ComAp
The heart of smart control

Control Solutions Overview

We control the biggest wind-farm in South-East Asia

That's smart control

The Burgos Wind Farm is located in Burgos, Philippines. ComAp controllers are used to control a backup power system for the wind farm. If the wind is too strong, the turbines automatically shut down in order to prevent damage. ComAp's system automatically starts up a bank of gen-sets synchronises them, and allows the generators to pick up the load within 20 seconds of the turbines shutting down.

The heart of smart control

heart:
The heart of ComAp is our staff and our customers.

smart:
Our products are innovative, intelligent and practical.

control:
What we ultimately provide our customers.

ComAp numbers

1 Global Distributor Network

19 Offices

28 Years of Success and Experience

400+ Employees

250+ Products and Accessories

1 Global Headquarters Prague Czech Republic

Going beyond our leading reputation for controllers to deliver intelligent electronic control solutions

At ComAp, we collaborate closely with you to fulfil your existing requirements, that's a given. It's our knowledge of focused markets, which we gain through unrivalled local expertise that allows us to deliver intelligent electronic control solutions that anticipate your needs.

What's more, our innovative solutions are highly flexible, intuitive and scalable, and supported by world-class customer service and technical expertise, at every stage. This we deliver through our specialist network of local experts operating across the globe.

Solutions for your applications That's smart control

- Telecom
- Marine
- Hospitals
- Agriculture
- Datacenters
- Mining
- Rental
- Industrial
- Events
- Construction
- Power plants
- Renewables
- Commercial
- Banks
- Oil & gas
- Defence

Applications

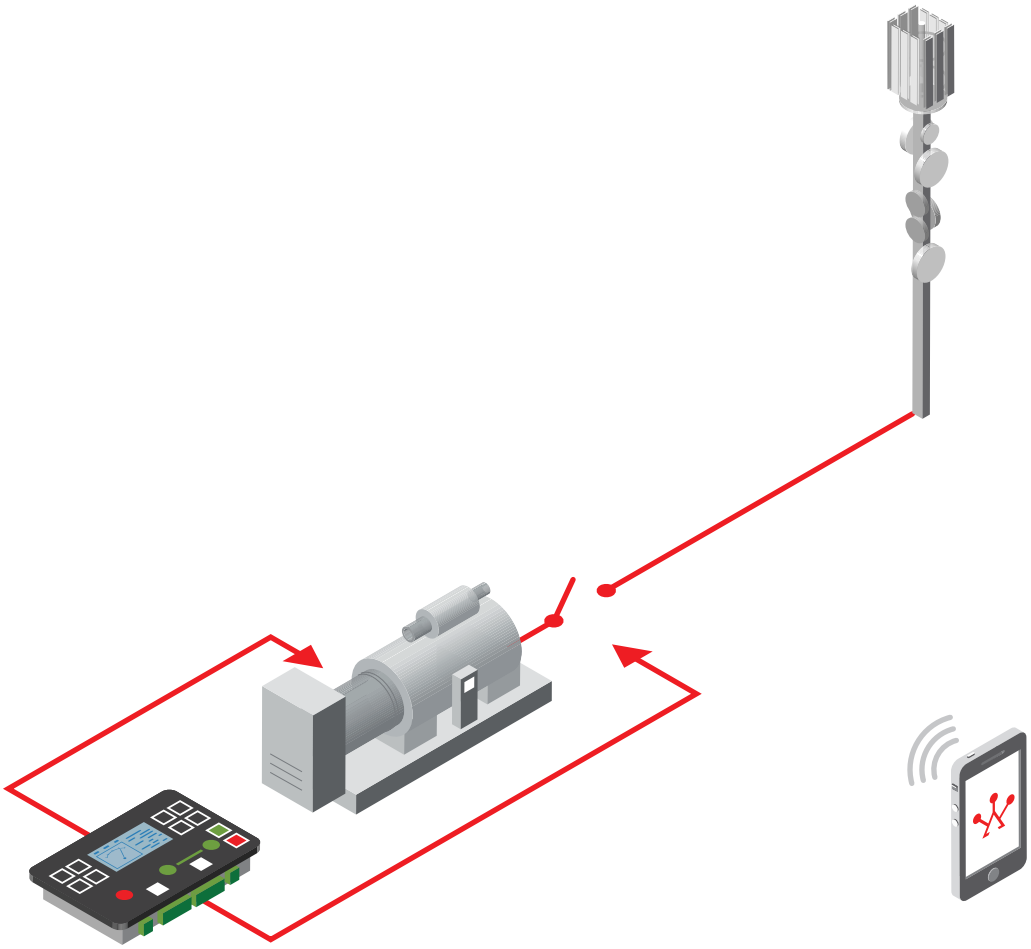
Prime power system

Remote monitoring via Internet

> ComAp's MRS controllers allow you to effectively operate a single gen-set, either manually on the gen-set itself, or remotely.

> New level of flexibility enabling customers to meet any application requirements.

> Get the gen-set under your watch and control it from basically anywhere using the wide range of communication capabilities that we offer - WebSupervisor, 4G, GPS, Ethernet, ModBus, SNMP, AirGate and many more.



UAE

Byrne Equipment Rental

Byrne Equipment Rental is the largest general rental company in the Middle East. They provide equipment rental solutions to a variety of industries. Their power generation equipment has been fitted with InteliLite^{NT} MRS 15 and IL-NT GPRS communication modules, enabling remote communications to be used across the fleet. The use of WebSupervisor and LOCATE technology allows Byrne to monitor and manage this large fleet remotely and accurately.

"It is a cost effective and easy to use tool for monitoring our machines online, anytime. The history also provides valuable information for our service teams, helping us cut many extra costs, and lowering downtime."

Nahidh Kashmoula, Technical Manager, Byrne Equipment Rental

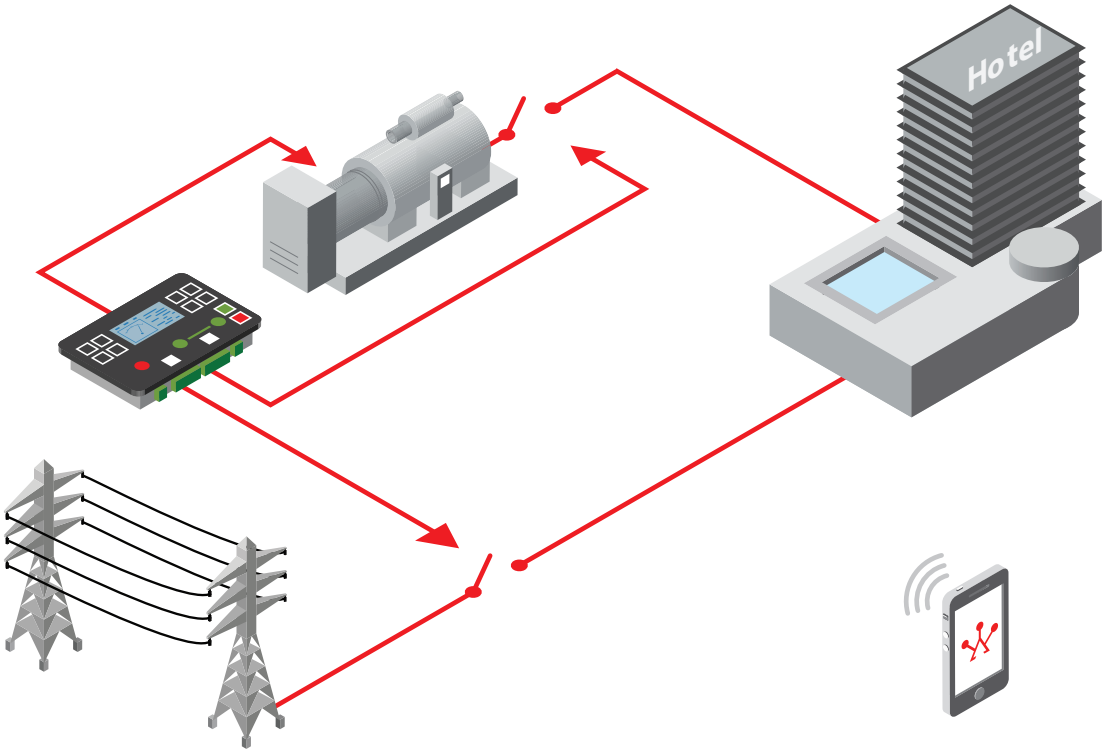
Standby system

Remote monitoring via Internet

> ComAp's AMF controllers allow you to effectively operate, monitor, and control a single gen-set operating in stand-by mode.

> New level of flexibility enabling customers to meet any application requirements.

> Get the gen-set under your watch and control it from basically anywhere using the wide range of communication capabilities that we offer - WebSupervisor, 4G, GPS, Ethernet, ModBus, SNMP, AirGate and many more.



Qatar

Losail International Circuit

Pramac supplied 44 generators for lighting of the race events. The diesel generators can generate 330 kVA each, powered by Volvo Penta engines, are protected by a soundproof enclosure, and equipped with an automatic control panel unit, a GPRS modem for remote control and sand trap air filters for the notorious desert storms. A special modified version of ComAp's InteliLite^{NT} AMF 25, (called the AC03) was installed in the control panel on each of the generators to ensure reliable, and easily monitored, control for the race organisers.

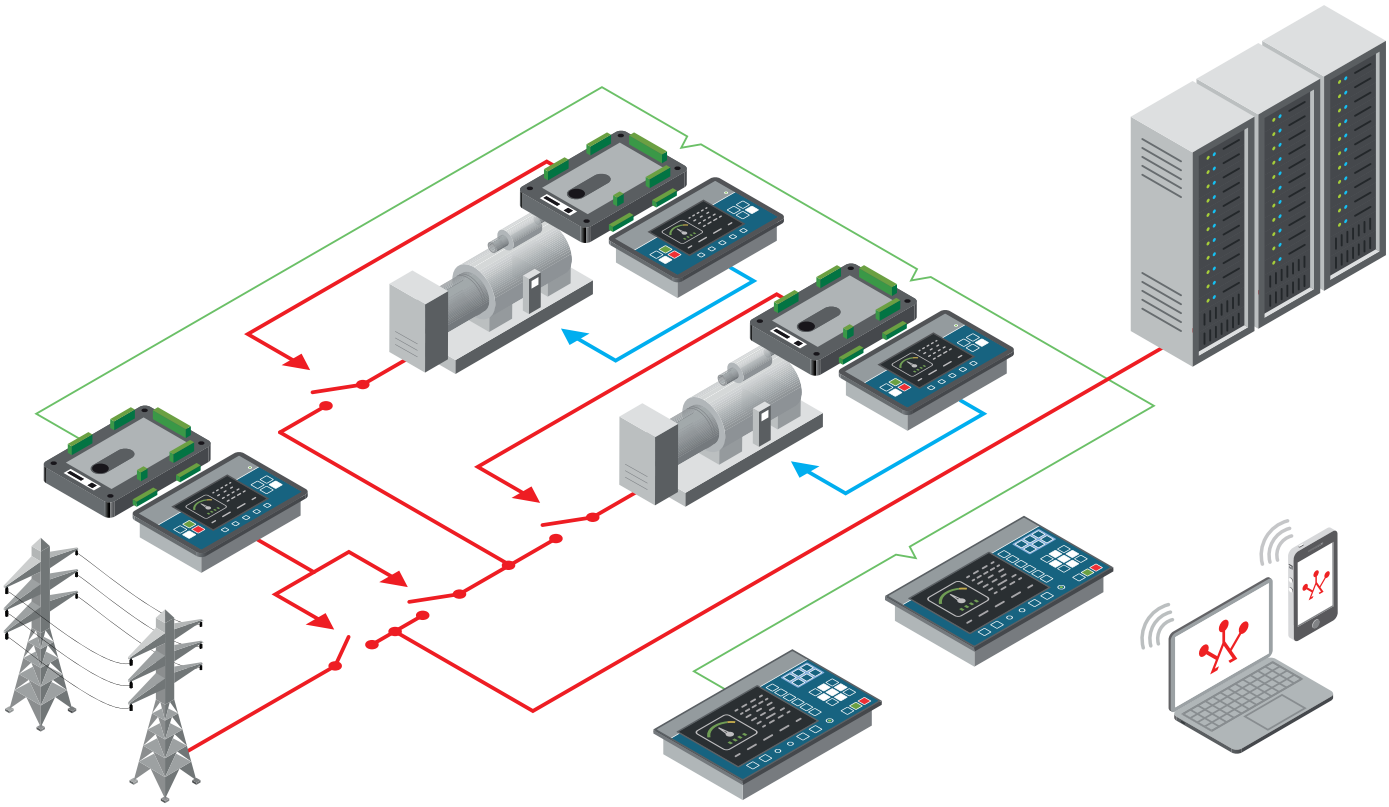
Multiple gen-sets in parallel to grid

Remote monitoring and control via Internet

> Efficient and automatic power management – smart power management for gensets with different nominal power and running hours.

