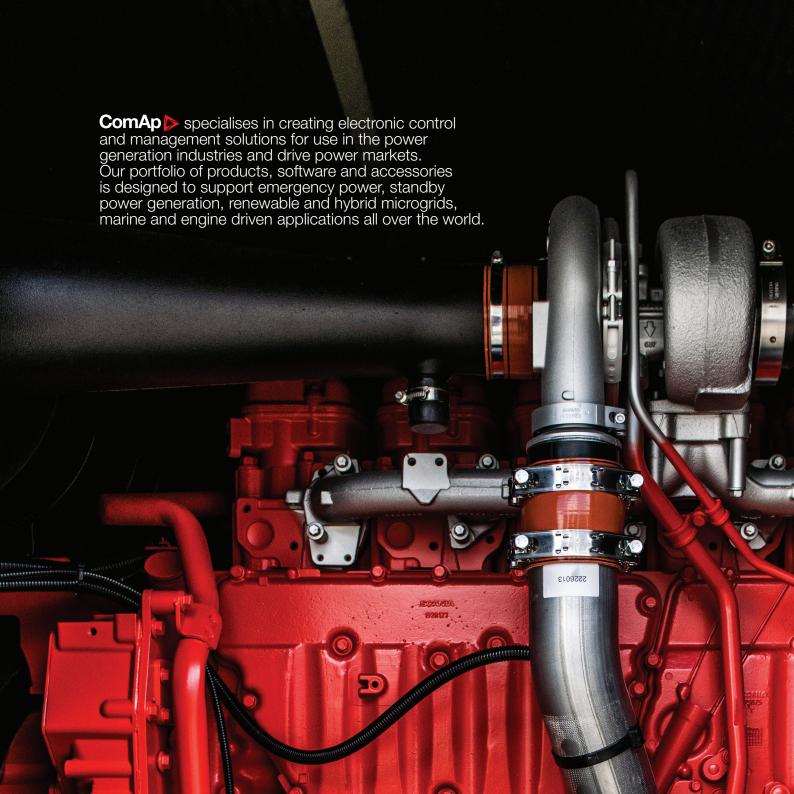
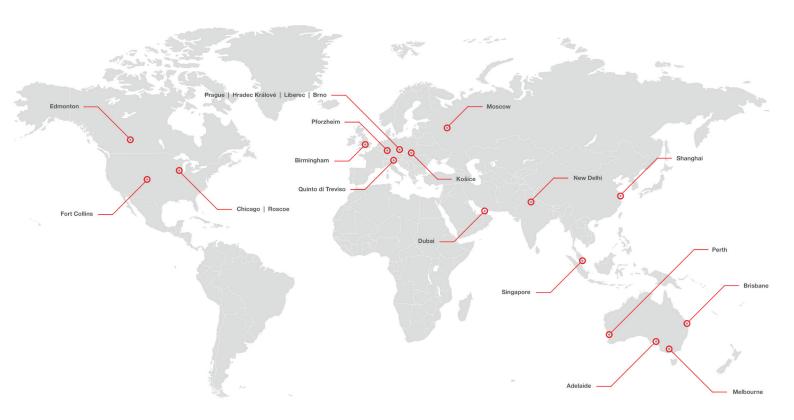


Rental Power Control Solutions





# **Offices**



**400+** Employees

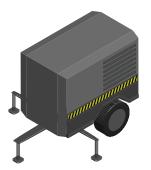
21 Offices

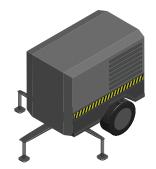
**60+** Distributors

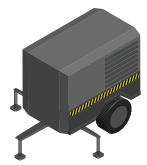
# **Rental Fleet Control Solutions**

Decrease costs, and increase revenue from your fleet.

Organisations are continually looking to reduce operational expenditure, and one of the largest expenses is power generation. For onsite or remote operations, instead of purchasing expensive power generation equipment, (along with fuel, maintenance and trained staff) many companies are turning to rental providers to ensure their power needs are met, without the unnecessary operation expenditure and maintenance costs that power generation equipment ownership entails.



