respective monitors.

To map the touch screen controllers:

1. Start the eGalaxTouch Calibration Utility.

2. On the General tab, click the Monitor Mapping button.

3. Follow the on-screen instructions.

After you have mapped the touch screen controllers, *do not* attempt to change the mapping.

To see how the touch screen controllers are mapped, select a USB Controller icon on the General tab, and then click the Display tab to see which display is selected.

Calibrating the touch screens

After the touch screen controllers have been mapped, you can calibrate the touch screens. For best results, we recommend that you perform a 4-point calibration first and then the 25-point linearization.

Caution: Equipment damage hazard. Only use your fingers to calibrate the touch screen. Do not use a stylus, pencil, or other mechanical objects that could damage the touch screen.

To calibrate the touch screens:

1. On the Settings tab, under Linearization Style, select 25 points, and then click Apply.

2. On the General tab, select the first USB Controller icon.

3. On the Tools tab, click the Clear and Calibrate button, and then perform the 4-point calibration. See Figure 23.

   Press each target point until it changes color and the screen displays OK.

4. On the Tools tab, click the Linearization button, and then perform the 25-point linearization. See Figure 23.

5. If you are using two monitors, on the General tab, select the second USB Controller icon, and then repeat steps 3 and 4 above.

Figure 23: Calibration target points

Connecting a PT-1S system event printer

Connect a PT-1S printer to one of the USB ports. See Figure 24.

Figure 24: USB printer connection

(1)
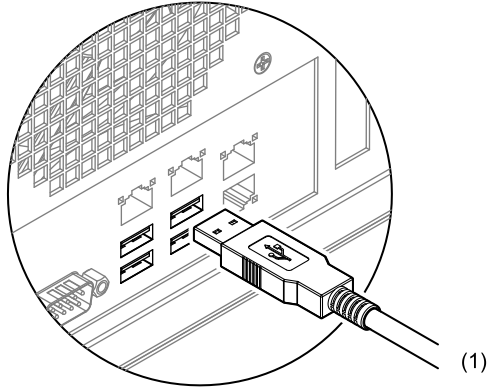
(1) Supervised and power-limited. Limit connections to the same room.

Notes

- FireWorks only supervises the system event printer for loss of communication.

- FireWorks does not differentiate between a printer that is turned off and a USB cable that is unplugged, and does not provide supervision for "loss of power" and "printer taken offline manually."

- FireWorks does not display a printer fault event until after another event occurs.

- FireWorks will not recognize the system event printer automatically. You must add it to your FireWorks project.

Chapter 3
FireWorks node connections

Summary

This chapter describes the different methods for connecting FireWorks nodes.

Content

Introduction

In a FireWorks life safety network, a node is the data connection point between the FW-UL6S and other systems or equipment. You can connect the FW-UL6S to the following nodes:

- An EST3 control panel

- An EST3X control panel

- An FW-HSSX1 Modbus high level interface

- A Bosch/Radionics D6600 communications receiver

- An iO Series control panel

Table 8 lists the type of connections allowed for each FireWorks node type.

Table 8: FireWorks node connections

Node	MN-COM1S	3X-ETHx	IPMON1000
EST3	Y	N	N
EST3X	Y [1]	Y [2]	N
FW-HSSX1	Y [3]	N	N
D6600	Y [3]	N	N
iO Series	N	N	Y [4]

[1] Requires 3-SDU V5.3, and C-CPU application code V1.30

[2] Requires 3-SDU V5.3, C-CPU application code V 1.30, and a 3X-ETHx option card

[3] Requires Lantronix CPR Manager 4.3.0.3. For installation instructions, see Appendix D "Lantronix CPR Manager" on page 67.

[4] Requires com0com.sys driver 2.2.2.0, and an SA-ETH option card. For com0com driver installation instructions, see "Installing the com0com driver" on page 34.

Connecting an EST3 control panel

To connect the FW-UL6S to an EST3 control panel, use an MN-COM1S. See Figure 25 and Figure 26. For more information, see *MN-COM1S RS-232 to Ethernet Interface Installation Sheet* (P/N 3101601-EN).

Figure 25: Local MN-COM1S connection
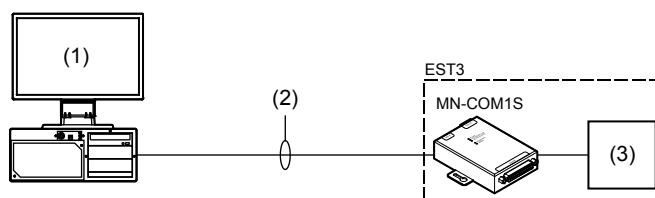
(1) FW-UL6S and FW-UL6CC1.
(2) RJ-45 Ethernet patch cable, Cat 5e or better. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) EST3 CPU card and RS-232 option card.

Figure 26: Remote MN-COM1S connection

(1) FW-UL6S and FW-UL6CC1.
(2) RJ-45 Ethernet patch cable, Cat 5e or better. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) MN-FNSx Ethernet switch.
(4) Dedicated fiber network.
(5) EST3 CPU card and RS-232 option card.

Connect the DB-25 serial cable supplied with the MN-COM1S to the serial port on the EST3 control panel as shown in Figure 27.

Figure 27: EST3 serial port field wiring
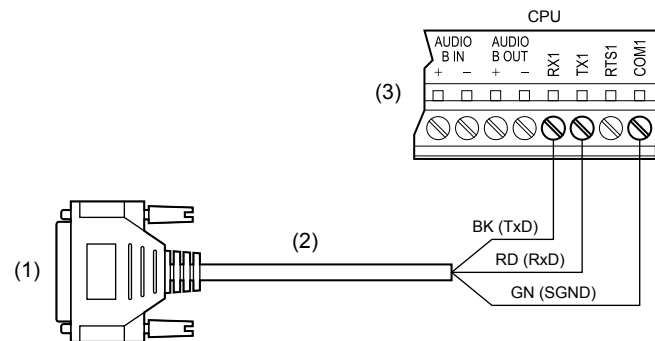
(1) To the MN-COM1S
(2) DB-25 serial cable supplied with the MN-COM1S
(3) EST3 CPU card serial port

Configure the serial port on the EST3 control panel as follows:

• Port Type: Gateway Type III

• Baud Rate: 19.2 Kbaud

Configure a FireWorks TCP/IP port as shown in Figure 28.

Figure 28: FireWorks TCP/IP port settings
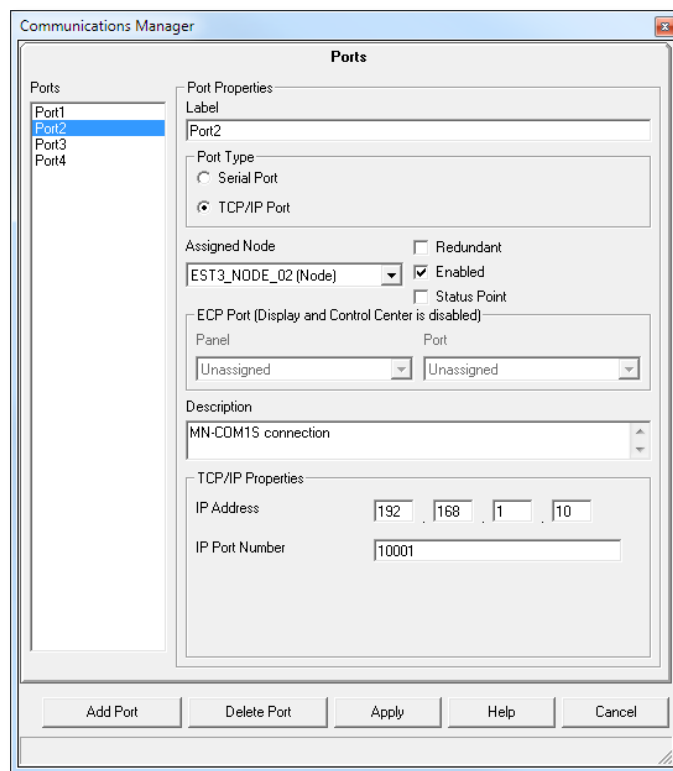
Connecting an EST3X control panel

You can use the following methods to connect the FW-UL6S to an EST3X control panel:

• An MN-COM1S connection

• A 3X-ETHx card connection

Using an MN-COM1S

Connect the FW-UL6S workstation to an EST3X control panel the same way you connect an EST3 control panel. For more information, see "Connecting an EST3 control panel" on page 28.