> Easy to install – if you have experiences with our non-parallel controllers, using of InteliCompact^{NT} will be a piece of cake for you.

> Whole site monitoring and remote control – use our WebSupervisor (web or mobile application) or InteliMonitor PC software for monitoring of the whole site.



Egypt

Arab National Cement Company

Arab National Cement Company is newly built production plant of multinational company ASEC Cement Holding Co.. The huge requirement for the uninterrupted power supply is covered by 31 Caterpillar gen-sets, 18 units of 1000 kVA, 8 units 1500 kVA, 4 units 2000 kVA and 1 unit of 2000 kVA used as a emergency stand-by. The scope of supply of ComAp products consists of 31 InteliCompact^{NT} MINT units with accessories. The whole site is monitored remotely by combination of IB-Lite and IL-NT GPRS.

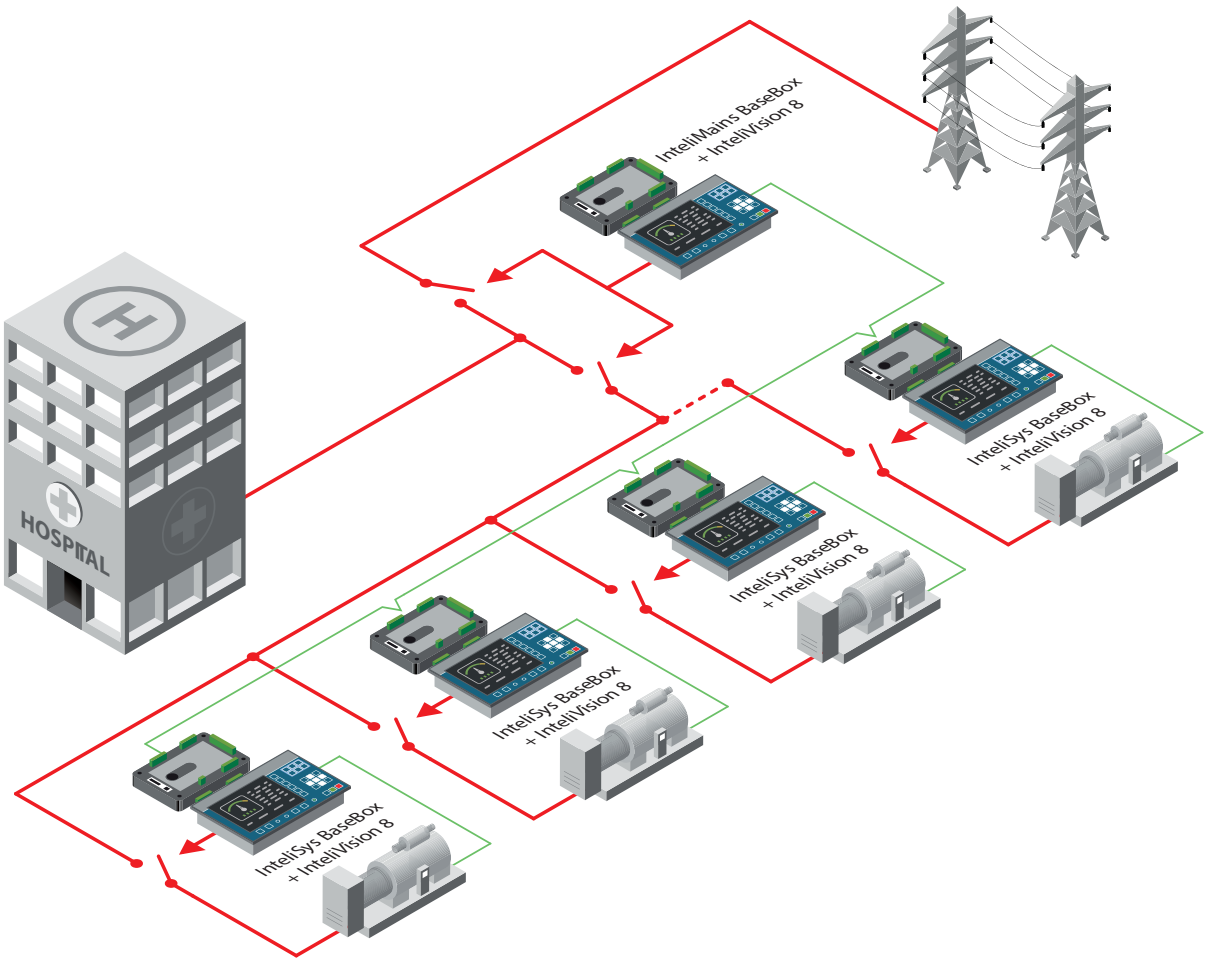
Start-up synchro gensets

Quick AMF without standard gen-set synchronization

> Extremely fast and reliable take-over of standby power due to start, synchronization and full load of gen-set group within 10 seconds from cold start.

> Saving lifetime of UPS batteries thanks to minimized down-time.

> Smooth energizing of transformers by eliminating of in-rush currents.



United Kingdom

London Data Centre

A major telecommunications company in the UK recently expanded their Data Centre on the outskirts of London. Several ComAp products were used for the power supply systems. The customer's maintenance technicians were extremely pleased with the system and have complete confidence with the ComAp controllers and using the HMI Panel Interface.

The Operator stated: "The control solution offers easy testing of the generators, allowing the operator to see exactly what is happening on the system via the InteliVision 17Touch display in the HMI panel." The system was also integrated into the plant BMS system to provide a continuous status of the condition of the plant, providing alarm indication of any fault on the system to the company headquarters.

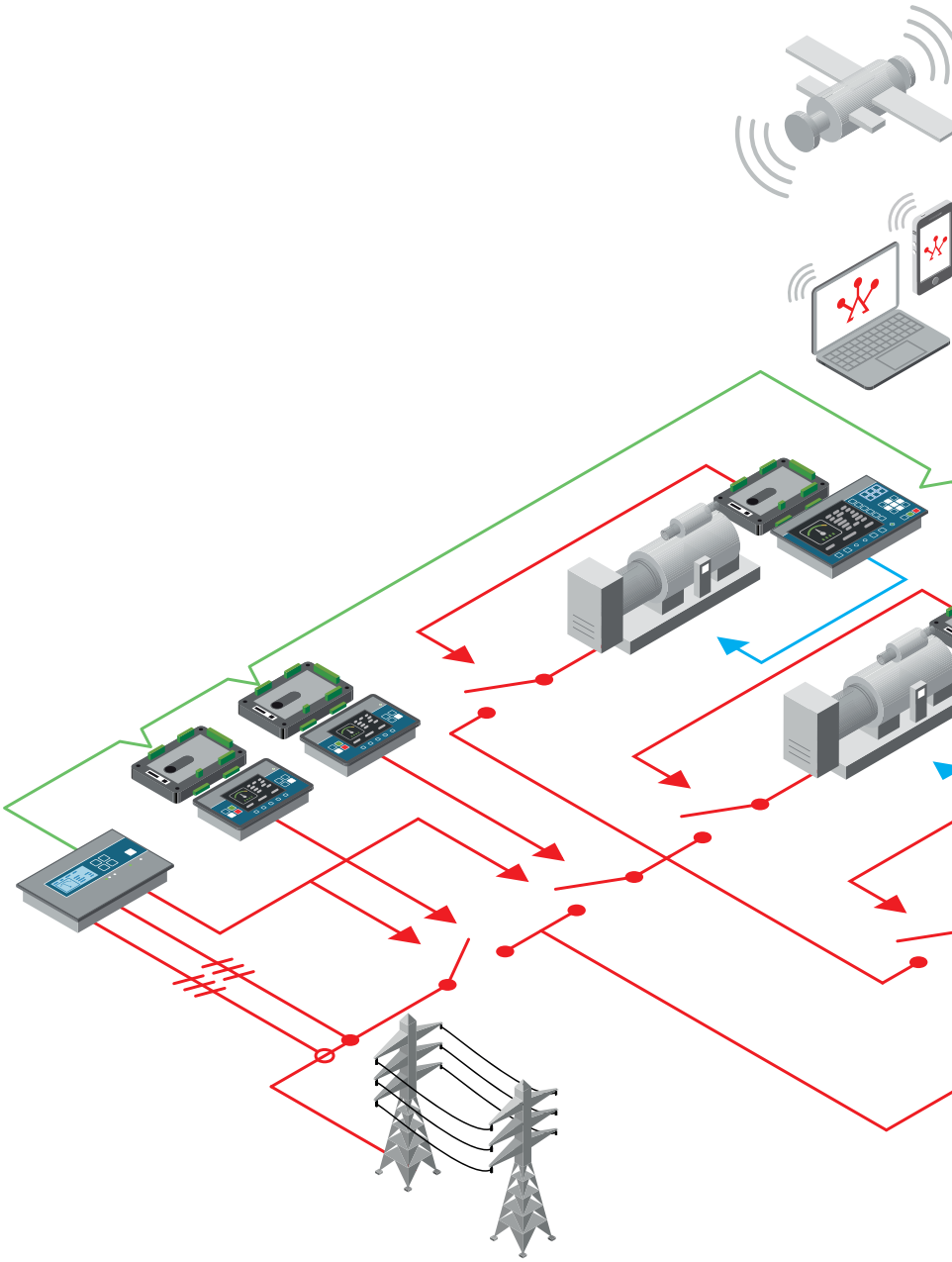
Complex installation

Multiple grids

> Distributed site control without the need for external PLC thanks to internal, openly programmable logic in controllers.

> System modularity with the flexibility to add complex scenarios due to extensive system configuration capabilities.

> Integration of the system into BMS, external SCADA or remote monitoring due to extensive communication options.