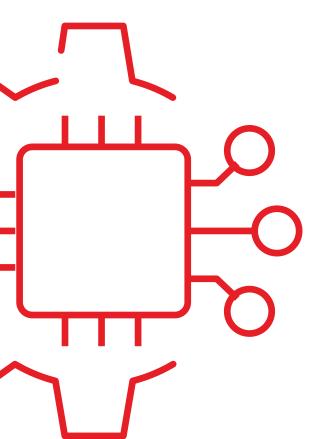






# Flexible, Reliable and Easy-to-use

ComAp's solutions for rental are incredibly flexible, allowing rental customers to decrease costs, and increase revenue from their fleets.

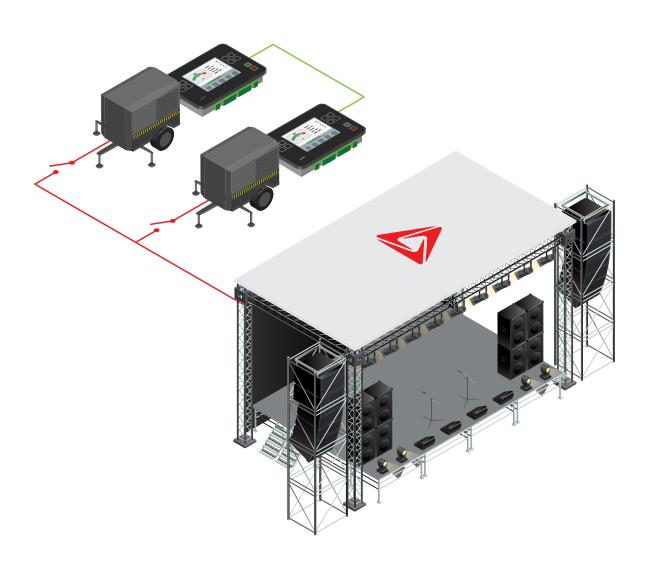


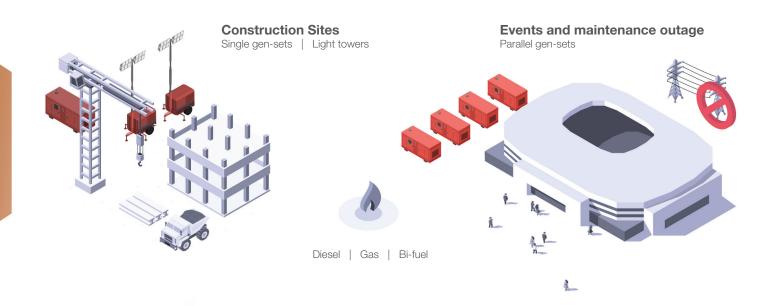
Power management functions allow different gen-set brands and sizes to function together, reducing fleet sizes.

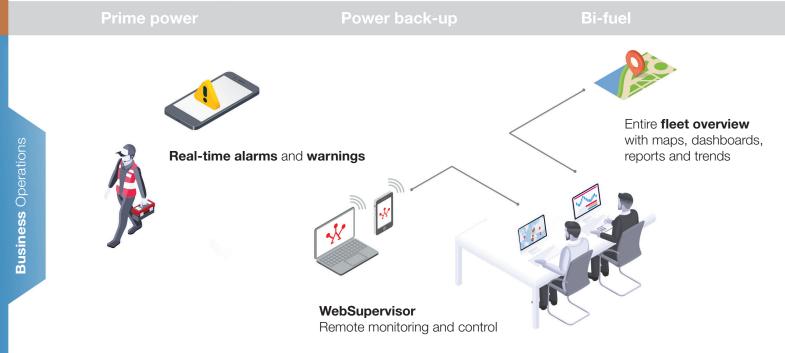
Optional communication and extension modules allows the system to be configured to the specific customer's needs.

Multiple operational modes in one controller allow for more flexibility with fleet management.

ComAp's solutions for the power equipment rental industry are easy to use, reliable, and provide customers and owners all the information they need to keep their organisations running effectively.