Using a 3X-ETHx card

Figure 29 and Figure 30 show you how to connect an EST3X control panel to the FW-UL6S workstation using a 3X-ETHx card. For more information, see *3X-ETH Ethernet Adapter Card Installation Sheet* (P/N 3101775-EN).
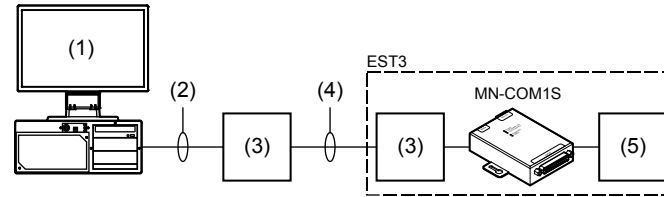
**Figure 29: Local 3X-ETHx card connection**
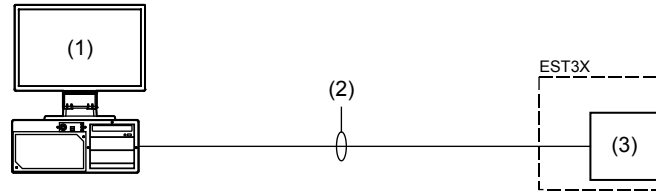
(1) FW-UL6S and FW-UL6CC1.
(2) RJ-45 Ethernet patch cable, Cat 5e or better. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) EST3X CPU card and 3X-ETHx option card.

Figure 30: Remote 3X-ETHx card connection
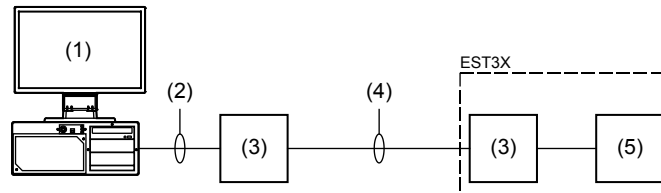
(1) FW-UL6S and FW-UL6CC1.
(2) RJ-45 Ethernet patch cable, Cat 5e or better. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) MN-FNSx Ethernet switch.
(4) Dedicated fiber network.
(5) EST3X CPU card and 3X-ETHx option card.

Configure a FireWorks TCP/IP port as shown in Figure 31.

Note: For encrypted communication, check the Encrypted Communication check box and enter a passphrase. Enter the same passphrase used on the EST3X control panel.

Figure 31: FireWorks TCP/IP port settings for 3-ETHx connection
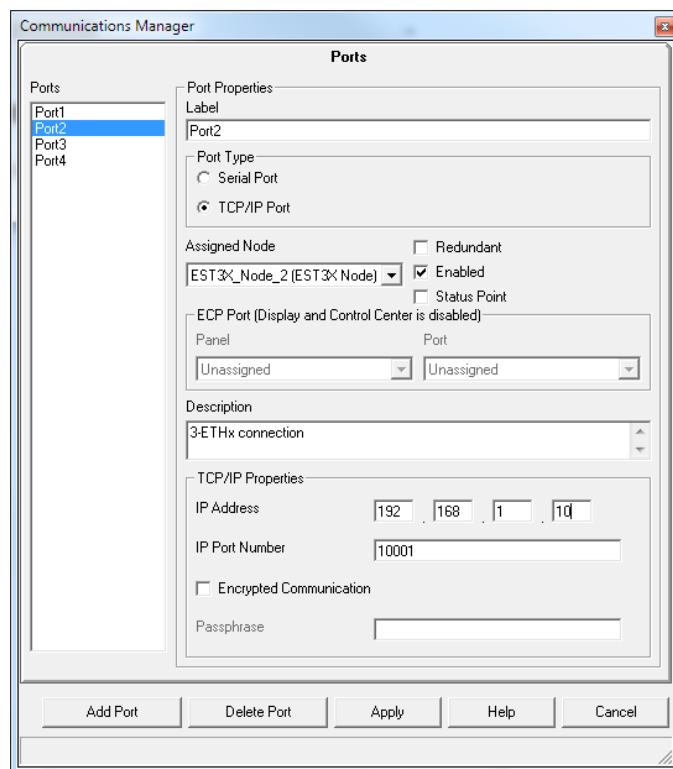
Connecting a Bosch/Radionics D6600 Communications Receiver

To connect the FW-UL6S to a Bosch/Radionics D6600, use an MN-COM1S. See Figure 32.

Notes

- You can only connect one D6600 to the FW-UL6S.

- An MN-COM1S connection to the D6600 requires that you use Lantronix CPR Manager 4.3.03 to redirect the FireWorks COM port. For more information, see Appendix D "Lantronix CPR Manager" on page 67.

Figure 32: D6600 MN-COM1S connection
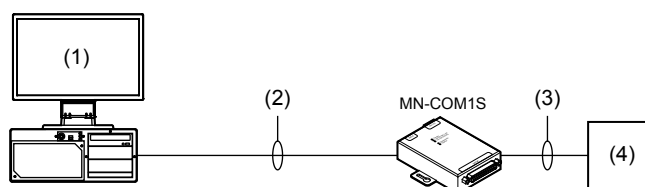
(1) FW-UL6S and FW-UL6CC1
(2) RJ-45 Ethernet patch cable, Cat 5e or better
(3) DB-25 serial cable assembly
(4) D6600 COM3 connector

Wire a DB-9 connector to the DB-25 serial cable supplied with the MN-COM1S. See Figure 33.

Figure 33: DB-25 serial cable wiring diagram
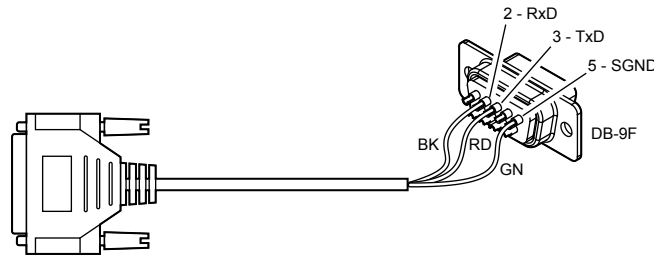
Setting up the Bosch/Radionics D6600 and other equipment

Here are the steps to follow when setting up and configuring a Bosch/Radionics D6600, a control panel and its dialer, and the FW-UL6S.

1. Set up and configure the Bosch/Radionics D6600 (firmware CPU-1.2.03).

    COM port settings
    Baud: [9] (38,400)
    Data bit: [8]
    Stop bit: [1]
    Parity: [0] (none)
    BSFK fire bit: [1]
    Output format: [2] (SIA - change requires hardware reboot/cycle power)

    CPU configuration
    Enable input commands: [0] (no input commands)
    Buzzer: [1] (buzzer on for any events)
    External parallel printer: [1] (primary: all reports go to this device)

    Network configuration (automation network configuration)
    Network automation output format: [2]
    Device: [2]

2. Set up the telephone lines for the control panel dialer.

    Note: For telephone connections, refer to the DACT or control panel installation instructions for UL requirements.

3. Install and configure the control panel dialer.

    You will need the account number, the protocol (4/2 or Contact ID), and the phone numbers for the receiver.

    Refer to the control panel documentation for details about configuring the dialer.

4. Once the dialer is configured, give the following information to the FireWorks programmer:

    •   A detailed report that lists the protocol and the event details for the control panel (this details the event codes and their meaning)

    •   A report that lists the control panel zones, groups, and partitions

    •   The address where the control panel is located and the name of the contact person

    Note: Each event type must be programmed in System Builder for FireWorks to display them properly. Unprogrammed event types are defaulted to the highest priority.

5. Configure the DACR, lines, account information, the events and their meaning, the event states, and protocol in the FireWorks Receiver Configuration Manager.

6. Map the event states in FireWorks System Builder.

7. Connect the FW-UL6S to the Bosch/Radionics D6600 automation port (COM3). See Figure 32 and Figure 33.

8. Test the system by initiating events on the control panel and making sure the correct event information is being sent to FireWorks through the receiver.

Note: The Bosch receiver only requires acknowledgement at the FW-UL6S.

For more information, refer to the documentation supplied with the Bosch/Radionics D6600.

Connecting iO Series control panels

You can connect the FW-UL6S to iO Series control panels — *for monitoring purposes only*. To connect the FW-UL6S to an iO Series control panel, you need the following:

• FW-IPMON1000

• FW-DARCOM

• A null modem emulator (com0com driver)

The general steps for connecting an iO Series control panel are:

1. Configure the iO Series control panel Network, IP Dialer, and IP Account settings.

2. Export the iO Series control panel dialer events.

3. In the Receiver Configuration Manager, add an OH Network Receiver, and then set up a Contact ID account.

    Note: The Receiver Type for an OH Network Receiver is: Osborne-Hoffman OH2000E.