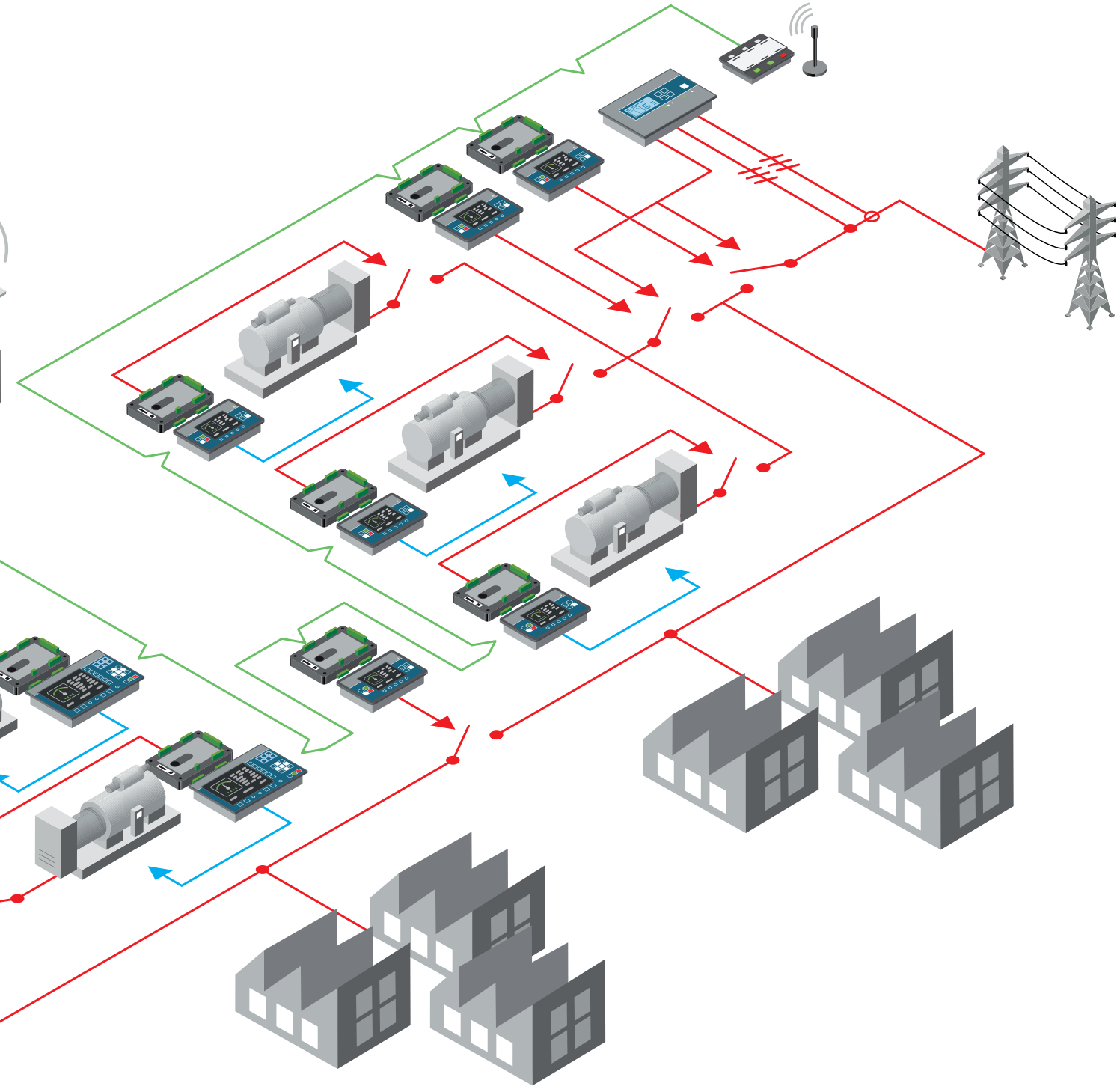


Denmark

Hvidovre hospital

The backup system included five FG Wilson diesel generators, all equipped with InteliSys^{NTC} BaseBox and InteliVision 8. Although the entire backup system was monitored from a control room using an InteliVision 17Touch, an InteliVision 5 display attached to each generator allowed for individual monitoring of each generator, to ensure the generators were all available for use, should an emergency arise. In case of a power outage the ComAp system that was installed has the generators up and running within 8 seconds, and on-load within 15 seconds.

Watch the project video!
youtube.com/ComApControlSystem

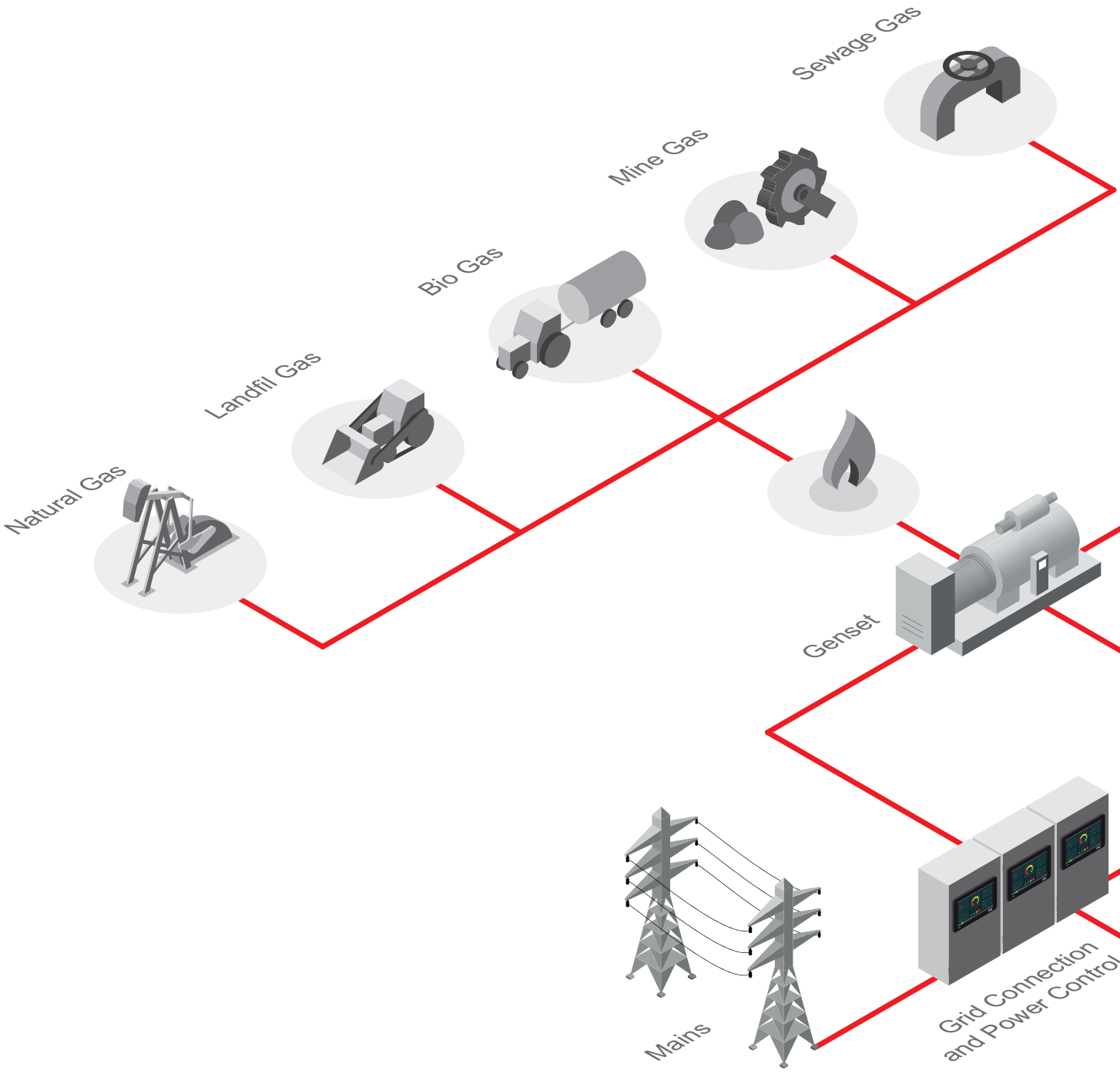


Combined heat and power

> Preconfigured ready-to-run solution package with the flexibility for individual customization.

> Easy to use tools for configuration, scaling and operation of the control system.

> PC and Web based software tools for extensive data recording and remote monitoring for efficient plant and gen-set analysis.



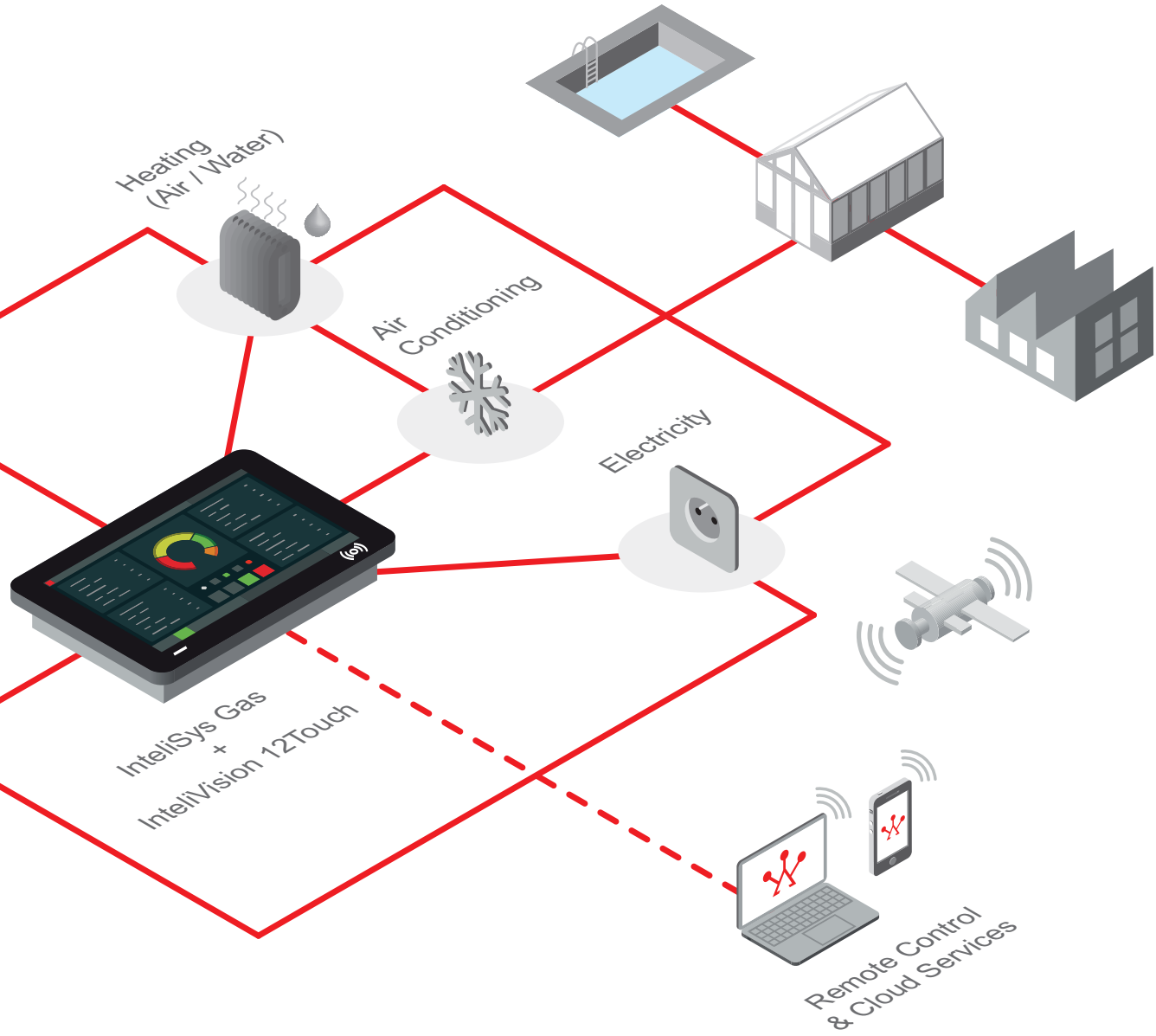
Germany

Uhlmann

Configuring for bi-fuel operation

The unique thing about this installation is that it is capable of simultaneously using two types of gas – biogas and natural gas – for power generation. Configuration of the PLC to run the CHP generator in this way is possible through InteliSys^{NT} BaseBox and InteliVision 8, whose further benefits include extensive data logging which is used to monitor the plant continuously for maintenance reasons.