Maintenance

Fleet management

# Emergency and disaster recovery

Gen-sets | Pumps



Hybrid Microgrids





Pumps Compressors

Hybrid Microgrid

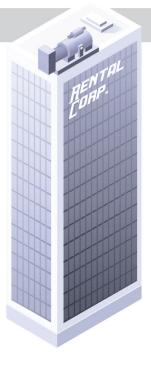


**Data** for strategic business decisions



**Integration** with internal systems through API





**Finance and Customer Management** 



### **Remote Comms Capabilities**

- > Remote monitoring and control
- > WebSupervisor cloud based system
- > GPS Tracking
- Geofencing



## **Fleet Management Features**

- > API connectivity
- Automatized reports
- > Extensive History Log
- Alarm Analyzer
- > Event Scheduler
- > Trends



### **Application Flexibility**

- Applications for single or multiple gen-sets in parallel
- > Power Management features
- > Droop
- > PLC capabilities
- > Alternative configuration
- > Application switch function
- > Force Values
- Communication and Extension modules



### **User Friendly and Customisable**

- > HMI, Front facia
- > SW customisation
- ECU comms customization



### **Global Technical Support**

- > 24/5 Global technical support
- Strong local presence allowing support from subsidiaries and local distributors



### **ComAp Quality**

- > 30 years od experience
- 2 years global warranty
- > Manufacturing in Czech Republic, EU
- Local presence
- Attractive product design



### **Easy Maintenance**

- > Maintenance scheduling
- > Easy installation
- > Remote controller configuration
- > Email, SMS and app alarm notifications
- > Easy unit replacement



### **Security**

- Multifactor Authentication for WebSupervisor
- > Password protection
- > Secured cloud and on premises solution



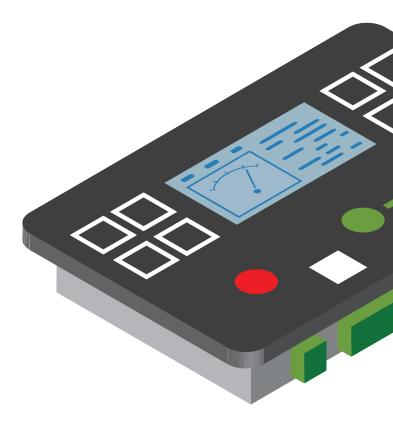
### **Rental Features**

- > Event scheduler
- > Rental timers
- > Fuel theft alarm
- > Dummy load
- > CAN redundancy



### **Green and Efficient**

- > Stage V and Tier4 Final Complience
- > Alternative fuels
- Dual-fuel/Bi-Fuel
- Solutions for Hybrid applications



# **WebSupervisor for Remote Monitoring**

Monitoring, data analysing and management.

WebSupervisor is a cloud-based system designed for monitoring, data analysing and management of ComAp and 3rd party devices via the Internet and is perfect for the rental industry – allowing greater control over your fleet of equipment and the comaptibility with other software packages allows you to export reports quickly and easily for billing and maintenance scheduling.

WebSupervisor gives you an overview of all your devices status, location and other important data - all on one screen. If an alarm occurs, for example if the gen-set is running low on fuel, you will be notified by email or mobile notification in the WebSupervisor mobile application.

The system also offers powerful reporting and sophisticated analysis tools such as the Alarm Analyser, trends and heat maps that give you additional added value and help you to:



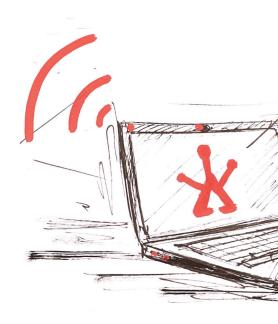
Optimize revenue for fleet of gen-sets



Increase gen-set up-time



Reduce maintenance costs

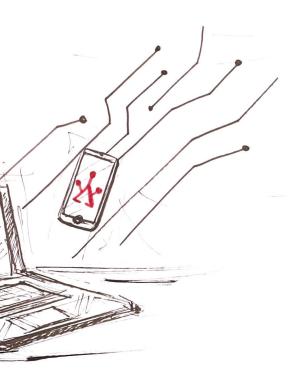




Security is our top priority. WebSupervisor runs on Microsoft Azure servers, which are ones of popular and secured servers. WebSupervisor offers login protected by a multifactor authentication that is higher level of security of the user account. WebSupervisor passed security audit by an independent authority.



WebSupervisor also allows for less travel for staff, which is important for both safety and cost reduction, since they can commission, monitor and maintain equipment remotely. Any issues can be diagnosed remotely before sending staff to site, which reduces the amount of time spent on location, minimising risk.





# **Clean Energy**

At ComAp, we take our impact on the world seriously.

As the world moves toward a more sustainable way of producing power, rental companies need to adapt to providing equipment that meet their customers sustainability needs, as well as meeting their own sustainability goals.