4. Import the iO Series control panel dialer events.

5. Install and set up OH Network Receiver.

6. Install and set up the com0com driver.

7. Connect the OH Network Receiver and the OH2000E digital receiver to the virtual COM port.

Installing the com0com driver

The com0com driver lets you add pairs of virtual COM ports that emulate a null modem cable. The com0com driver is an open source kernel-mode virtual serial port driver that is available freely under GPL license.

A copy of com0com is in the C:\Fireworks\Tools\Serial Port Tool folder after you install FireWorks.

Before installing the com0com driver:

• Turn off User Account Control (UAC) by changing the User Account Control setting to Never Notify.

• Open Windows Device Manager and note which communication port numbers are already used.

• Enable test signing.

To enable test signing:

1. Click Start > Run.

2. In the Open box, type: `bcdedit.exe -set TESTSIGNING ON`, and then click OK.
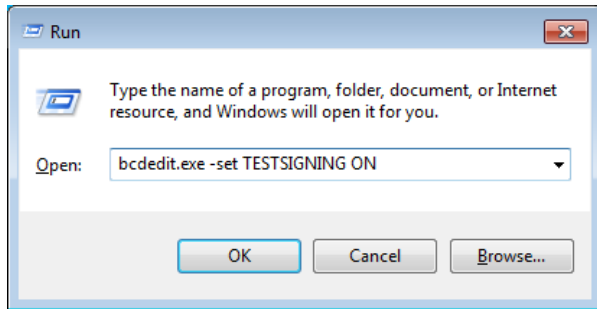
3. Restart the computer.

To install the com0com driver:

1. Open the C:\FireWorks\Tools\Serial Port Tool folder.

2. Open the com0com-2.2.2.0-x64-fre-signed.zip file, and then click Unzip.

3. Open the com0com-2.2.2.0-x64-fre-signed folder, double-click setup.exe, and then follow the on-screen instructions.

4. On the Start menu, open the com0com folder, and then double-click Setup.

5. In the Setup for com0com dialog box, rename the virtual COM port pair to two *unused* Windows COM port numbers.

   For example, rename the virtual COM ports to COM10 and COM11 as shown below.
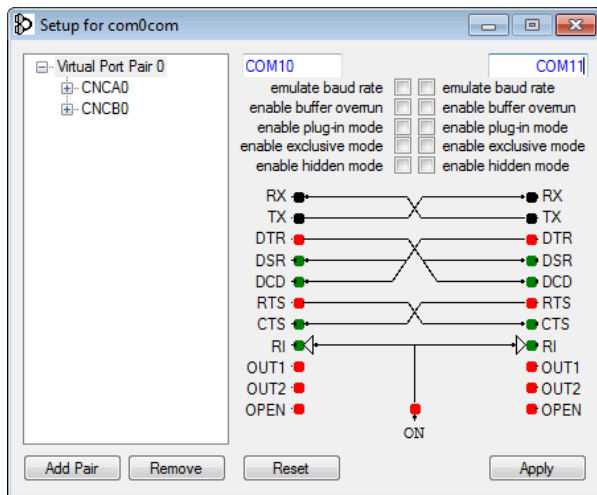
6. Click Apply, and then click Close.

Connecting the OH Network Receiver to the virtual COM port

1. Click Start > All Programs > UTC F&S, and then click OH Network Receiver.

2. On the Setup menu, click Serial ports.

3. In the Port Name list, select the lower-numbered virtual COM port as shown below.
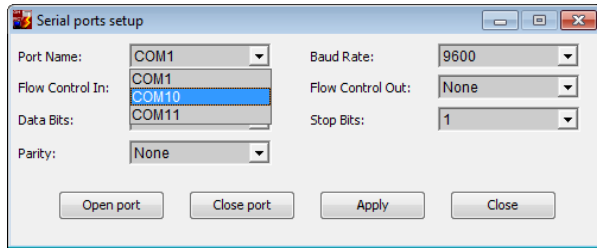
4. Click Apply, and then click Close.

Connecting the OH2000E digital receiver to the virtual COM port

1. On the System Builder Applications menu, click Communications Manager.

2. Select an unassigned port from the Ports list.

3. Select the OH2000E digital receiver from the Assigned Node list.

4. Under Serial Port Properties, select the higher-numbered virtual COM port from the Com Port list as shown below.
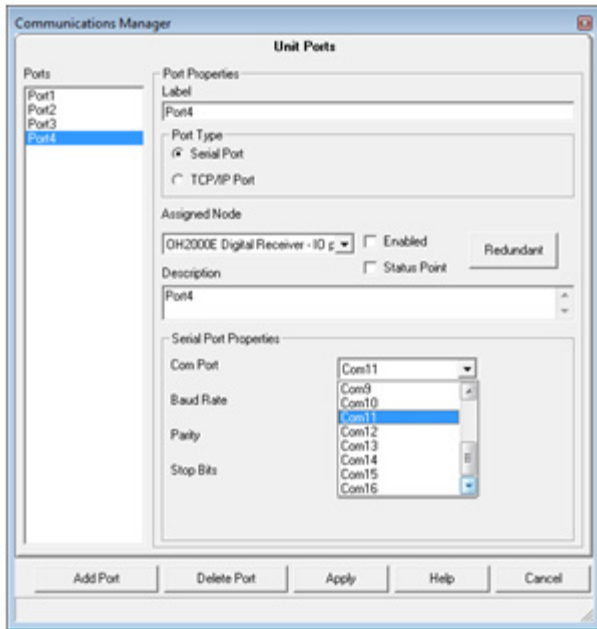
5. Set Baud Rate, Parity, and Stop Bits to the same values as the OH Network Receiver serial port settings.

6. Click Apply, and then click Close.

7. Start System Control and test the OH Network Receiver.

Connecting an FW-HSSX1 VESDA Modbus High Level Interface

Figure 34 shows how you connect an FW-UL6S to an FW-HSSX1. For more information, see *FW-HSSX1 VESDA Modbus High Level Interface Installation Sheet* (P/N 3102240-EN).

Figure 34: FW-HSSX1 connection
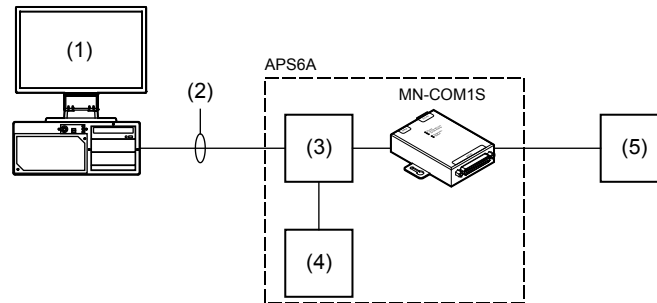
(1) FW-UL6S and FW-UL6CC1.
(2) RJ-45 Ethernet patch cable, Cat 5e or better. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) MN-FNSx Ethernet switch.
(4) MN-NETRLY4 module.
(5) FW-HSSX1. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.

Chapter 4
UL/ULC programming instructions

Summary

This chapter provides instructions for programming your FW-UL6S to comply with UL and ULC requirements.

Content

UL/ULC programming requirements

NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISIDICTION, AND OTHER INVOLVED PARTIES

This product incorporates field-programmable software. In order for the product to comply with the requirements in UL and ULC standards, certain programming features or options must be limited to specific values or not used at all as indicated in Table 9 below.