Watch the project video!
youtube.com/ComApControlSystem

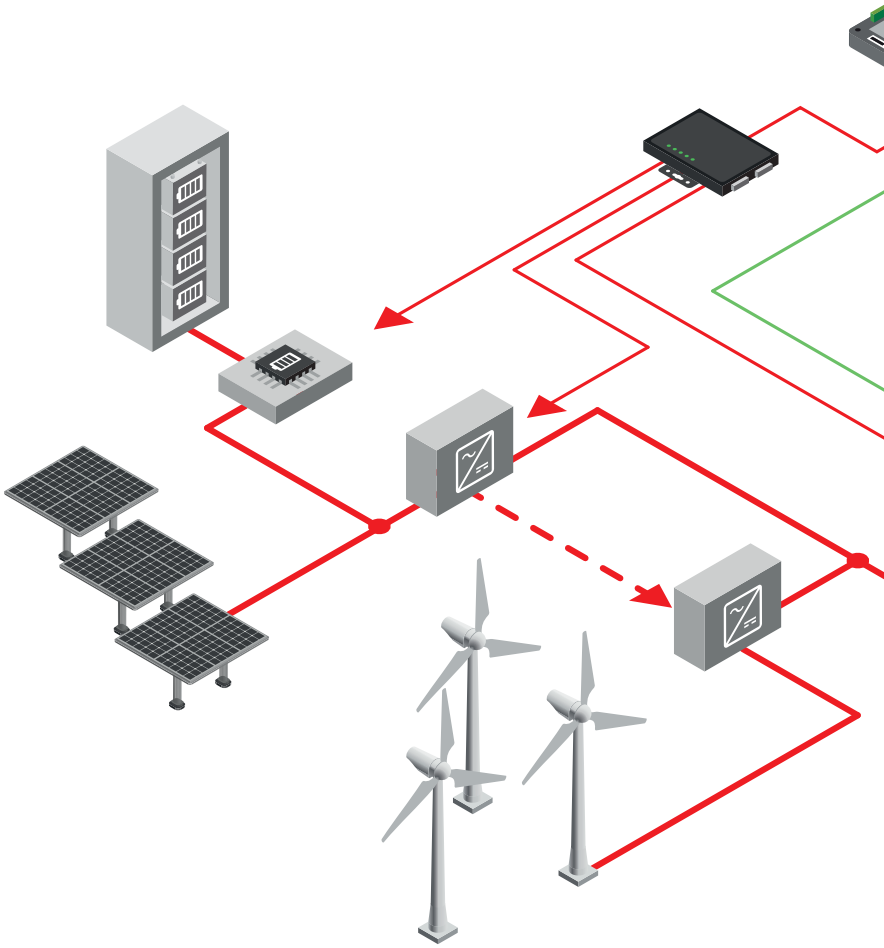


Hybrid power plant

> Fully automatic gen-set control enables the system to react to changing conditions from a variable renewable source.

> Dynamic spinning reserve function allows the system to automatically start and stop the gen-sets without the need to reduce the power from the PV inverters.

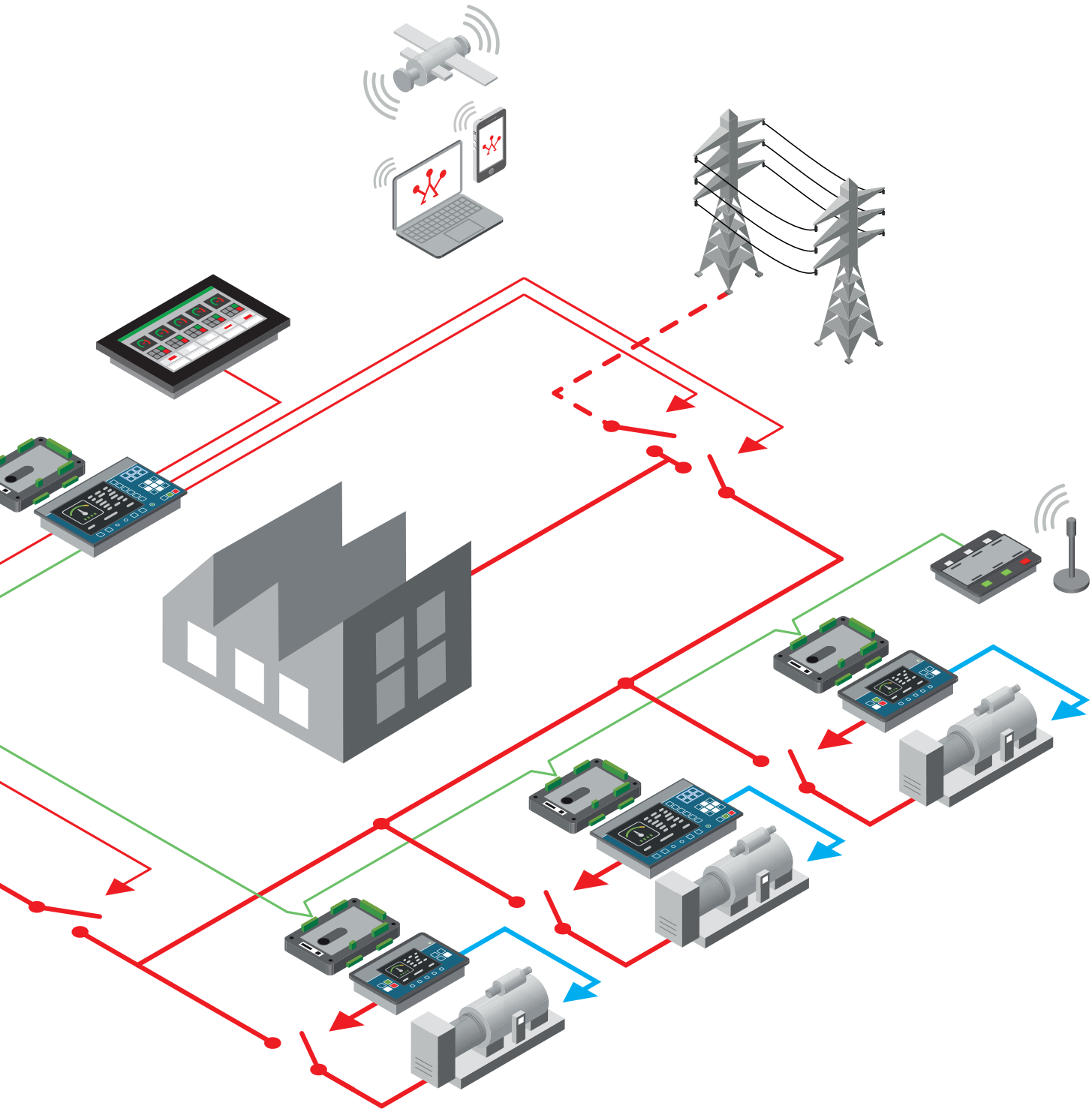
> Built in PLC programing allows you to adjust the control system to specific site conditions.



Vanuatu

Wind/Diesel power plant controls

Vanuatu used two 4 MW gen-sets to generate electricity. However they also have a 3 MW wind farm, and the output of this obviously varies greatly from zero to 3 MW. An additional issue which needed to be countered is that if the wind gets too fast the wind farm automatically shuts down to protect itself, but this means that the output goes from 3 MW to zero in 30 seconds. ComAp designed a system where four spare 800 kW Cummins sets were upgraded with InteliGen^{NT} controllers and these run in a power management mode. Most of the time one set is running but as the wind drops off, other sets will start up through ComAp's standard power management. Normally it takes only 15 seconds to get the idle gen-set running and synchronized. All relevant data can be seen through ComAp InteliMonitor SCADA system.

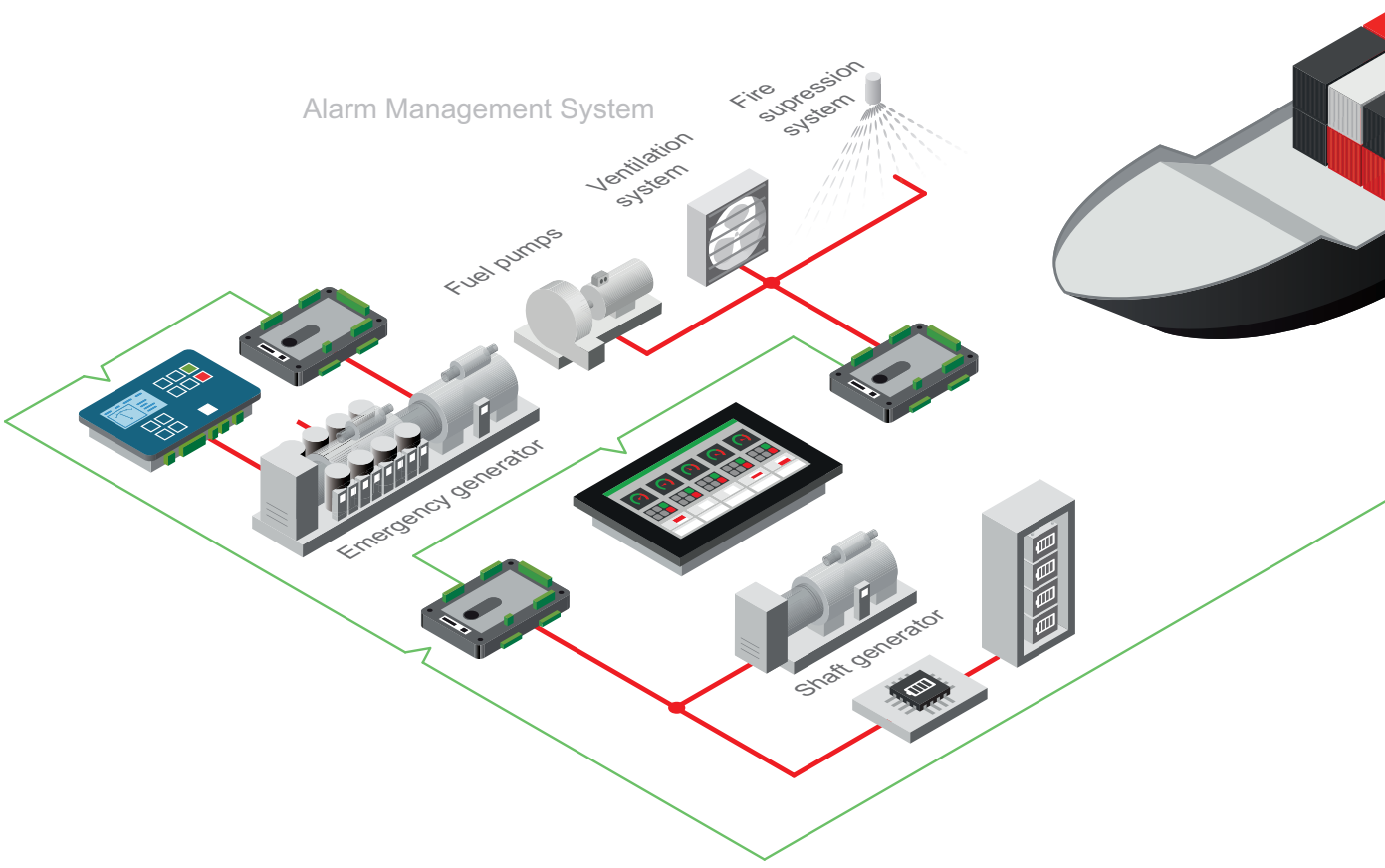


Marine power management and propulsion engine system

> Integrated solution: synchronizer and load sharing and protection module in one.