With sustainability in mind, ComAp has developed a hybrid power generation system, which combines the reliability of a diesel gen-set with the sustainability of a renewable source of power. Using ComAp's hybrid system, a diesel gen-set can be set up with a series of solar panels, and the hybrid system will prioritise the use of the solar panels as the power source. But when the solar panels aren't available, or the power requirements increase, the system will start the diesel gen-set to provide power. When the solar panels are available again, the system powers down the gen-set and power resumed being provided by the solar panels. Batteries can even be included in the system, decreasing the reliance on the diesel gen-set. This all happens automatically and can be monitored and managed remotely using WebSupervisor.

ComAp also has an innovative bi-fuel system, which converts a diesel gen-set to use gas as its primary fuel source. The system can substitute up to 70%h of diesel with gas, substantially reducing operating costs and emissions. The gas can be from a main line, or from a storage tank, which is perfect for the rental industry. The system dynamically adjusts for gas quality, power output and engine speed all automatically. There is no loss of power for the gen-set and it can also be monitored remotely using WebSupervisor.

All ComAp's power generation products adhere to the Stage V and Tier4 Final emissions standards, and we constantly update our products with a focus on increasing power generation efficiency and reducing environmentally harmful emissions.



# InteliNano<sup>NT</sup> Plus

AMF and MRS Controller with Current Measurement and Support of EFI Engines



- > AMF and MRS controller in one model
- > 1/3 Phase generator voltage measurement (3/3 phase when used as MRS controller)
- > Phase generator current measurement
- > Phase mains voltage measurement
- > Connection type and voltage auto detect
- > Various generator and engine protections
- > Icon menu, no text
- > Automatic or manual MCB and GCB control
- > "Zero" power consumption mode
- > Battery voltage, Service time and Running hours indication
- > All setpoints and I/Os configurable via front panel
- > Light Tower mode supported
- > Event log (10 events)
- > Up to 3 analog inputs (shared with binary inputs)
- > COM terminal for analog measurement
- > Up to 6 binary inputs (1 binary input is shared with binary output)
- 2 high side high current outputs, 4 high side binary outputs
- D+ pre-excitation terminal

- > ECU support (CAN J1939)
- > USB one-cord power supply and programing
- > Standard cut-out dimension 96 × 96 mm
- > Outside dimension 118 x 108 mm
- > JP 65

# InteliLite 4 MRS 16

Advanced single gen-set controller for prime-power applications



- > Backlit symbols
- 8 binary outputs, 8 + 1 binary inputs, 4 analogue inputs (U/I/R)
- > +5V output reference for analogue inputs
- > 2 high-current binary outputs
- > USB Host
- > Inbuild RS485
- 2 slots for extension plug-in modules (Modbus, Internet, SMS, inputs/outputs)
- Extension CAN modules
- > ECU support (Tier 4 Final, Stage V)
- > RTC with battery back-up (full calendar)
- > Power over USB for controller configuration
- > Zero power mode
- > True RMS measurement
- > In-built PLC, complemented with a PLC monitoring tool in InteliConfig
- > Full remote communications support (AirGate 2.0, WebSupervisor)
- Internet access using Ethernet / 4G, Modbus TCP/RTU, SNMP v1/v2c
- Active SMS and emails

- > Detailed history log with up to 350 records
- > Dual Mutual Standby application support
- > Remote display
- > User setpoints and protections
- > 5 languages in the controller & Translator functionality
- User Access Management
- > Cyber security improvement
- > Alternative configurations
- > Multi-purpose schedulers
- Modbus register mapping possibility
- > Load shedding, dummy load management
- > User buttons
- > Geofencing based on GPS position
- > Cut-out: 187 mm × 132 mm (as InteliGen 200)
- Available also in low temperature version (Order code: IL4MRS16XBLA)

# InteliLite 4 AMF 8

Single gen-set controller for stand-by and prime-power applications



- > Stand-by and prime-power application in one unit
- 6 binary outputs, 6 + 1 binary inputs, 3 analogue inputs (U/I/R)
- > +5V output reference for analogue inputs
- > 2 high-current binary outputs
- > 1 slot for extension plug-in modules (Modbus, Internet, SMS, inputs/outputs)
- > Extension CAN modules
- > ECU support (Tier 4 Final, Stage V)
- > RTC with battery back-up (full calendar)
- > Power over USB for controller configuration
- > Zero power mode
- > True RMS measurement
- > In-built PLC, complemented with a PLC monitoring tool in InteliConfig
- > Full remote communications support (AirGate 2.0, WebSupervisor)
- Internet access using Ethernet / 4G, Modbus TCP/RTU, SNMP v1/v2c
- > Active SMS and emails
- > Detailed history log with up to 150 records
- > Remote display