Table 9: UL/ULC programming requirements

Programmable feature or option	Possible settings	Permitted UL settings	Permitted ULC settings
24-hour trouble re-sound	Enabled (checked) Disabled (cleared)	Enabled (checked)	Enabled (checked)
Adjustable trouble signal re-sound timer	0 to 99 (hours)	1 to 24 (hours)	1 to 24 (hours)
Automatic workstation silence cancel	0 to 999,999,999 minutes	0 to 240 minutes	0 to 240 minutes
Control panel local AC power fail event delay	0 to 45 hours	1, 2, 3 hours	1, 2, 3 hours
Automatically restoring the default screen layout	On all events Only on alarm events	On all events	On all events
Default screen layouts	N/A	Any arrangement that does not obscure the Event List and Event Action windows	Any arrangement that does not obscure the Event List and Event Action windows
Event selection method	Maintain Selected Event Select High Priority Select Newest Select Newest (if Higher or Equal Priority)	Select High Priority	Select High Priority
Clear all receiver account events	Enabled (checked) Disabled (cleared)	Disabled (cleared)	Disabled (cleared)
Event display filters (all events)	Allow (checked) Block (cleared)	Allow (checked)	Allow (checked)
Event print filters (all events)	Allow (checked) Block (cleared)	Allow (checked)	Allow (checked)
Event history filters (all events)	Allow (checked) Block (cleared)	Allow (checked)	Allow (checked)
Partition display filter	Allow (checked) Block (cleared)	Allow (checked) Block (cleared)	Allow (checked) Block (cleared)
Partition print filter	Allow (checked) Block (cleared)	Allow (checked) Block (cleared)	Allow (checked) Block (cleared)
Partition history filter	Allow (checked) Block (cleared)	Allow (checked) Block (cleared)	Allow (checked) Block (cleared)
Local mode of operation	Proprietary Local	Proprietary Local	Proprietary

Programmable feature or option	Possible settings	Permitted UL settings	Permitted ULC settings
Status points	True False	False	False
Event List operation	UL 864 compliant (US) ULC-S527 compliant (Canada)	UL 864 compliant (US)	ULC-S527 compliant (Canada)
Emergency event indicator color	Red Black Blue Brown Cyan Grey Gold Orange White Yellow	Red Black Blue Brown Cyan Grey Gold Orange White Yellow	Yellow
Supervisory event indicator color	Black Blue Brown Cyan Grey Gold Orange White Yellow	Black Blue Brown Cyan Grey Gold Orange White Yellow	Yellow
Building event indicator color	Black Blue Brown Cyan Grey Gold Orange White Yellow	Black Blue Brown Cyan Grey Gold Orange White Yellow	Yellow
Trouble event indicator color	Black Blue Brown Cyan Grey Gold Orange White Yellow	Black Blue Brown Cyan Grey Gold Orange White Yellow	Yellow
Monitor event indicator color	Black Blue Brown Cyan Grey Gold Orange White Yellow	Black Blue Brown Cyan Grey Gold Orange White Yellow	Yellow

Disabling the 24-hour trouble re-sound timer

By default, the local trouble signal automatically re-sounds if you do not clear all events from the system within 24 hours after you acknowledge them. If you do not want the local trouble signal to automatically re-sound after 24 hours, you can disable the timer or you can adjust the trouble signal re-sound timer for an interval other than 24 hours.

Notes

• UL/ULC requires the local trouble signal to re-sound within 24 hours. Setting the adjustable trouble signal re-sound timer for more than 24 hours violates UL/ULC requirements.

• The adjustable trouble signal re-sound timer setting overrides the 24-hour trouble re-sound timer setting.

To disable the 24-hour trouble re-sound timer:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the UL tab, under Property, select SYSCONTROL_RESOUND_24_HOUR.

4. In the Value box, clear the Enabled check box.

5. Click Apply.

Automatically canceling workstation silence

Silencing the workstation gives you time to acknowledge new events posted on the system without the local trouble signal sounding in the background. You can configure FireWorks to automatically re-sound the local trouble signal in the event you get pulled away from the workstation or get distracted while you are acknowledging events. By default, FireWorks automatically re-sounds the local trouble signal after five minutes.

Note: The local trouble signal silence timer setting may conflict with UL/ULC requirements. To comply, set SYSCONTROL_BELL_SILENCE_MINUTES for a value between 0 and 240.

To automatically cancel workstation silence:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the System Control tab, under Property, select SYSCONTROL_BELL_SILENCE_MINUTES.

4. In the Value box, type the duration in minutes.

5. Click Apply.

Delaying control panel local AC power fail events

By default, control panel local AC power fail events are not posted on the system until after 3 hours. This is to prevent power fluctuations from becoming a nuisance.

Note: UL/ULC requires that you post control panel AC power fail events after a delay of between 1 and 3 hours. Other delays are permitted, including no delay.

To delay control panel AC power fail events:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the UL tab, under Property, select UL_NINTH_EDITION_ACPOWER_TIMEOUT_HOURS.

4. In the Value box, enter the amount of delay in hours.

5. Click Apply.

Changing the event selection method

The event selection method determines which event is automatically selected (has focus) when FireWorks posts a new event. Your options are:

*   Maintain Selected Event: The currently selected event remains selected. It does not change when a new event is posted.

*   Select High Priority (default): The new event is automatically selected only if it has a higher priority. Select this setting if you want the system to display the oldest, highest priority event.

*   Select Newest: The new event is automatically selected regardless of its priority.

*   Select Newest (if higher or equal priority): The new event is automatically selected only if its priority is higher than or is equal to the current event. Select this setting if you want the system to display the most recent highest priority event.

Note: The event selection method setting may conflict with UL/ULC requirements. To comply, set the event selection method for Select High Priority for all user accounts.

To change the event selection method:

1. In System Control, click the Function menu.

2. Point to Event Selection Method, and then click one of the choices described above.

Assigning user rights to clear all receiver account events

To clear all events from the same receiver account at the same time you must be assigned the Clear All Account Events user right. Typically, this user right is only assigned to administrator user accounts.

Note: The event selection method setting may conflict with UL/ULC requirements. To comply, clear the Clear All Account Events check box.

To assign the Clear All Account Events user right:

1. On the Applications menu, click User Manager, and then click the Access Group Configuration tab.

2. In the Access Groups list, click the access group.

3. Under Configuration Items, click System Control.

4. Check the Clear All Account Events check box.

Filtering events

The FireWorks event filters let you determine which events are displayed, printed, and saved in the history file. By default, all events are displayed, printed, and saved.

Note: The event filter settings may conflict with UL/ULC requirements. To comply, set the Display, Printer, and History filters to allow all events.

To filter events:

1. In System Builder, on the Applications menu, click Set Filtering Parameters.

2. In the Set Filtering Parameters dialog box, check the Enable Filtering check box.

3. For each event type, do one of the following under Display, Printer, and History:

    Check the check box to allow the event.

    — or —

    Clear the check box to block the event.

4. Click Apply.

Changing to local mode of operation

Local mode of operation automatically acknowledges activation events and restoration events from the same point — *if both are present in the New Events list after 5 to 30 minutes*. By default, FireWorks is set for proprietary mode.

To change to local mode operation:

1. In System Builder, on the Applications menu, click Local Mode of Operation.

2. In the Local Mode of Operation dialog box, under Operational Modes, click Local.

3. Set Local Mode Acknowledged Time for between 5 and 30 minutes.

4. Click Apply.

Adjusting the trouble signal re-sound timer

By default, the local trouble signal automatically re-sounds if you do not clear all events from the system within 24 hours after you acknowledge them. You can adjust the trouble signal re-sound timer to re-sound at an interval other than 24 hours. By default, the trouble signal re-sound timer is disabled (set to 0).

Notes

•   UL/ULC requires the local trouble signal to re-sound within 24 hours. Setting the adjustable trouble signal re-sound timer for more than 24 hours violates UL/ULC requirements.

•   The adjustable trouble signal re-sound timer setting overrides the 24-hour trouble re-sound timer setting.

To adjust the trouble signal re-sound timer:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the System Control tab, under Property, select SYSCONTROL_RESOUND_HOUR_CONFIGURABLE.

4. In the Value box, type the duration in hours. Possible values: 0 to 99.

5. Click Apply.

Changing Event List operation

The EventList property determines how System Control handles Security events based on agency requirements. By default, System Control groups Security events with Building events (UL 864 operation). You can also keep Security events separate (CAN/ULC-S527-11 operation).

Note: To comply with CAN/ULC-S527-11, set the EventList property for ULC-S527 compliant (Canada).

To change Event List operation:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the Basic tab, under Property, select EventList.

4. In the Value box, click the required agency standard.

5. Click Apply.

Changing the color used for Emergency events

FireWorks uses colors to help the system operator distinguish between Emergency events and other event types. By default, FireWorks uses the color yellow for Emergency events.

Changing the color used for Emergency events affects the following System Control screen elements:

•   The background color that the Event List window uses to identify active Emergency events

•   The color that the Alarm/Emergency LED uses to indicate active Emergency events

•   The border color that Device TSAs and Device icons use to indicate active Emergency events

Note: To comply with CAN/ULC-S527-11, set the SYSCONTROL_COLOR_FOR_EMERGENCY property for Yellow.

To change the color used for Emergency events:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the UL tab, under Property, select SYSCONTROL_COLOR_FOR_EMERGENCY.

4. In the Value box, click the arrow, and then click the color that you want.

5. Click Apply.

Changing the color used for Supervisory events

FireWorks uses colors to help the system operator distinguish between Supervisory events and other event types. By default, FireWorks uses the color yellow for Supervisory events.