> Reliability: marine certified hardware and software for different engines application.

> Flexibility and complexity: in-built user friendly PLC logic to fulfill customer requirements.

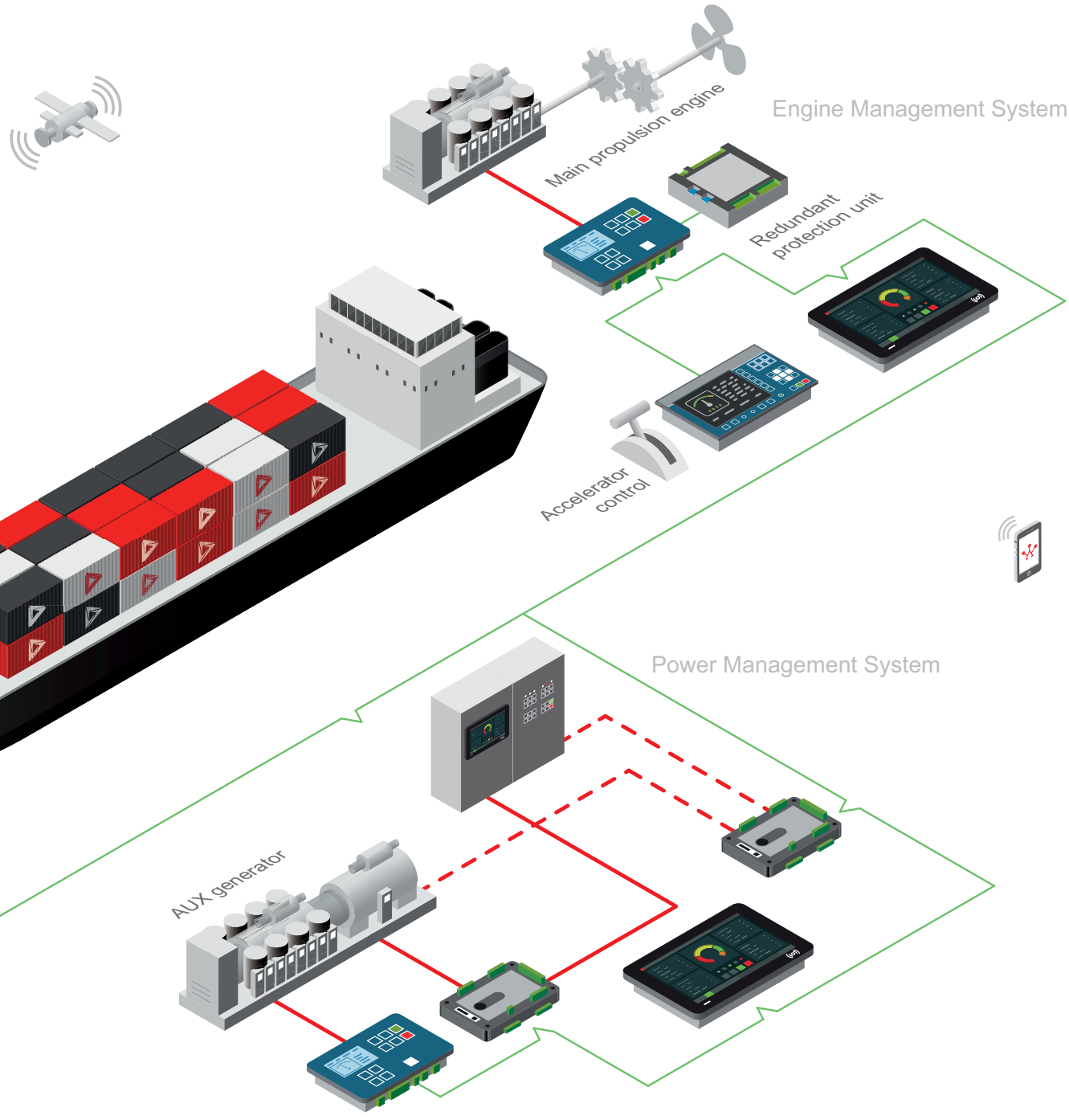


Denmark

Marine solution for the ferry Faaborg III

Nordhavn, one of the largest marine gen-set builders in Scandinavia, installed two new engines and gen-sets equipped with ComAp controllers and displays on the ferry Faaborg III. All five onboard engines are fitted with InteliDrive DCU Marine controllers which communicate with the ferry's SCADA system provided by Emerson. The InteliDrive DCU Marine controllers operate in three application modes (Propulsion, Auxiliary and Emergency) allowing the controllers to control, monitor and protect every engine and also to integrate fully into the ferry's power management and monitoring systems.

Watch the project video!
youtube.com/ComApControlSystem

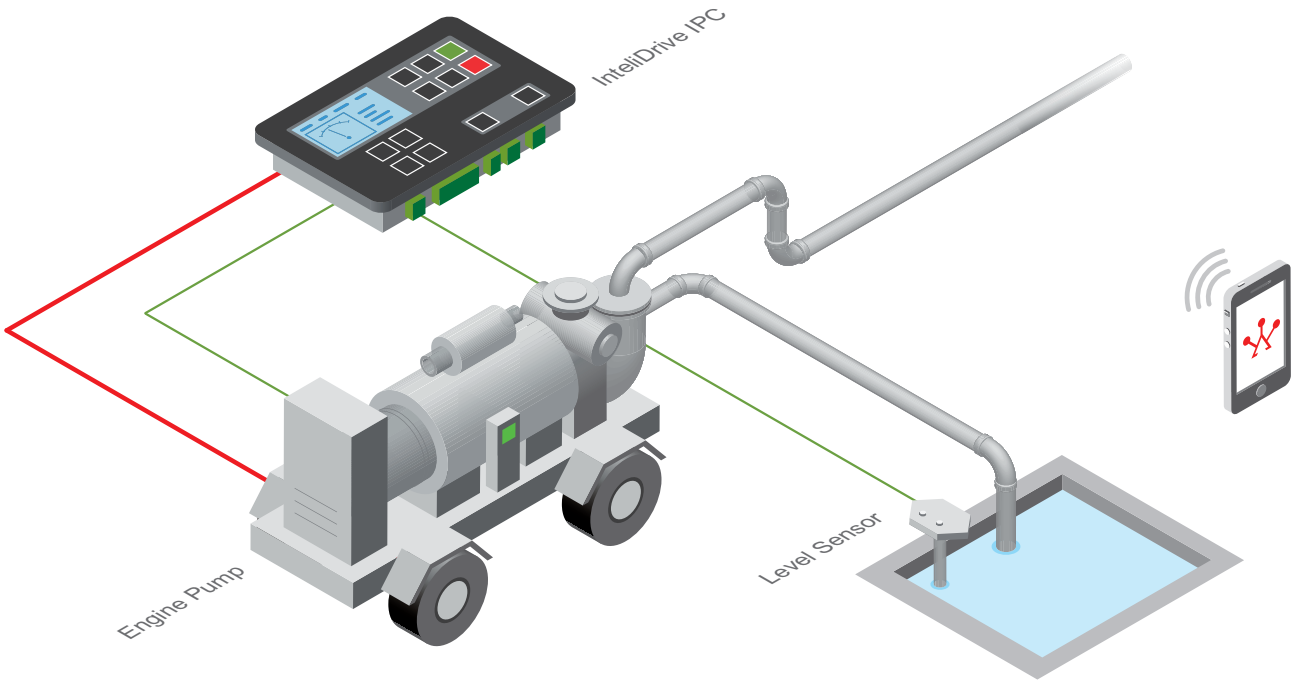


Pump system

> Easy to install, configure and operate

> Complex control made simple

> No PC required



Australia

Mobile Acid Pump for the Mining Industry

Dynapumps of Perth have supplied a mobile engine driven pump for acid movement to the Western Australian mining industry. The Cummins 6BT engine is connected to a stainless steel self-priming centrifugal pump specially designed for pumping acid.

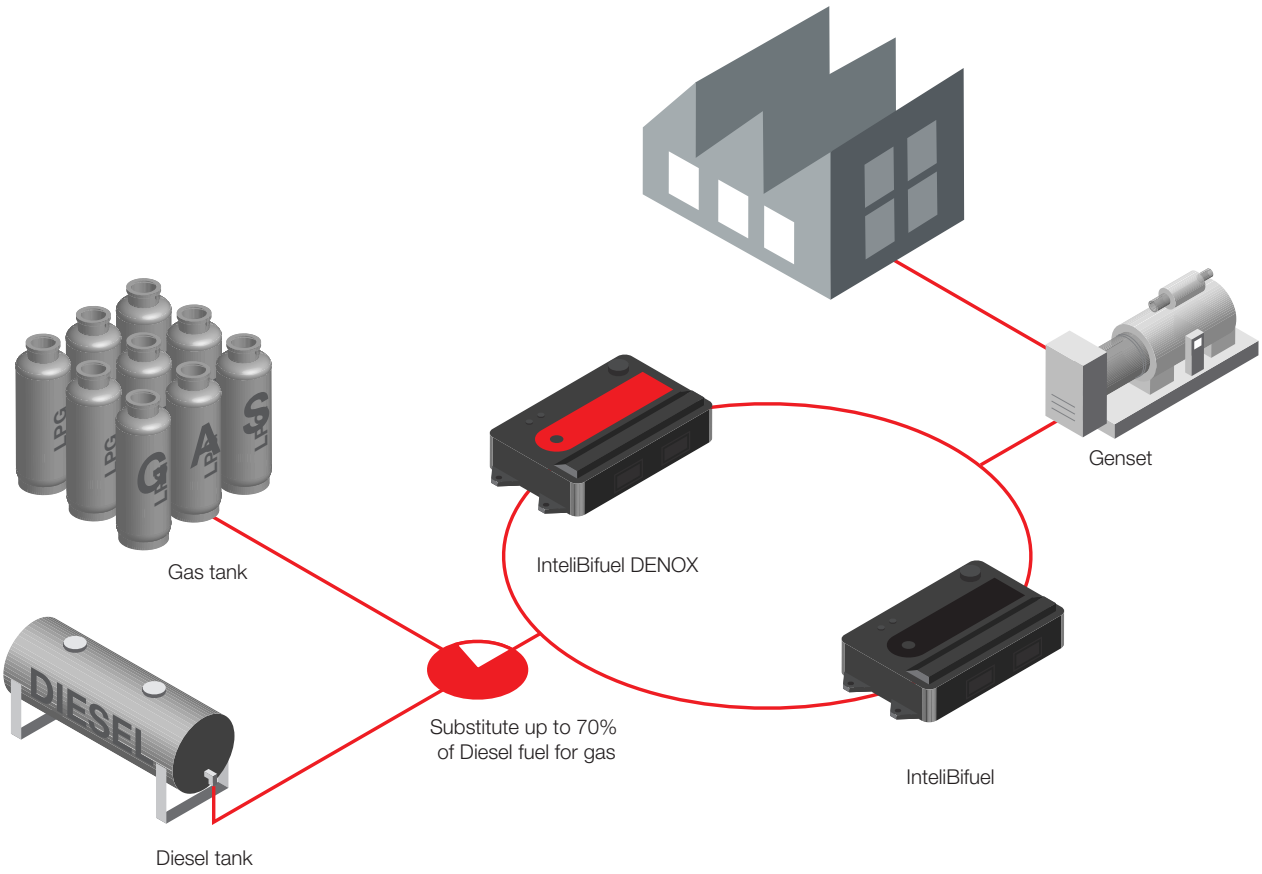
The engine speed can be varied between 1600 and 2100 rpm based on pressure inputs. All control signals are sent to the InteliDrive via telemetry in Modbus protocol utilizing the high level communications capabilities of the controller. As well as providing engine protection the InteliDrive controller also monitors and provides protection for pump pressure and flow.