- > User setpoints and protections
- > 5 languages in the controller & Translator functionality
- > User Access Management
- > Cyber security improvement
- > Alternative configuration
- > Multi-purpose schedulers
- > 3 maintenance timers
- > Modbus register mapping possibility
- > Fuel pump management
- > Run Hours source selector
- > Cut-out: 172 mm × 112 mm

# InteliLite 4 AMF 25

Advanced single gen-set controller for stand-by and prime-power applications



- > Stand-by and prime-power application in one unit
- > Backlit symbols
- > 8 binary outputs, 8 + 1 binary inputs, 4 analogue inputs (U/I/R)
- > +5V output reference for analogue inputs
- > 2 high-current binary outputs
- > USB Host
- > Inbuild RS485
- 2 slots for extension plug-in modules (Modbus, Internet, SMS, inputs/outputs)
- > Extension CAN modules
- > ECU support (Tier 4 Final, Stage V)
- > RTC with battery back-up (full calendar)
- > Power over USB for controller configuration
- > Zero power mode
- > True RMS measurement
- In-built PLC, complemented with a PLC monitoring tool in InteliConfig
- > Full remote communications support (AirGate 2.0, WebSupervisor)
- Internet access using Ethernet / 4G, Modbus TCP/RTU, SNMP v1/v2c

- > Active SMS and emails
- > Detailed history log with up to 350 records
- > Dual Mutual Standby application support
- > Remote display
- > User setpoints and protections
- > 5 languages in the controller & Translator functionality
- User Access Management
- > Cyber security improvement
- > Alternative configurations
- Multi-purpose schedulers
- Modbus register mapping possibility
- > Load shedding, dummy load management
- > User buttons
- > Geofencing based on GPS position
- > Cut-out: 187 mm × 132 mm (as InteliGen 200)
- Available also in low temperature version (Order code: IL4AMF25XBLA)

# InteliGen 200

### Parallel Gen-set Controller



- Synchronising Optimize your gen-set usage or parallel different sizes and brands of generators
- > PLC Utilise our unique, and easy to use PLC drag-and-drop blocks for configuration
- New design Flexibility to change the application e.g. SPtM and MINT
- > Built in AVRi You no longer need a separate AVRi interface in your installation
- Plug-in modules Customize your controller with our plug-in extension and communic tion modules
- > 4G/LTE Connect to your gen-set via 4G/LTE for alerts or use ComAp's WebSupervisor
- > GPS Always know the location of your gen-set using geofencing for theft or movement alert
- InteliConfig Our new configuration and monitoring PC tool (based on new LiteEdit) will offer you multi gen-set control and monitoring as well as easy set-up
- > Remote Display available
- Low Temperature version available (order code IG3200XXBLA)

- Easy switching between parallel to mains or multiple genset applications
  - Multiple gensets in parallel to mains available together with InteliMains 210 controller
- Two types of synchronisations: Phase Match or Slip Synchro
- > Two types of Load/VAr Sharing: Isochronous (CAN) or Droop, including Emergency Droop
- Direct communication with EFI engines including Tier 4 Final support
- > Total remote monitoring and control
  - InteliConfig for configuration, single genset or mutli genset/site monitoring
  - WinScope for precise tuning of PID regulators exactly according to gen-set type and application needs
  - WebSupervisor for cloud based monitoring and control of your whole gen-set fleet
- Internal PLC support with PLC editor and monitor included in InteliConfig
- Active SMS and emails in different languages

- Wide range of communication and connection capabilities including:
  - USB, CAN and RS485 on board
  - USB master for configuration or firmware upload or download
  - RS232 and additional RS485 via plug-in module
  - internet access using Ethernet, GPRS/3G/4G via plug-in modules
  - configurable Modbus RTU or TCP and support of SNMP protocols v2
- > Geofencing and tracking via WebSupervisor
- 2 x 10 A binary outputs for cranking and fuel solenoid, powered by separated E-Stop input
- Option for additional inputs/outputs
- > Flexible event based history with up to 350 events
- > Load shedding, dummy load capability
- > Comprehensive gen-set protections
- > Multipurpose flexible timers
- > UL listed