Changing the color used for Supervisory events affects the following System Control screen elements:

- The background color that the Event List window uses to identify active Supervisory events
- The color that the Supervisory/Building LED uses to indicate active Supervisory events
- The border color that Device TSAs and Device icons use to indicate active Supervisory events

Note: To comply with CAN/ULC-S527-11, set the SYSCONTROL_COLOR_FOR_SUPERVISORY property for Yellow.

To change the color used for Supervisory events:

1. On the Applications menu, click System Configuration.
2. Enter the system configuration password.
3. On the UL tab, under Property, select SYSCONTROL_COLOR_FOR_SUPERVISORY.
4. In the Value box, click the arrow, and then click the color that you want.
5. Click Apply.

Changing the color used for Building events

FireWorks uses colors to help the system operator distinguish between Building events and other event types. By default, FireWorks uses the color yellow for Building events.

Changing the color used for Building events affects the following System Control screen elements:

- The background color that the Event List window uses to identify active Building events
- The color that the Supervisory/Building LED uses to indicate active Building events
- The border color that Device TSAs and Device icons use to indicate active Building events

Notes

- To comply with CAN/ULC-S527-11, set the SYSCONTROL_COLOR_FOR_BUILDING property for Yellow.
- The SYSCONTROL_COLOR_FOR_BUILDING property also determines the color used for Security events when Event List operation is configured to comply with UL 864.

To change the color used for Building events:

1. On the Applications menu, click System Configuration.
2. Enter the system configuration password.
3. On the UL tab, under Property, select SYSCONTROL_COLOR_FOR_BUILDING.
4. In the Value box, click the arrow, and then click the color that you want.
5. Click Apply.

Changing the color used for Trouble events

FireWorks uses colors to help the system operator distinguish between Trouble events and other event types. By default, FireWorks uses the color yellow for Trouble events.

Changing the color used for Trouble events affects the following System Control screen elements:

- The background color that the Event List window uses to identify active Trouble events

- The color that the Trouble/Disabled LED uses to indicate active Trouble events

- The border color that Device TSAs and Device icons use to indicate active Trouble events

Note: To comply with CAN/ULC-S527-11, set the SYSCONTROL_COLOR_FOR_TROUBLE property for Yellow.

To change the color used for Trouble events:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the UL tab, under Property, select SYSCONTROL_COLOR_FOR_TROUBLE.

4. In the Value box, click the arrow, and then click the color that you want.

5. Click Apply.

Changing the color used for Monitor events

FireWorks uses colors to help the system operator to distinguish between event types. By default, FireWorks uses the color yellow for Monitor events.

Changing the color used for Monitor events affects the following System Control screen elements:

- The background color that the Event List window uses to identify active Monitor events

- The color that the Maintenance Alert/Monitor LED uses to indicate active Monitor events

- The border color that Device TSAs and Device icons use to indicate active Monitor events

Note: To comply with CAN/ULC-S527-11, set the SYSCONTROL_COLOR_FOR_MONITOR property for Yellow.

To change the color used for Monitor events:

1. On the Applications menu, click System Configuration.

2. Enter the system configuration password.

3. On the UL tab, under Property, select SYSCONTROL_COLOR_FOR_MONITOR.

4. In the Value box, click the arrow, and then click the color that you want.

5. Click Apply.

Chapter 5
Troubleshooting

Summary

This chapter covers problems that you may experience while setting up and using your FW-UL6S and gives you possible solutions.

Content

Fire alarm control panel to workstation communication problems

In this section, we assume that your fire network already operates correctly on its own. Refer to the appropriate technical reference manual for additional information about your fire alarm control panel and network.

Workstation/server communication

Problem

The workstation/server is not communicating with a fire alarm control panel.

Check the status bar. The LED indicators in the status bar turn from green to yellow when there is an RS-232 port communication problem.

When multiple fire networks are connected to a single workstation/server, you can identify which node has a problem by displaying the Node Status window.

Causes and solutions

RXD and TXD connections are crossed. Verify correct connections using the system control menu or the F2 quick key. Is the cable correct? Is the panel connection correct?

Communication port configuration is wrong. Use System Builder to check and correct the hardware, node, and port settings for the node with trouble. Check for:

- Incorrect port selection or wiring
- Baud rate mismatch between the workstation/server and fire network

The wrong drivers are installed. The COM ports should not be configured for WinRT communications; they should be configured for serial communications.

EST3 or EST3X communication

Problem

The control panel is not communicating with the workstation/server.

A communication failure between the control panel and the workstation/server network appears as an internal trouble on zone 0607 (port 1 on EST3 or EST3X) or 0608 (port 2 on EST3).

Different events can cause the 0607/0608 trouble state. Failure of the auxiliary port is identified on the control panel and on the FireWorks displays.

Causes and solutions

RXD and TXD connections are crossed. Verify correct connections. Is the cable correct? Is the panel connection correct?

The gateway port on the control panel is not configured, or the FireWorks and control panel gateways are set differently. Use the SDU data entry program to configure the control panel port as Gateway 3. Make sure the port is not configured for a printer. Make sure the gateway settings are correctly set and are the same in both FireWorks and the control panel.

Communication baud rates for the control panel and the workstation/server do not match. Set the control panel baud rate using the SDU program. Set the workstation/server baud rate from the System Builder software to define the node (port) connected to the control panel. The suggested baud rate is 19,200.

Workstation/server hard drive failure

The benefit of a FW-UL6S workstation/server is that the system remains operational if one of the hard drives fail. If a hard drive fails, a message the screen displays a message to tell you that a RAID volume is degraded.

Figure 35: RAID volume degraded message
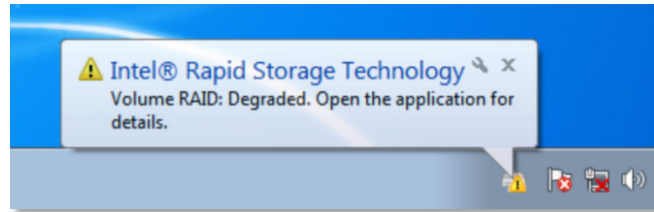
FireWorks continues to operate using the good hard drive, but the fault-tolerant RAID functionality will not work until the failed hard drive is replaced. Once the failed hard drive is replaced, the RAID system rebuilds the data on the replaced drive and your system is back to full operation.

Order a replacement RAID hard drive and follow the installation instructions included with the drive.

To identify the failed hard drive:

1. Start Intel Rapid Storage Technology Enterprise.

    Click the Intel Rapid Storage Technology Enterprise icon in the icon tray.
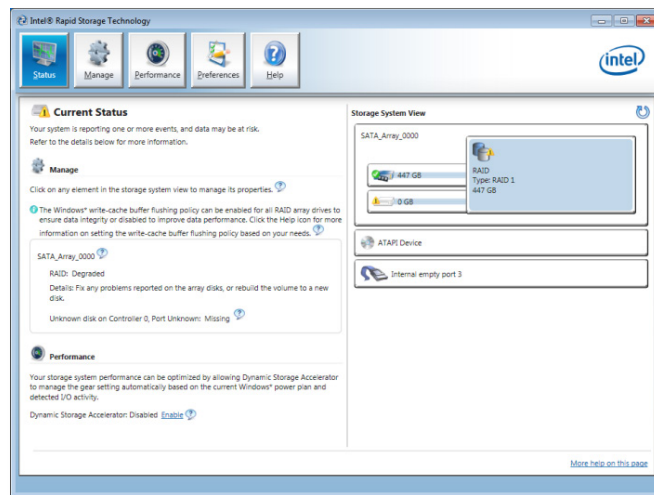
    — or —

    Click Start > All Programs > Intel > Intel Rapid Storage Technology Enterprise.

2. Under Current Status, note which hard drive is missing. See Figure 36.

    Typically, Drive 1 is connected to Port 0 (SATA 0). Drive 2 is connected to Port 1 (SATA 1).

Figure 36: Intel Rapid Storage Technology Enterprise

Note: Click the Help button for information on using Intel Rapid Storage Technology Enterprise.

Cleaning the filter

Clean the filter once a year or more often if needed. Replace the filter if cleaning by itself does not achieve satisfactory results.

For more information, see *FW-FILTER FireWorks Workstation Air Filter Installation Sheet* (P/N 3100780-EN).