Bi-fuel powered remote solution using stored gas

> Lower fuel costs

> Simply adaptive

> Environmentally friendly



Ghana

Trojan Power
25 megawatt Bi-fuel conversion

Trojan Power, a wholly owned, independent power generation company in Ghana, Africa have completed ComAp's largest Bi-fuel conversions to date. Twenty four Caterpillar C32 and eight Caterpillar 3508 generators were converted to Bi-fuel for a total power output of 25 megawatts. The 32 bi-fuel generators are housed in two power houses with 16 generators in each and regularly function at a 70 % gas to 30 % diesel ratio, giving significant financial savings. This huge power plant quickly provides reliable power for the surrounding area for customers who were previously relied on aging mains power electricity infrastructure.

Your equipment made less remote

WebSupervisor4

WebSupervisor defines new standard in cloud fleet management systems for managing ComAp and monitoring 3rd party devices via the Internet. This system offers a number of beneficial features that help optimize revenue for machinery fleets, as each piece of equipment can be individually monitored for all important operation values.

WebSupervisor gives you an overview of all your asset's status, location, and other important data and alerts - all on one screen. Data-logging, historical trends, and asset management is all easily accessible. From your PC, tablet or mobile phone you can instantly reach the most important and relevant data. The responsive design ensures easy to use operation on any screen size.

- List and map of assets and alerts on one screen
- Dashboard with fleet statistics
- Advanced trend representation
- Customizable look with your logo and URL
- Automatic reports with the possibility of customization
- Single machine or group control
- Quick connection to PC tools
- Automatic download of history records from controller
- Option to run in public or private cloud
- 3rd party device monitoring
- API - possibility to integrate data to 3rd party SW

The flexible system provides a high level of security, with the central administrator able to determine users' access rights for specific equipment within the fleet as well as appropriate information. In addition, alarm generated e-mails can be created and sent to specific users to give fast and efficient notification to improve decision making or react to additional revenue generating opportunities.

WebSupervisor offers equipment owners a number of powerful reporting tools allowing monthly summaries of availability and revenue creation ensuring that maintenance scheduling and asset utilization can be maximized for individual equipment and the whole fleet. The information generated from each controller can be archived on the central server for future analysis and trend evaluation.

ComAp now offers three different versions of WebSupervisor: Lite, Pro and On Premises. Instead of offering a one-size-fits all solution, which may not be suitable for everyone, ComAp now offers you the opportunity to have the monitoring system that is the best solution for your particular business, whether it be cloud based, or hosted on your own server equipment.

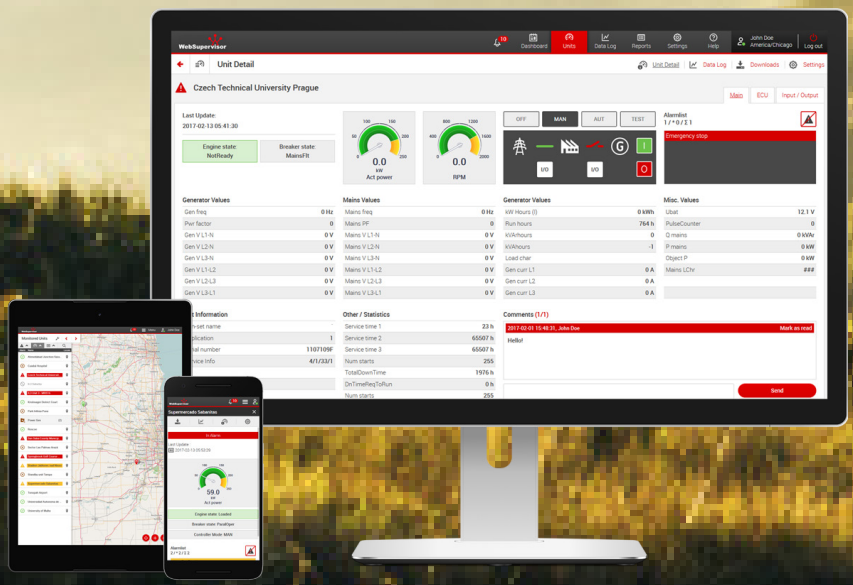
Try it now!

Visit www.websupervisor.net
and get your free demo account.

Manage your fleet with our mobile application!

GET IT ON Google Play

Download on the App Store



www.websupervisor.net

Rental

WebSupervisor4 has many features that are especially useful for rental fleet operators. Real-time GPS monitoring, fuel-level alarms and detailed usage data can all allow rental fleet operators to maximise revenue.

Packagers

WebSupervisor4 allows packagers to take advantage of additional revenue streams by on-selling equipment for monitoring and management to customers who would not normally want or need to monitor equipment on their own.

Telecom

Operators of telecom towers (or BTSs) can find additional benefits in using WebSupervisor4 in their installations. The analysis, reporting and monitoring features allow operators to ensure that their towers are all operating within operational parameters. It also provides integration with other third-party devices which can make WebSupervisor an all-in-one solution for monitoring and management of BTS towers.

Cogeneration

The many reporting and management tools within WebSupervisor4 allow operators to ensure that each cogeneration plant is operating at peak efficiency and generating the most revenue possible.

Controllers for single gen-set applications

	InteliNano^{NT} PLUS	inteliNano^{NT} MRS 3	InteliLite^{NT} MRS 3	InteliLite^{NT} MRS 4	InteliLite^{NT} AMF 8
					
Binary inputs / outputs	6 / 6[2)]	6 / 6[2)]	4 / 4"	4 / 4"	4 / 6"
Analog inputs	3	3	3	3	3
2×10 A binary outputs	●	●	–	–	–
Input / output configurations	● / ●	● / ●	● / ●	● / ●	● / ●
D+ battery charging alternator circuit	●	●	●	●	●
Magnetic pickup	–	●	–	–	●
AMF / MRS functions	● / ●	– / ●	● / ●	● / ●	● / ●
GCB / MCB control with feedback	● / ●	● / –	●[6)] / ●[6)]	●[6)] / ●[6)]	● / ●[15)]
3ph voltage measurement Gen. / Mains	●[4)] / ●	● / –	● / –	● / –	● / ●
3ph current measurement	–[5)]	•	●	●	●
Frequency measurement Gen. / Mains	● / ●	● / –	● / –	● / –	● / ●
kW / kWh / kVA measurement	– / – / ●	● / ● / ●	● / ● / ●	● / ● / ●	● / ● / ●
Generator protections	●	●	●	●	●
Earth fault current protections	–	–	–	–	–
History file	●	●	●	●	●
RTC / Battery	– / –	– / –	– / –	– / –	– / –
PLC	–	–	–	–	–
Remote control	–	–	●	●	○
4G	–	–	–	–	–
Tracking & Geofencing	–	–	–	–	–
Active SMS / E-mails	–	–	○ / –	○ / –	○ / –
AirGate	–	–	–	–	○
WebSupervisor	–	–	–	–	●
USB integrated	●	●	○[7)]	○[10)]	○
ECU support via CAN	●	●	–	●	–
Modbus support / SNMP support / SNMP traps	– / – / –	– / – / –	○ / – / –	○ / – / –	○ / – / –
Plug-in modules	–	–	●[8)]	●[8)]	○[8)]
Manual speed control[1)]	–	–	–	–	–
Total fuel consumption	–	–	–	–	–
Fuel pump	–	–	–	–	–
Dummy load / Load shedding	–	–	–	–	●
Auto. temperature based heating & cooling	–	–	–	–	–
Analog calibration	–	–	–	–	–
Connection type autodetect	●	●	–	–	–
Tier 4 Final support	–	–	–	–	–

KEY
- • Included
- – Excluded
- ○ Optional – plug-in module required

GCB: Generator circuit breaker
MCB: Mains circuit breaker
1) For ECU engines
2) 1 binary input is shared with binary output
3) Analog inputs are shared with binary inputs
4) 1 ph; 3 ph when used as MRS controller
5) 1 ph is available
6) Manual / Automatic GCB and MCB control, but without feedback
7) Only with order code IL2M3USBXAB

InteliLite[NT] AMF 9	InteliLite 9	InteliLite MRS 11	InteliLite MRS 16	InteliLite AMF 20	InteliLite AMF 25
					
4 / 6"	6 / 6"	6 / 6"	7 / 7"	7 / 7"	8 / 8"
3	3	3	4	3	4
–	•	•	•	•	•
• / •	• / •	• / •	• / •	• / •	• / •
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o[8]	o[14]	o[14]	o[14]	o[14]	o[14]
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8) IL-NT RS232, IL-NT RS232-485, IL-NT GPRS, IL-NT S-USB, IL-NT AOUT8, IL-NT BIO8

10) Only with order code IL2M4USBXAB
11) Plug-in module required
12) The same as 8) plus IB-Lite

13) The same as 8) plus IB-Lite and IC-NT CT-BIO7
14) CM-RS232-485, CM-GPRS, CM-4G-GPS, CM-Ethernet, EM-BIO8-EFCP

15) Without breaker feedback

Controllers for parallel gen-set applications

	InteliGen^{NT} BaseBox	InteliGen^{NTC} BaseBox	InteliSys^{NTC} BaseBox	InteliGen GSC BaseBox
				
Binary Inputs / Outputs	12 / 12 (108 / 108)[10]	12 / 12 (108 / 108)[10]	16 / 16 (112 / 112)[10]	16 / 16 (108 / 108)[10]
Analog Inputs / Outputs	3 / 0 (83 / 32)[10]	3 / 0 (83 / 32)[10]	4 / 1 (83 / 33)[10]	3 / 0 (83 / 32)[10]
Configurable Shared / Distribute I/O	• / •	• / •	• / •	• / •
Maximum controllers on CAN	992*	992*	992*	992*
Predefined / Configurable Protections	• / •	• / •	• / •	• / •
AMF Function	•	•	•	•
GCB control with feedback	•	•	•	•
Integrated PLC	•••	•••	••••	•••
Input / Output configuration	• / •	• / •	• / •	• / •
Alternate configuration / Force Value	• / •	• / •	• / •	• / •
Voltage measurement Gen / Mains (bus)	3 ph / 3 ph 277V	3 ph / 3 ph 120V / 277V	3 ph / 3 ph 120V / 277V	3 ph / 3 ph 277V
Current measurement	3ph + 1 / 6w IDMT overcurrent 5A	3ph + 1 / 6w IDMT overcurrent 1A/5A	3ph + 1 / 6w IDMT overcurrent 1A/5A	3ph + 1 / 6w IDMT overcurrent 5A
kW / kWh / kVA measurement	• / • / •	• / • / •	• / • / •	• / • / •
Acccuracy U/I/P/Q	1% / 2% / 3% / 3%	1% / 2% / 3% / 3%	1% / 2% / 3% / 3%	1% / 2% / 3% / 3%
Display	External	External	External	External
Remote displays	InteliVision 5, InteliVision 8, InteliVision 12Touch InteliVision 18Touch	InteliVision 5, InteliVision 8, InteliVision 12Touch InteliVision 18Touch	InteliVision 5, InteliVision 8, InteliVision 12Touch InteliVision 18Touch	InteliVision 5, InteliVision 8, InteliVision 12Touch InteliVision 18Touch
Extension / plug in modules	•[12] / -	•[12] / -	•[12] / -	•[12] / -
Controller's communication interfaces	CAN1, CAN2, RS232, RS485, Ethernet[8], Modbus RTU, SNMP[13]	CAN1, CAN2, RS232, 2× RS485, USB,Ether-net, Modbus RTU, Modbus TCP, SNMP, AirGate, Web server	CAN1, CAN2, RS232, 2× RS485, USB,Ether-net, Modbus RTU, Modbus TCP, SNMP, AirGate, Web server	CAN1, CAN2, RS232, RS485, Ethernet[8], Modbus RTU, SNMP[13]
Field BUS support - Slave Modbus support	•	•	•	•
Field BUS support - Modbus Master	• (I-CB Modbus)	• (I-CB Modbus)	• (I-CB Modbus)	• (I-CB Modbus)
Communication modules (via CAN)	InternetBridge-NT, I-LB+, I-CR, I-CB	InternetBridge-NT, I-LB+, I-CR, I-CB	InternetBridge-NT, I-LB+, I-CR, I-CB	InternetBridge-NT, I-LB+, I-CR, I-CB
Redundancy	I-CR-R	I-CR-R	I-CR-R	I-CR-R
SMS / Email Alerts	• / •	• / •	• / •	• / •
ECU support	•	•	•	•
Tier4Final / Stage V	• / •	• / •	• / •	• / •
Forward / Reverse synchronizing / Mains parallel operation	• / • / •	• / • / •	• / • / •	• / • / •
Multiple operation / Power Management System	• / •[14]	• / •[14]	• / •[14]	• / •[14]
History (max records) / Configurable [1]	1000 / •	1000 / •	1000 / •	1000 / •
SUS / GeCon functionality	• / •	• / •	• / •	• / •
Pre-morten history	–	–	•	–
Timers / Schedulers programmers	• / •	• / •	• / •	• / •
General Certifications	CE, UL Listed	CE, UL Listed	CE, UL Listed	CE, ongoing UL listed
Marine certifications	•	•	•	planned RRR
Grid codes certifications	–	–	–	European Requirements for Generators, and VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, including Single Fault Tolerance