# InteliGen 500

Advanced parallel Gen-set Controller with 5" colour display



- Synchronising Optimize your gen-set usage or parallel different sizes and brands of generators
- PLC Utilise our unique, and easy to use
  PLC drag-and-drop blocks for configuration
- New design Flexibility to change the application e.g. SPtM and MINT
- > Built in AVRi You no longer need a separate AVRi interface in your installation
- Plug-in modules Customize your controller with our plug in extension and communication modules
- > 4G/LTE Connect to your gen-set via 4G/LTE for alerts or use ComAp's WebSupervisor
- > GPS Always know the location of your genset using geofencing for theft or movement alerts
- InteliConfig Our new configuration and monitoring PC tool (based on new LiteEdit) will offer you multi gen-set control and monitoring as well as easy set-up.
- Easy switching between parallel to mains or multiple genset applications

- Multiple gensets in parallel to mains available together with InteliMains 210 controller
- Multiple gensets and grids in parallel available together with the Mains and BTB controllers
   Two types of synchronisations: Phase Match
- Two types of synchronisations: Phase Match or Slip Synchro
- Two types of Load/VAr Sharing: Isochronous (CAN) or Droop, including Emergency Droop
- Direct communication with EFI engines including Tier 4 Final support
- > Total remote monitoring and control
- > InteliConfig for configuration and monitoring
- WinScope for precise tuning of PID regulators exactly according to gen-set type and application needs
- > WebSupervisor for cloud based monitoring and control of your whole gen-set fleet
- Wide range of communication and connection capabilities including:
- > USB. CAN and RS485 on board
- B USB master for configuration or firmware upload or download
- RS232 and additional RS485 via plug-in module

- internet access using Ethernet, GPRS/3G/4G via plug-in modules
- configurable Modbus RTU or TCP and support of SNMP protocols v1
- Internal PLC support with PLC editor and monitor included in InteliConfig
- > Active SMS and emails in different languages
- Geofencing and tracking via WebSupervisor
- 2 x 10 A binary outputs for cranking and fuel solenoid, powered by separated E-Stop input
- > Option for additional inputs/outputs
- Flexible event based history with up to 350 events
- Load shedding, dummy load capability
- > Comprehensive gen-set protections
- Multipurpose flexible timers
- > UL listed

# InteliGen<sup>NTC</sup> BaseBox

### Complex Parallel Gen-set Controller



- InteliGen<sup>NTC</sup> BaseBox is a comprehensive gen-set controller for both single and multiple gen-sets operating in standby or paralleling modes. The detachable modular construction allows fast and intuitive installation with the potential for many different extension modules designed to suit individual customer requirements
- To be used in conjunction with colour displays InteliVision 5 or InteliVision 8
- Support of engines with ECU (Electronic Control Unit)
- Complete integrated gen-set solution and signal sharing via CAN bus – minimum external components needed
- Many communication options full and intuitive remote supervising and servicing
- > AirGate support, Ethernet connection (RJ45), USB 2.0 slave interface, 1× RS232 / 2× RS485 interface with Modbus protocol support; Analog / GSM / ISDN / CDMA modem communication support; SMS messages; ECU Modbus interface; secondary RS485 converter is isolated
- Automatic synchronizing and power control (via speed governor or ECU)
- AMF function, Baseload, Import / Export, Peak shaving, Voltage and PF control (AVR)

- Generator measurement: U, I, Hz, kW, kVAr, kVA, PF, kWh, kVAhr
- > Mains measurement: U, I, Hz, kW, kVAr, PF
- > Selectable measurement ranges for AC voltages and currents 120 / 277 V, 0–1 / 0–5 A
- Inputs and outputs configurable for various customer needs
- Bipolar binary outputs possibility to use BO as High or Low side switch
- Controller redundancy
- Event-based history (up to 1000 records) with customer-selectable list of stored values; RTC; statistic values
- > Integrated PLC programmable functions
- > Integrated fixed and configurable protections
- > DIN-Rail mount
- > Customized firmware solution