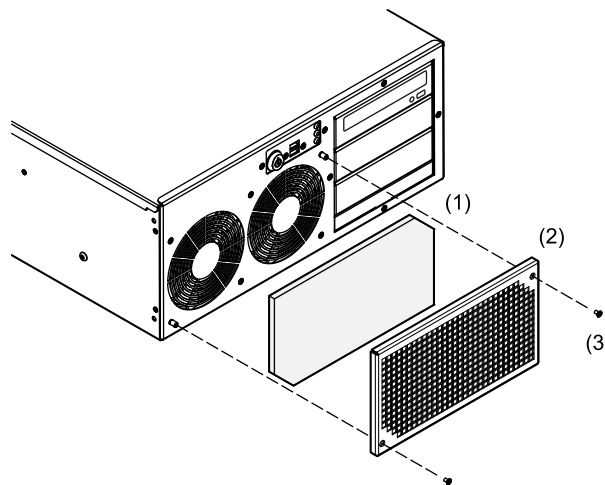**Caution:** Equipment damage hazard. Do not use chemical solvents of any kind to clean the filter.

To clean the filter:

1. Remove the filter and filter cover. See Figure 37.

2. Vacuum the debris from the filter or rinse the filter with clean fresh water.

3. Dry thoroughly, and then replace.

Figure 37: Filter assembly exploded view

(1) Filter
(2) Filter cover
(3) #6-32 × 1/2 tapered machine screws (2x)

Cleaning the monitors

Clean the monitors periodically to remove dust and other particles that can scratch the screen. Use a soft, clean, lint-free cloth or a camel hair brush.

Appendix A
System calculations

Summary

This appendix provides instructions for sizing a UPS.

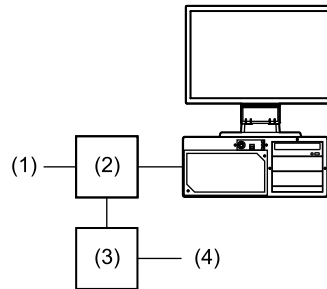**Content**

UPS sizing calculations

NFPA guidelines require the use of a UL 1481 Listed uninterruptible power supply (UPS) for FireWorks workstations. The UPS must be UL Listed for Fire Protection Signaling applications (UTRZ). It must provide 120 V at 60 Hz as required by code or the local authority having jurisdiction.

Figure 38: UPS block diagram

(1) Permanent mains connection to UPS   (3) UL/ULC Listed trouble signal initiating device circuit
(2) UL 1481 Listed UPS   (4) Fire alarm control panel

Use Table 10 to calculate the volt-amp (VA) requirements for the uninterruptible power supply to be used with the FW-UL6S.

To calculate UPS size:

1. List the equipment to be protected by the UPS in the Equipment column.

2. Record the power requirement for each piece of equipment in the Volts and Amperes columns.

   You can find this information on the equipment tags.

3. Multiply the volts and amps for each piece of equipment and write the result in the Power column.

   The power on some equipment may be listed in watts. You can use the following formula to convert watts to VA. Use a power factor of 0.7, which is typical for computer equipment.

   VA = Watts x Power factor

4. Add the Power column and enter the result in Subtotal.

5. Multiply the Subtotal by 0.25 and enter the result in Derating.

6. Add the Derating to the Subtotal and enter the result in Required VA.

7. The required standby power (VA) you just calculated must be maintained for the time period required by NFPA code.

8. Calculate the required standby battery size in ampere-hours according to the following equations.

You will need to know the UPS conversion efficiency (EC) and battery voltage (VB). You'll calculate the DC power required by the UPS and the battery current. These yield the battery size in ampere-hours.

PDC = VA / EC

Where:
PDC = DC power required by UPS
VA = Volt-amps you calculated
EC = UPS conversion efficiency

IB = PDC / VB

Where:
IB = Battery current
PDC = DC power required by UPS
VB = UPS battery voltage

CB = IB x BP

Where:
CB = Battery capacity in amp-hours
BP = Backup period from table

Note: Consult UPS manufacturer's instructions for specific battery sizing instructions. Remember that you must provide for bypassing the UPS for servicing.

Table 10: UPS sizing worksheet

Equipment	Volts	Amperes	Power (volts × amperes)
FW-UL6S	120	5.0	600
Monitor 1 [1]	120		
Monitor 2	120		
Monitor 3	120		
Monitor 4	120		
Monitor 5	120		
Monitor 6	120		
PT-1S	120	1.0	120

Subtotal	
Derating (25% of subtotal)	
Required VA	

[1] Refer to the monitor installation sheet for rating specifications.

Appendix B
Listing requirements

Summary

This appendix lists the requirements you must meet for agency listings and approvals.

Content

UL/ULC listing requirements

Table 11: UL/ULC listing requirements

UL	ULC	Requirement
		Workstation/server
X	X	Any device connected to the workstation/server by copper wiring must limit connections to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury. To connect devices outside the room you must use fiber optic cable.
X	X	The workstation/server must be supervised by an internal watchdog card.
X	X	Each workstation/server requires a permanent connection to a dedicated fire alarm branch-circuit supply by way of a UL 1481 Listed uninterruptible power supply (UPS) and a UL 1449 Listed Type 2 surge protection device installed at the power junction box. The UPS must be UL Listed for fire protection (UTRZ), must provide 120 V at 60 Hz for a minimum of 24 hours in normal (standby) and 15 minutes in alarm, and must be supervised.
	X	For proprietary installations, the workstation/server must be installed in a rack and locked to protect it from tampering. See Table 5 on page 9 for a list of rack mounting accessories. No other equipment may be installed in the rack.
		For annunciator installations, the workstation/server does not need to be rack mounted and may be installed on a bench.
X	X	When mounting the workstation/server on a bench, place the workstation/server horizontally on the surface along with the monitors, keyboard, and mouse. When mounting the workstation/server on a bench, you must use an FW-UL6CC1 to secure cables and connect conduit.
		ULC only allows bench mounting in applications where the workstation/server is ancillary (no common controls).
X	X	UL 1076 and UL 1610 require an acknowledgement signal from the proprietary/central station. This is sometimes called "closing confirmation" or "ring-back."
		To comply with UL 1076, connect FireWorks to the EST3 RS-232 serial port by way of a direct connection or by way of an MN-COM1S interface module. In this configuration FireWorks functions as a "multiplex central station." Program the sub-states so that the security partitions activate an audible and visual signal at the security location. See FireWorks System Builder Help for more information.
		To comply with UL 1610, the EST3 communicates with the proprietary/central station by way of a 3-MODCOM(P) Digital Alarm Communicator Transmitter (DACT). Program the EST3 to activate an audible and visual signal at the security location after it confirms that the proprietary/central station received a partition arming (closing) message. See 3-SDU Help for more information.
X	X	Security: A COM fault trouble to an EST3 system must be investigated immediately because it comes in as a COM fault and not a security compromise.
X		Security: The FireWorks receiving equipment is suitable for proprietary burglar alarm service, central station service, hold up alarm service, and police station connect service with basic line security. For holdup alarm service, the CMS or FireWorks must be manned 24 hours a day.
	X	Security: Limited to Local applications only
	X	For ULC applications, all wiring must be mechanically protected.

UL	ULC	Requirement
X	X	When applied per section "Connecting a Bosch/Radionics D6600 Communications Receiver" on page 32, FireWorks is suitable for the following: UL/ULC Proprietary and Central Station Receiver for fire applications (one DACR per workstation), UL/ULC Central Station Receiver for security applications (one D6600 per workstation). If more than one Osborne Hoffman DACR is connected to a single FireWorks workstation/server in either application this configuration is considered ancillary and requires acknowledgement at the DACR. These configurations are not suitable for use as Central Station Automation Equipment.
X	X	FireWorks with common controls can be used on standard LAN/WAN Ethernet networks for communication to the EST3 system as long as the EST3 system is used as the firefighter's interface. For fire applications only.
		Remote clients and ancillary fiber switches connected directly to the EST3 and to FireWorks must be UL Listed for ITE or fire, and must be installed within the protected premises or per the authority having jurisdiction. For ULC applications, the use of secure protocols needs to be applied, such as HTTPS, VPN, or another similar encryption method.
X		When applied per section "Passing commands between control panels" on page 64, the control panels must be mounted in the same room and positioned so both can be simultaneously observed. For use in UL 864 applications only.
		Proprietary Fire Signal Receiving Centre Applications
	X	For CAN/ULC-S559 compliant proprietary fire signal receiving center applications, see *EST Life Safety Systems CAN-ULC-S559 Application Guide* (P/N 3102245-EN).
		PT-1S printer
X	X	Event messages must be recorded so users can review them.
		Each system must include at least one PT-1S printer for printing event messages.
		FireWorks Remote Client connections
X	X	FireWorks Remote Client connections must be made using fiber optic cables

In order to meet CAN/ULC-S527 requirements for Local applications, the FireWorks workstation requires a hardened enclosure to protect all wiring and cables, including the mouse, the keyboard, and the monitors. Additionally, the prioritization of signals is required to meet CAN/ULC-S527-99 Table 1 and CAN/ULC-S527-11 Table 4.