KEY
- • Included
- – Excluded
- ○ Optional – plug-in module required

CAN1 For peripheral modules and ECU (J1939)
CAN2 Intercontroller can; monitoring
1) Depends on number of values in history record
2) With IL-NT BIO8 and IG-IOM or IGS-PTM
3) With IG-IOM or IGS-PTM
4) With IL-NT AOUT8 and IG-IOM or IGS-PTM
5) With IC-NT CT-BIO7

InteliGen GSC-C BaseBox	InteliSys GSC-C BaseBox	InteliGen 200	InteliGen 500	InteliGen NTC
				
12 / 12 (108 / 108)[10]	16 / 16 (144 / 88)[10]	9 / 8 (96 / 56)[10]	9 / 8 (96 / 56)[10]	12 / 12 (108 / 108)[10]
3 / 0 (83 / 32)[10]	8 / 1 (84 / 33)[10]	4 / 0 (32 / 10)[10]	4 / 0 (32 / 10)[10]	3 / 0 (83 / 32)[10]
• / •	• / •	- / -	- / -	• / •
992*	992*	32	32	992*
• / •	• / •	• / •	• / •	• / •
•	•	•	•	•
•	•	•	•	•
•••	••••	•	••	••
• / •	• / •	• / •	• / •	• / •
• / •	• / •	• / -	• / -	• / •
3 ph / 3 ph 120V / 277V	3 ph / 3 ph 120V / 277V	3 ph / 3 ph 120V / 277V	3 ph / 3 ph 120V / 277V	3 ph / 3 ph 120V / 277V
3ph + 1 / 6w IDMT overcurrent 1A/5A	3ph + 1 / 6w IDMT overcurrent 1A/5A	3ph + 1 / 6w IDMT overcurrent 5A	3ph + 1 / 6w IDMT overcurrent 5A	3ph + 1 / 6w IDMT overcurrent 1A / 5A
• / • / •	• / • / •	• / • / •	• / • / •	• / • / •
1% / 2% / 3% / 3%	1% / 2% / 3% / 3%	1% / 1% / 2% / 2%	1% / 1% / 2% / 2%	1% / 2% / 3% / 3%
External	External	LCD 132x64	TFT 5" 800x480	LCD 128x64
InteliVision 5, InteliVision 8, InteliVision 12Touch InteliVision 18Touch	InteliVision 5, InteliVision 8, InteliVision 12Touch InteliVision 18Touch	soon	soon	InteliVision 5, InteliVision 8, InteliVision 12Touch InteliVision 18Touch
•[12] / -	•[12] / -	•[12] / •[15]	•[12] / •[15]	•[12] / -
CAN1, CAN2, RS232, 2× RS485, USB,Ethernet, Modbus RTU, Modbus TCP, SNMP, AirGate, Web server	CAN1, CAN2, RS232, 2× RS485, USB,Ethernet, Modbus RTU, Modbus TCP, SNMP, AirGate, Web server	CAN1, CAN2, RS232[8], RS485, Ethernet[9], Modbus RTU, SNMP[16]	CAN1, CAN2, RS232[8], RS485, Ethernet, Modbus RTU, SNMP	CAN1, CAN2, RS232, 2x RS485, Ethernet[9], Modbus RTU, SNMP, AirGate, Web server[13]
•	•	•	•	•
• (I-CB Modbus)	• (I-CB Modbus)	-	-	• (I-CB Modbus)
InternetBridge-NT, I-LB+, I-CR, I-CB	InternetBridge-NT, I-LB+, I-CR, I-CB	I-CR	I-CR	InternetBridge-NT, I-LB+, I-CR, I-CB
I-CR-R	I-CR-R	I-CR-R	I-CR-R	I-CR-R
• / •	• / •	• / •	• / •	• / •
•	•	•	•	•
- / -	• / •	• / •	• / •	• / •
• / • / •	• / • / •	• / • / •	• / • / •	• / • / •
• / •[14]	• / •[14]	• / •	• / •	• / •[14]
1000 / •	4000 / •	350 / -	500 / -	500 / •
• / •	• / •	- / -	- / -	• / •
–	•	–	–	–
• / •	• / •	• / •	• / •	• / •
CE, ongoing UL listed	CE, ongoing UL listed	CE, UL Listed	CE, UL Listed	CE, UL recognised
planned RRR	planned RRR	-	-	•
European Requirements for Generators, and VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, including Single Fault Tolerance	European Requirements for Generators, and VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, including Single Fault Tolerance	-	- / -	-

6) IGL-RA15, IG-IOM, IGS-PTM
7) IC-NT CT-BIO7 is already included in the controller
8) With communication modules
9) With MainsCompact[NT]
10) With extension modules, see 12)
11) More PLC blocks may vary according to the used firmware
12) Inteli AIN8, Inteli AIN8TC, Inteli IO8/8, Inteli AIO9/1, IS–AIN8, IS–AIN8TC, IS–BIN16/8, I–AOUT8, IGL–RA15, IGS–PTM
13) With InternetBridge-NT
14) With IGS-NT-LSM+PMS dongle
15) CM-Ethernet, CM-4G-GPS, CM-GPRS, CM-RS232-485, EM-BIO8 EFCP
16) With CM-Ethernet

Controllers for engine driven and bi-fuel applications

	InteliDrive WP	InteliDrive IPC	InteliDrive Lite	InteliDrive DCU Industrial	InteliDrive DCU Marine	InteliDrive Mobile	InteliBifuel
							
Binary inputs	5× Digital inputs 1× RPM	5× Digital inputs 1× RPM	7× Digital inputs 1× RPM	14× Digital inputs 1× RPM	14× Digital inputs 1× RPM	16 Digital inputs (4× BW detection) 4× RPM 2× Impulse inputs	9 Digital inputs 3× RPM inputs 3× Impulses Inputs
Total binary inputs (with additional modules)	5	13	15	78	132	80	73
Binary outputs	5 (2× 10 A)	5	7	14	14	8× Hi-side 3 A switches with BW detection 8× 3 A switches configurable as: • Hi-side switches • Low-side • PWM	8× Hi side 0,5 A 8× Hi-Side/Low Side or PWM switches 3A 2× Hi-Side Safety switches 3A
Total binary outputs (with additional modules)	5	13 + 15 (IGL-RA15)	14 + 15 (IGL-RA15)	78	130	80	82
Analog inputs	9 (3× Ω, 3× mA, 3× V)	6 Configurable (V, Ω)	9× Configurable (V, Ω)	8 configurable (V, mA, Ω, thermocoupler, PT100/1000)	8 configurable (V, mA, Ω, thermocoupler, PT100/1000)	16 configurable (V, mA, Ω, PT100/1000)	10 configurable (0 – 5 V, 0 – 20 mA, 0 – 24 V, 0 – 2500 Ohm, PT1000, isolated thermocouple), 3 Non isolated thermocouple inputs
Total analog inputs (with additional modules)	9	6× + 4× (IL-NT AIO)	9× + 4× (IL-NT AIO)	40	88	48	53
Analog outputs	1× PWM	On external modules (1× IL-NT AIO or 8× IL-NT AOUT8)	On external modules (1× IL-NT AIO or 8× IL-NT AOUT8)	On external modules (e.g. 2× ID-SCM, 8× I-AOUT8)	On external modules (e.g. 2× ID-SCM, 8× I-AOUT8)	8× configurable (V, mA) 1× Speed Governor (V, PWM)	6× configurable (0 – 10 V, 0 – 20 mA) 1x PWM 5V 450-3000Hz
Total analog outputs (with additional modules)	1	8	8	32	32	41	38
External communication modules	–	IB-Lite, IL-NT S-USB, IL-NT RS232, IL-NT RS232-485, IL-NT GPRS	IB-Lite, IL-NT S-USB, IL-NT RS232, IL-NT RS232-485, IL-NT GPRS	InternetBridge-NT, I-CB, I-LB+, I-CR	InternetBridge-NT, I-CB, I-LB+, I-CR	InternetBridge-NT, I-CB, I-LB+, I-CR	InternetBridge-NT, I-CB, I-LB+, I-CR
Modem	–	External	External	External	External	Internal (Option)	Internal (Option)
GPS	–	–	–	External	External	Internal (Option)	Internal (Option)
Communication interfaces	1× USB	1× CAN, 1× RS232, 1× RS485, 1× USB, 1x Ethernet	1× CAN, 1× RS232, 1× RS485, 1× USB, 1x Ethernet	2× CAN, 1× RS232, 1× J1708	2× CAN, 1× RS232, 1× J1708, 1× RS485	2× CAN, 1× RS485	2xCAN, 1x RS485, USB
ECU values	Fix set	Fix set	Fix set	Configurable	Configurable	Configurable	Configurable
ECU – fault codes	Displays text or/and numeric codes	Displays text or/and numeric codes	Displays text or/and numeric codes	Displays text or/and numeric codes	Displays text or/and numeric codes	Displays text or/and numeric codes	Displays text or/and numeric codes
Displays	Graphic back-lit LCD display 128 × 64	Graphic back-lit LCD display 128 × 64	Graphic back-lit LCD display 128 × 64	Graphic back-lit LCD display 128 × 64 external: 5,7"/ 8"	Graphic back-lit LCD display 128 × 64, external: 5,7"/ 8"/ 12,1"	External: 5,7"/ 8"	External: 5,7"/ 8"
PLC – programmable functions	–	–	–	•	•	•	•
PC software	LiteEdit, InteliMonitor	LiteEdit, InteliMonitor	LiteEdit, InteliMonitor	InteliMonitor, DriveConfig	InteliMonitor, DriveConfig	InteliMonitor, DriveConfig	InteliMonitor, Drive Config, Logger History, WebSupervisor
IP	IP65	Front panel IP 65 Rear side IP 20	Front panel IP 65 Rear side IP 20	Front panel IP 65 Rear side IP 20	Front panel IP 65 Rear side IP 20	IP 69K	IP69K
Engine network capability	–	single	single	Up to 8 engines	Up to 32 engines	Up to 32 engines	Up to 32 engines
History log out	•	•	•	•	•	•	• (Long history)