# InteliSys<sup>NTC</sup> BaseBox

Premium Parallel Gen-set Controller



- > Premium gen-set controller for both single and multiple gen-sets operating in standby or parallel modes
- Support of complex applications for power production in data centres, hospitals, banks and smaller CHPs
- Support of engines both with electronic unit ECU and mechanical engines
- Complete control of the engine, alternator and controlled technology from one unit, including synchronisation, provides access to all measured data in a coherent and time corresponding way
- > Wide range of communication interfaces allows smooth integration into local monitoring systems (BMS, etc.)
- Internal built-in PLC interpreter allows you to configure customised logic to meet demanding customer requirements on your own without extra programming knowledge and in a fast way
- Configurable event-based history (up to 4000 records) with extra Pre-mortem part is a valuable tool for troubleshooting and performance analysis

- P Plug & Play Local and Remote monitoring from a range of ComAp HMI display units and dedicated PC tools or Web based services, including the AirGate technology, offers you an full, intuitive and secure monitoring of the controlled fleet, site or technology.
- Force value function allows to use alternative configuration setting based on actual condition, allows better control of the gen-set or related technology based on its actual situation
- All analogue and binary I/Os are freely configurable to suit every application requirement, and to use just the right amount of I/Os or I/O expansion modules which saves customer costs

# InteliDrive DCU Industrial

Engine Controller for Pumps and Compressors









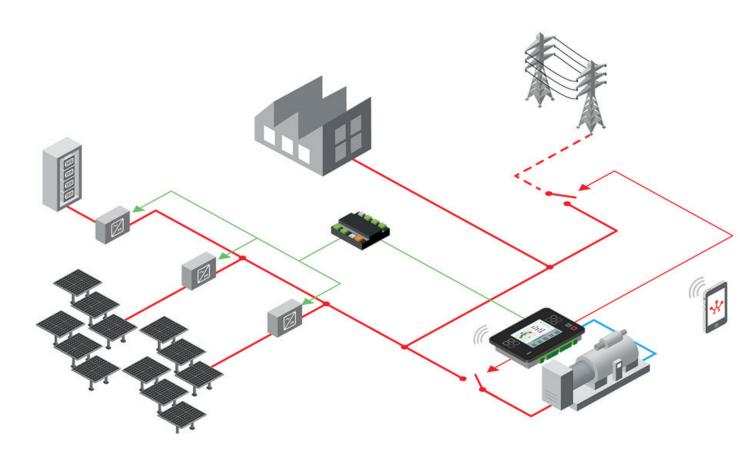
- Engine controller for land-based applications powered by engine driven compressors and pumps
- Control, monitoring and protection for both mechanical and electronic diesel/gas engines as well as peripheral equipment in one unit
- Support of engines with EFI (ECU) CAN / J1939 or Cummins Modbus
- > Event driven History record
- > Speed control
- > Engine measurement from sensors or via J1939
- > 14 binary inputs, 14 binary outputs, 8 analog inputs
- Over 100 binary inputs and outputs is available via additional modules
- > 3 level password protection
- > Remote control and monitoring via analog / GSM modem, SMS or Internet
- Configurable PLC functions (Logical, Mathematical, Comparators, Analog switch, PID loops, Counters, Timers, Delay and others)
- > Load sharing for propulsion engines
- Integrated clutch control
- > Running hours meter, number of starts counter

- > RS232, Modem, Modbus, Internet communication
- > Push buttons for simple control, lamp test
- > Front panel sealed to IP65
- > EN, UL, CSA, NFPA certifications

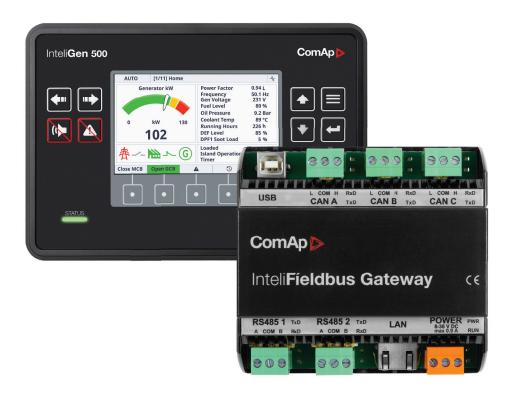


# InteliGen 500 Microgrid

New software solution for total microgrid control and energy management



The InteliGen 500 Microgrid solution consists of the InteliGen 500 (genset controller), a custom microgrid firmware upgrade activated by a software key and an InteliFieldbus Gateway for interaction with third party products including solar inverters.