In lieu of the above requirements for hardened enclosure (see item c) and priority of signals (see items a, b, c & d):

a) When Local Security Services is installed in FireWorks, the main FireWorks workstation shall be installed adjacent to the EST3.

b) When Local Security Services is installed in FireWorks, client workstations and remote clients shall be classified for ancillary display purposes only and shall have no control capabilities.

c) The FireWorks workstation is not listed as the only means of annunciation (see CAN/ULC-S527-11, 4.11.3.2, and 4.11.3.3).

d) CO events shall be programmed as Monitor events only.

In order to meet CAN/ULC-S559 requirements, no action is required for both Central Station and Proprietary Fire Signal Receiving Centre and Systems as the FireWorks is listed for ULC Fire Only. Note: FireWorks is listed for Emergency Signaling, US Only and Security, US Only.

FM approval requirements

To meet the requirements for FM approval (Proprietary Signaling Systems and Local Protective Signaling, US only):

- The FireWorks workstation must monitor and supervise the trouble contacts on the UPS (uninterruptible power supply). If the UPS can report multiple trouble condition (e.g., UPS Trouble and UPS On Battery), then FireWorks must distinctly annunciate each trouble condition.

- Plug the software key into one of the USB ports on the back of the workstation and install a FW-UL6CC1 cable cover to protect it.

Appendix C
Applications

Summary

This appendix describes typical FW-UL6S applications.

Content

Ethernet network application

FireWorks can communicate with EST3 and EST3X control panels over an Ethernet network (LAN or WAN).

Notes

- When connecting FireWorks over a standard network to an EST3 or EST3X control panel with no firefighter interface, the FireWorks connection is considered ancillary, meaning that it cannot have common controls capability with the control panel.

- When connecting FireWorks over a network to an EST3 or EST3X control panel that has a firefighter interface, the FireWorks can have common controls capability with the control panel. This is a fire-only UL/ULC proprietary application and is not suitable for UL/ULC security applications.

Figure 39 shows a typical Ethernet network application.

Figure 39: Typical Ethernet network application
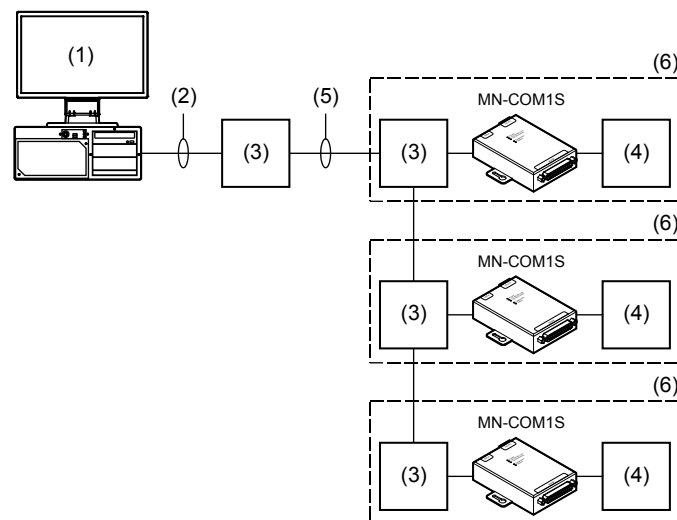
(1) FW-UL6S and FW-UL6CC1.
(2) Ethernet connection. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) MN-FNSx Ethernet switch.
(4) EST3/EST3X CPU card and RS-232 option card.
(5) Dedicated fiber network. See *MN-FNSx Fiber Optic Transceiver Module Installation Sheet* (P/N3102138-EN) for distance and cable specifications.
(6) Dashed line indicates the same enclosure (or equivalent).

Redundant Ethernet communication application

In a redundant Ethernet communication application, FireWorks uses two TCP/IP ports to connect to the fire alarm system. If the primary port connection breaks, FireWorks can still communicate using the redundant port connection. See Figure 40.

Figure 40: Typical redundant Ethernet application
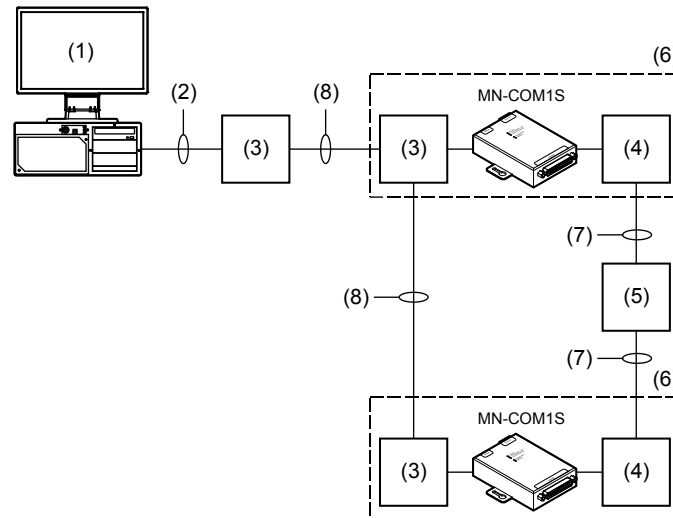
(1) FW-UL6S and FW-UL6CC1.
(2) Ethernet connection. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) MN-FNSx Ethernet switch.
(4) EST3/EST3X CPU and RS-232 option card.
(5) Other EST3/EST3X control panels in the same fire alarm network.
(6) Dashed line indicates the same enclosure (or equivalent).
(7) EST3/EST3X RS-485 network.
(8) Dedicated fiber network.

Passing commands between control panels

The FW-UL6S is capable of passing commands between it and the following control panels:

- EST3
- EST3X

FireWorks acts like a control panel by receiving the command or event (e.g. reset command or alarm event) from one control panel, processing that command or event, and then sending a command to another control panel.

Figure 41: Command passing flow diagram

Event takes place on FACP 1. The Event is sent to FireWorks.	Æ	FireWorks receives the event. The event triggers a command in FireWorks. The command is sent to FACP 2.	Æ	FACP 2 receives and executes the command.
FACP 1 receives and executes the command.	Å	FireWorks receives the event. The event triggers a command in FireWorks. The command is sent to FACP 1.	Å	Event takes place on FACP 2. The Event is sent to FireWorks.

(1) Locate the fire alarm control panels (FACP) in the same room and position them so both can be viewed at the same time. For use in UL 864 applications only.
(2) Ethernet connection. Limit connection to the same room, within 20 ft. (6.1 m) for UL or 59 ft. (18 m) for ULC, and enclose in conduit or equivalent protection against mechanical injury.
(3) FW-UL6S and FW-UL6CC1.

Example 1: An alarm event on panel 1 triggers a command in FireWorks, which turns on the strobes on panel 2.

Example 2: An alarm event on panel 2 triggers a command in FireWorks, which turns on the strobes on panel 1.

Example 3: Reset is pressed on panel 1, which triggers a command in FireWorks that resets panel 2.

For commands like Reset or Signal Silence, program the command to execute in one direction only. For example, do not configure your system so that pressing Reset on the FACP 1 resets FACP 2 and pressing Reset on FACP 2 resets FACP 1. Programming the command to execute in both directions can result in an infinite loop condition in which both panels reset each other continuously.

EST3 and EST3X programming

When sending a reset command to another panel, additional programming is required in FireWorks.

Desired operation: When reset is pressed on an EST3 or EST3X panel, FireWorks receives the event and sends a reset command to the other panel and the panel resets.

This is accomplished by:

- Creating an "other panel" reset command using Command Browser in FireWorks System Builder

- Assigning the reset command to the EST3 or EST3X reset activation event (Label: Reset_Active_00_00, Address: 00-00-0011) in Device Browser in System Builder

Security applications

The following applications are UL/ULC Listed for use with EST3 systems only and can be used in a rack-mount or bench-mount configuration:

- Police station connection with basic line security

- Central station alarm

- Proprietary

- Holdup alarm

Note: For information about these applications, refer to the EST3 control panel documentation.

The following is optional equipment when bench mounting or rack mounting your system for *annunciator only* applications:

- PT-1S system event printer

- UL 1481 Listed UPS

- FW-UL6CC1

Fire applications

The following applications are UL Listed for use with all systems and can be used in a rack-mount or bench-mount configuration:

- Signaling device accessory

- Signaling system control unit

The following is optional equipment when bench mounting or rack mounting your system for *annunciator only* applications:

- PT-1S system event printer

- UL 1481 Listed UPS

- FW-UL6CC1

Firefighter Smoke Control Station (FSCS)

This section describes how to configure an FW-UL6S for use as a UL/ULC Listed Firefighter Smoke Control Station (FSCS). Figure 42 below shows a typical FSCS application.