KEY
- • Included
- – Excluded

Colour displays

	InteliVision 5	InteliVision 5 CAN	InteliVision 8	InteliVision 8 Marine	InteliVision 12Touch	InteliVision 12Touch OEM	InteliVision 18Touch
							
Type	TFT	TFT	TFT	TFT	TFT (IPS)	TFT (IPS)	TFT
Size	5,7"	5,7"	8"	8"	12,1"	12,1"	18,5“
Resolution	320 × 240 px	320 × 240 px	800 x 600 px	800 x 600 px	1280 x 800 px	1280 x 800 px	1366 × 768 px
Touch Layer	–	–	–	–	PCAP	PCAP	PCAP
Backlit Display / Intensity control	● / –	● / ●	● / –	● / –	● / ●	● / ●	● / ●
Front Panel Dimensions	245 × 164 mm	245 × 164 mm	289,5 × 186 mm	289,5 × 186 mm	337 × 232 mm	337 × 232 mm	490,8 × 320,6 mm
IP65 Protection – Front / Rear	● / –	● / ●	● / –	● / –	● / –	● / –	IP66/ –
Voltage Supply	8–36 VDC	8–36 VDC	8–36 VDC	8–36 VDC	8–36 VDC	8–36 VDC	12–30 VDC
Consumption	0,7A at 8 VDC	0,7A at 8 VDC	1A at 8 VDC	1A at 8 VDC	2A at 12 VDC	2A at 12 VDC	max. 32,4W at 12V
Operating Temp.	–30 to +70°C	–20 to +70°C	–20 to +70°C	–20 to +70°C	–30 to +70°C	–30 to +70°C	–10 to +60°C
Plug and Play	●	●	●	●	●	●	●
CAN	–	●	●	●	●	●	–
RS485	o	–	●	●	●	●	●
RS232	o	–	●	●	–	–	●
USB Port A / B	– / –	– / –	● / ●	● / ●	2× / ●	2× / ●	2× USB 2.0 1x USB 3.0
ETH	–	–	–	–	●	●	2×
NFC	–	–	–	–	– (will be implemented)	– (will be implemented)	–
IP65 Connector	–	o	–	–	–	–	–
Multiple Gen-Set Monitoring	–	–	–	–	– (will be implemented)	– (will be implemented)	●
Soft Keys	●	●	●	●	–	–	–
Internal Buzzer	–	●	–	–	●	●	–
I/O	–	1× BO (Horn)	–	–	1× AI (Backlight) 1 × BO (Horn)	1× AI (Backlight) 1 × BO (Horn)	–
Backlit Buttons	–	o	–	–	–	–	–
Screen Editor	●	●	●	●	●	●	–
InteliMonitor	–	–	–	–	–	–	●
Trends	–	–	●	●	●	●	●
History	●	●	●	●	●	●	●
AlarmList	●	●	●	●	●	●	●
Easy Login	–	–	●	●	– (will be implemented)	– (will be implemented)	–
NFC Tag Management	–	–	–	–	– (will be implemented)	– (will be implemented)	–
User Images	–	–	●	●	●	●	●
Adjustable Service Screen	–	–	–	–	●	●	–
Adjustable Status Screen	–	–	–	–	●	●	–
Editable Setpoint Description	–	–	–	–	●	●	–
Extended Import / Export Functions	–	–	–	–	●	●	–
Skins	–	–	–	–	●	●	–
UL	●	●	●	●	●	●	●
Backlit Buttons	–	●	–	●	–	–	–
Marine certification	–	–	–	●	–	●	–
Display compatibility: Gen / Sys	●	●	●	●	●[1]	●[1]	●
Display compatibility: Drive DCU	–	●	●	●	●[2]	●[2]	●
Display compatibility: Mobile / Bifuel	●	●	●	–	●[3]	●[3]	●

KEY
- ● Included
- – Excluded
- o Optional

1) InteliVision 12Touch is only compatible with selected InteliSys models. Please visit www.comap-control.com for details.
2) Compatible only with ID-DCU Marine from HW version 2.0 of the controller
3) Compatible only with InteliDrive Mobile from SW version 2.6.0 of the controller

Gen / Sys: InteliGen^{NT}, InteliGen^{NT} BaseBox, InteliGen^{NTC} BaseBox, InteliSys^{NT}, InteliSys^{NTC} BaseBox. Other models from the InteliGen and InteliSys range are also compatible with this product, please visit www.comap-control.com for more details.
Drive DCU: InteliDrive DCU Industrial, InteliDrive DCU Marine
Mobile / Bifuel: InteliDrive Mobile, InteliBifuel

Mains protection

		InteliPro	InteliPro SYNC	MainsPro	MainsPro Lite
					
	ANSI				
Under/overvoltage and asymmetry (two stage setting)	27, 59, 47	•	•	•	•
Overfrequency, Underfrequency (two stage setting)	81H, 81L	•	•[1)]	•	•
Vector Shift	78	•	–	•	–
ROCOF	81R	•	–	•	–
Instantaneous over current, Time over current	50, 51	•	•[1)]	–	–
Current asymmetry	46	•	–	–	–
Earth fault current	50N + 51N	•	•[1)]	–	–
Ground surge current	50GS + 51GS	•	•[1)]	–	–
Directional/Reverse power with time delay	32	•	•	–	–
Breaker failure		•	•	•	•
Phase sequence supervision		•	–	•	•
Auto fault reset		•	•	•	•
Battery voltage protection		•	•	•	•
Synch Check	25	•[1)]	•	–	–
Time over current with voltage control	51V	•[1)]	–	–	–

KEY • Included
– Excluded

1) Optional feature, activation via ComAp application. Please contact your nearest ComAp distributor to get more information.

Communication and extension modules

			ATS	Lite	Compact	Gen / Sys	InteliPro	Drive DCU	Mobile / Bifuel
Communication	CM-4G-GPS	4G Modem / Wireless Internet Module	–	●[1]	–	–	–	–	–
	CM-Ethernet	Internet / Ethernet Plug-in Module including Web Server	–	●[1]	–	–	–	–	–
	CM-GPRS	GSM Modem / Wireless Internet Module	–	●[1]	–	–	–	–	–
	CM-RS232-485	Dual Port Extension Board	–	●[1]	–	–	–	–	–
	I-CR	CAN Repeater Module	–	–	–	●	–	●	–
	I-LB+	Local Bridge	–	–	●	●	–	●	●
	IB-Lite	Internet / Ethernet Module including Web Server	●	●	●	–	●	–	–
	ID-COM	Communication Module	–	–	–	–	–	●	–
	IL-NT GPRS	GSM / GPRS Modem Plug-In Module	●	●	●	–	●	–	–
	IL-NT RS232	RS232 Extension Board	●	●	●	–	●	–	–
	IL-NT RS232-485	Dual Port Extension Board	●	●	●	–	●	–	–
	IL-NT S-USB	Service USB Module	●	●	●	–	●	–	–
	InternetBridge-NT	Communication Module with Cellular / Ethernet Connection	–	–	●	●	–	●	●
Extension	EM-BIO8-EFCP	Hybrid Current Input & Binary Input / Output Extension Module	–	●[1]	–	–	–	–	–
	I-AOUT8	Analog Output Module	–	–	–	●	–	●	●
	IC-NT CT-BIO7	Hybrid Current Input & Binary Input/Output Extension Module	–	●[2]	●	–	●	–	–
	ID-RPU	Redundant Protection Unit	–	–	–	–	–	●	–
	ID-SCM	Speed Control Module	–	–	–	–	–	●	–
	IG-IOM	Analog / Binary Input / Output Module	–	●[2]	–	●	●	–	–
	IGL-RA15	Remote Annunciator	–	●	●	●	–	●	–
	IGS-PTM	Analog / Binary Input / Output Module	–	●[2]	●	●	●	●	–
	IL-NT AIO	Analog Input / Output Module	–	●[2]	–	–	●	–	–
	IL-NT AOUT8	Analog Outputs for PWM Gauges Module	●	●	●	–	–	–	–
	IL-NT BIO8	Binary Input / Output Module	●	●	●	–	–	–	–
	IL-NT IO1	Analog Output and Binary Input Module	–	●[2]	–	–	–	–	–
	Inteli AIN8	8 Analog Input Channels and 1 RPM/Impulse Input Module	–	–	–	●	–	●	●
	Inteli AIN8TC	8 Analog Channels Module	–	–	–	●	–	●	●
	Inteli AIO9/1	Analog Input Output Module	–	–	–	●	–	●	●
	Inteli IO8/8	Binary Inputs / Outputs and Analog Outputs Module	–	–	–	●	–	●	●

KEY • Included
– Excluded

1) The product is suitable only for new generation of InteliLite models: InteliLite MRS 11, InteliLite MRS 16, InteliLite AMF 20, InteliLite AMF 25

2) The product is suitable only for selected models from the InteliLite^{NT} and InteliDrive Lite range. Please visit www.comap-control.com for more details.

ATS: InteliATS^{NT}

Lite: InteliLite^{NT} AMF 25, InteliLite^{NT} MRS 16, InteliDrive Lite. Other models from the InteliLite^{NT} and InteliDrive Lite range could be also compatible with this product, please visit www.comap-control.com for more details.

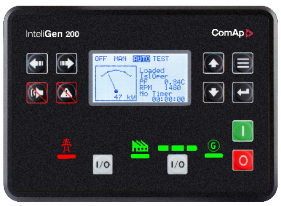
Compact: InteliCompact^{NT}

Gen / Sys: InteliGen^{NT}, InteliGen^{NT} BaseBox, InteliGen^{NTC} BaseBox, InteliSys^{NT}, InteliSys^{NTC} BaseBox. Other models from the InteliGen and InteliSys range are also compatible with this product, please visit www.comap-control.com for more details.

Drive DCU: InteliDrive DCU Industrial, InteliDrive DCU Marine

Mobile / Bifuel: InteliDrive Mobile, InteliBifuel

Product overview

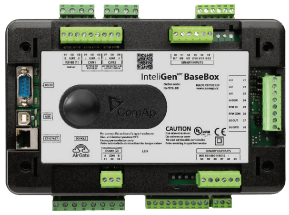


InteliGen 200

> InteliGen power in a "compact" package. Parallel Gen-set Controller.

InteliGen 500

> Parallel Gen-set controller. The first ComAp controller to feature a full colour 5-inch display



InteliGen^{NTC} BaseBox

> High-end marine certified gen-set controller for single or multiple generating sets operating in standby or parallel modes

InteliSys^{NTC} BaseBox

> Premium marine certified gen-set controller for single or multiple generating sets operating in standby or parallel modes

InteliVision 5 CAN Backlit

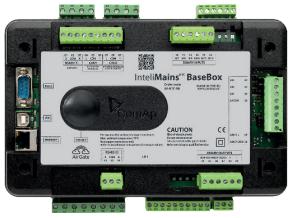
> Marine approved 5,7-inch colour display unit with CAN bus interface and backlit buttons

InteliVision 12Touch

> 12-inch industrial grade touch Plug & Play display

InteliVision 18Touch

> 18-inch industrial grade touch Plug & Play display



InteliMains^{NTC} BaseBox

> Controller for mains application (shore connection) or bus tie breaker application

You can find more brochures online now at **publications.comap-control.com**

Manufacturer:

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Local distributor / partner:

ComAp
The heart of smart control

08/2019