- > Seamless integration
- > Renewable energy preferrence
- > Site reliability (AMF on battery, cyclical battery charging)
- > Flexible design
- > Wide range of supported devices
- > Easy configuration and commissioning

# **InteliBifuel**

Bi-fuel/dual fuel control system for single speed engines



- > InteliBifuel package is a fully programmable solution designed for any single speed Bi-fuel application, with its features perfectly suitable for Oil & Gas, Mining and Rental applications
- > New algorithm with automatic compensation for gas quality changes
- > Enable factory setting of Bi-fuel system
- > Simplified installation and commissioning
- Extended PLC logic and historyOptional GPRS/GMS and GPS monitoring
- > IP-69 enclosure fits to any application
- > Optional high pressure single point gas injection after turbocharger
- Compatible with InteliVision 5, and InteliVision 8 displays

# InteliBifuel DENOX

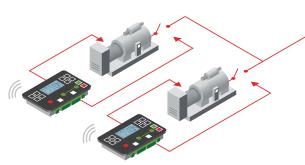
Bi-fuel anti-knocking device



- > Unique anti knocking engine protection controller specifically designed for Bi-fuel applications, ensure proper detonation is always maintained during Bi-fuel operation
- > Suitable for engines up to 20 cylinders
- > Suitable for variable speed engines
- > Individual cylinder knocking detection
- > Individual cylinder misfiring detection
- > Integrated 2× Inteli AINSTC up to 16 thermocouples
- > Harsh environmental design IP69K
- > Full communication and direct CAN interface to InteliBifuel LITE, InteliBifuel and InteliBifuel MOBILE
- > Operating temperature: -40°C to +80°C > CE, UL, CSA

# **WebSupervisor**

A Cloud-based application that enables remote monitoring, management and analyses of a gen-set fleet and 3<sup>rd</sup> party devices from anywhere.



### **Main Features**

- List and map views of devices and alerts on one screen
- Device tracking and geofencing\*
- > Dashboard with fleet and group of devices statistics
- Automatic reports for each device, or a group of devices, with customization options.
- > Alarm Analyser which can help reduce maintenance costs
- > Advanced trend representation (bar graphs, heat maps and more)
- 3rd party device monitoring
- > API: able to download data and integrate in CRM, ERP, PowerBI or other third party software
- Screen Editor: modify the data that is displayed according to your needs
- > Web camera support
- User activity logger: logs all user activity for a device or fleet
- Download controller's history files (event-based history)
- Customizable look with your logo and URL
- > User management with several levels of permission



<sup>\*</sup>Tracking and geofencing requires purchasing an additional GPS card.

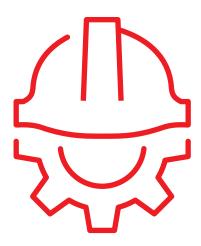


# **Full Support of Your Projects**

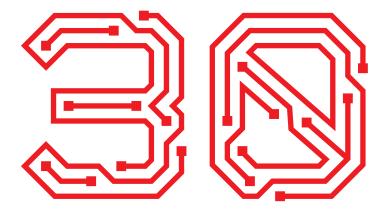
At ComAp, we closely cooperate with you to fulfil your project requirements. It is our knowledge of the various markets, which we gain through unrivalled local expertise, that allows us to deliver smart electronic control products and solutions.

We are able to assist you at every stage of your project. We can help you design the system, along with wiring and installation, programming and commissioning, in addition to providing enclosed solutions and other services. We deliver all of this through our specialist network of solution partners around the world.

Please contact your local ComAp representative for more information regarding these services.







# **30 Years of Smart Control:** ComAp celebrates 3 decades

of success through continuous innovation and growth.

Founded in a one-room office in Prague, Czech Republic in 1991 by three friends, ComAp has since become a successful global company with a strong local presence supported by 13 subsidiaries, more than 400 employees, and a network of 60+ distributors. The company is in the hands of its founders who have an ambitious vision for further growth and investment in acquisitions and partnerships. But it is trusted relationships with customers what is the central focus of ComAp. Let's have a look at the milestones of this astonishing journey starting back in the early 1990s, in the heart of Europe, that has become known as The Heart of Smart Control in the world of independent and backup power generation.



# comap-control.com