Note: This application may only be used with EST3 life safety systems. For more information, see *EST3 Smoke Management Manual* (P/N 270913-EN).

Figure 42: Typical FSCS application
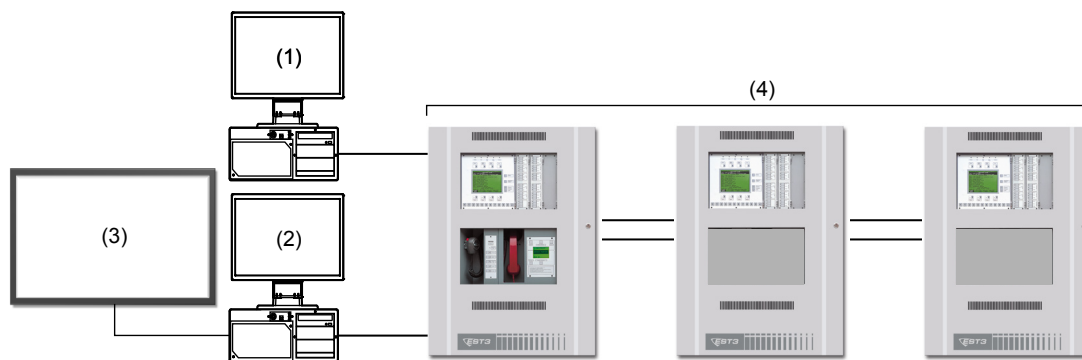
(1) FireWorks fire alarm/emergency communication workstation
(2) FireWorks FSCS (FW-UL6S)
(3) Second UL Listed monitor (optional)
(4) EST3 life safety system

To meet UL/ULC listing requirements:

- The FireWorks FSCS may only operate as a stand-alone FireWorks workstation (i.e., only FW-CGSUL installed). You *may not* install any other software options or use FireWorks versions earlier than 8.2.

- The FireWorks FSCS may be used for dedicated or nondedicated smoke control systems.

- The FireWorks FSCS may only be used for operating smoke control functions (e.g, open/close dampers, turn fans on/off). The FireWorks FSCS *may not* be used to operate any fire alarm or emergency communication control functions (e.g., silence fire alarm signals, reset control units).

- The FireWorks FSCS display must be visible at all times (e.g., no screen savers). Text on map display graphics must be legible.

- The FireWorks FSCS must be configured to require log on credentials.

- System operation, graphics, text, and other displayed information must be approved by the local authority having jurisdiction.

- Communication faults between the FireWorks FSCS and the EST3 life safety system must be displayed on both systems.

- For Canadian operation, fire alarm status indicators must be red and trouble status indicators must be yellow.

- The FireWorks FSCS must display the status of electrical or personal protection devices (e.g., electrical disconnects, static pressure sensors) that are part of and are monitored by the EST3 life safety system.

When model FW-UL6S is configured as a graphical FSCS, it is required to be connected to a UL 864 Listed monitor using an HDMI video cable that does not exceed eight feet in length. Model FW-UL6S is also permitted to utilize an additional available HDMI video port to connect a second monitor that is UL 864 Listed using an HDMI video cable that does not exceed eight feet in length.

Appendix D
Lantronix CPR Manager

Summary

This appendix provides instructions for installing Lantronix CPR Manager and setting up serial ports for use with select serial devices.

Content

Introduction

Lantronix CPR Manager (also known as COM Port Redirector) lets FireWorks communicate with select serial devices using an Ethernet connection and an MN-COM1S.

A copy of Lantronix CPR Manager is in the C:\Fireworks\Tools\Serial Port Tool folder after you install FireWorks.

Note: If the host is on the other side of a router or a firewall, then you may have to add UDP ports 30718, 43282, and 43283 to the firewall exception list. You may experience trouble in opening this COM port if these UDP ports are not excluded. For VESDA applications, use TCP port 10001

Installing CPR Manager

1. On the Start menu, click Computer, and then open the C:\Fireworks\Tools\Serial Port Tool folder.

2. In the Serial Port Tool folder, double-click CPRSetup.exe.

3. Click Install, and then follow the on-screen instructions.

Creating the Lantronix CPR port

1. On the Start menu, under the Lantronix folder, click CPR Manager.
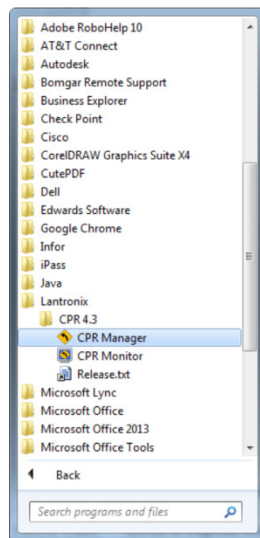
2. On the Device menu, click Search or click the Search For Devices button to add existing COM ports to the Com Port List.
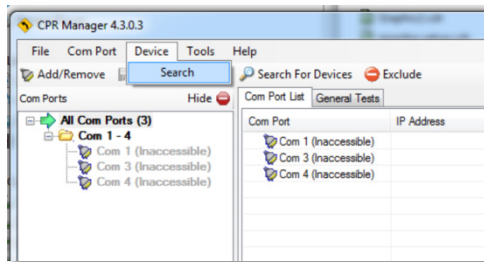
3. On the Com Port menu, click Add and Remove or click the Add/Remove button to add a virtual COM port.
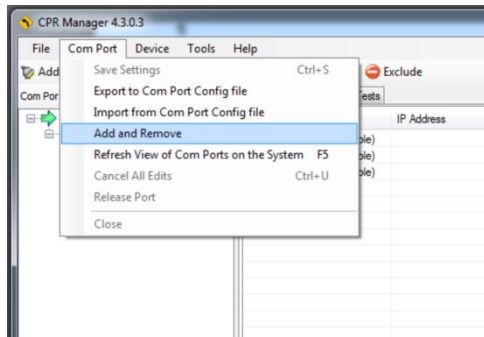
4. In the Com Ports dialog box, check the check box for the COM port you want to add, and then click OK.

    Note: FireWorks Communication Manager supports up to 25 serial ports. Do not select Com26 or higher.
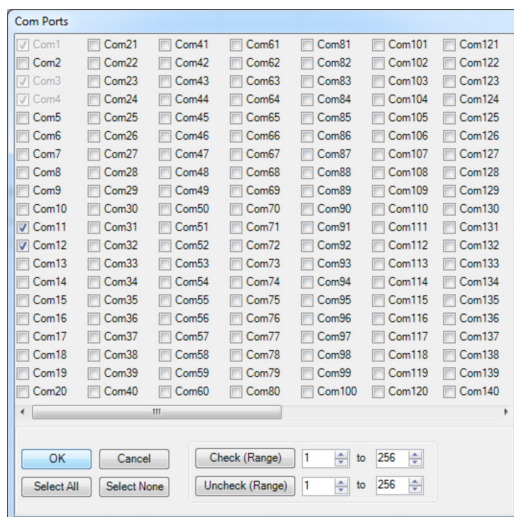
5. In the device navigation pane, select the COM port, that you just created.

6. On the Settings tab, do the following:

    In the Host box, type the IP address of the MN-COM1s connected to the target serial device.

    In the TCP Port box, type 10001.

7. Click Save.

Configuring the FireWorks COM port

1. On the System Builder Applications menu, click Communications Manager.

2. In the Communications Manager dialog box, select a port in the Ports list or click Add Port.

3. Under Port Properties, do the following:

    In the Label box, type a label for the port.

    Under Port Type, select Serial Port.

    In the Assigned Node list, select the target node, and then check the Enabled check box.

    In the Description box, type a description.

    Under Serial Port properties, in the Com Port list, select the Lantronix CPR port.

4. Click Apply.

Testing the connection

Once the equipment is set up and deployed, you can use Lantronix CPR Manager to test the connection.

To test the connection:

1. Start Lantronix CPR Manager.

2. In the navigation panel, click the COM port that you want to test.

3. On the Com XX tab, set the serial port settings for the following values:

    Baud Rate: 19200

    Data: 8 bits

    Parity: Even

    Stop: 1 bit

    Flow control: None

4. Click Open.

5. Verify that Com Status is Open and that the Network Status indicates you are connected to the correct IP address.

6. Click Close.

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