

Product Guide





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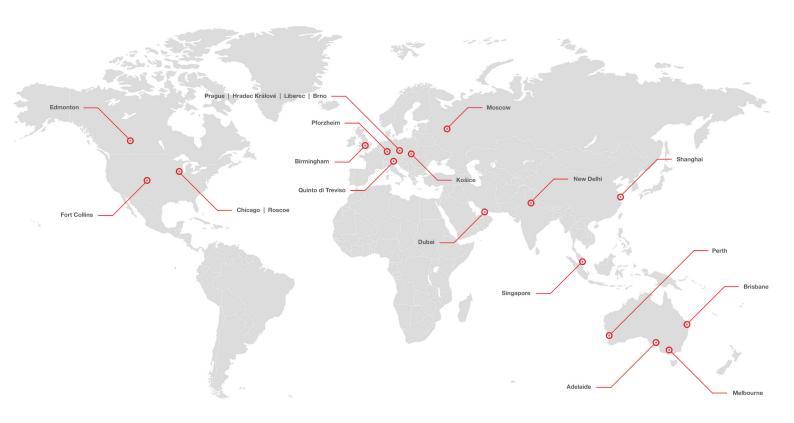


Our vision is
to be the global
leader in smart energy
control solutions that drive
the world's transition
to environmental
sustainability

Peter Magnus Sandin
Chief executive officer



# **Offices**





400+ Employees



21 Offices



**60+** Distributors

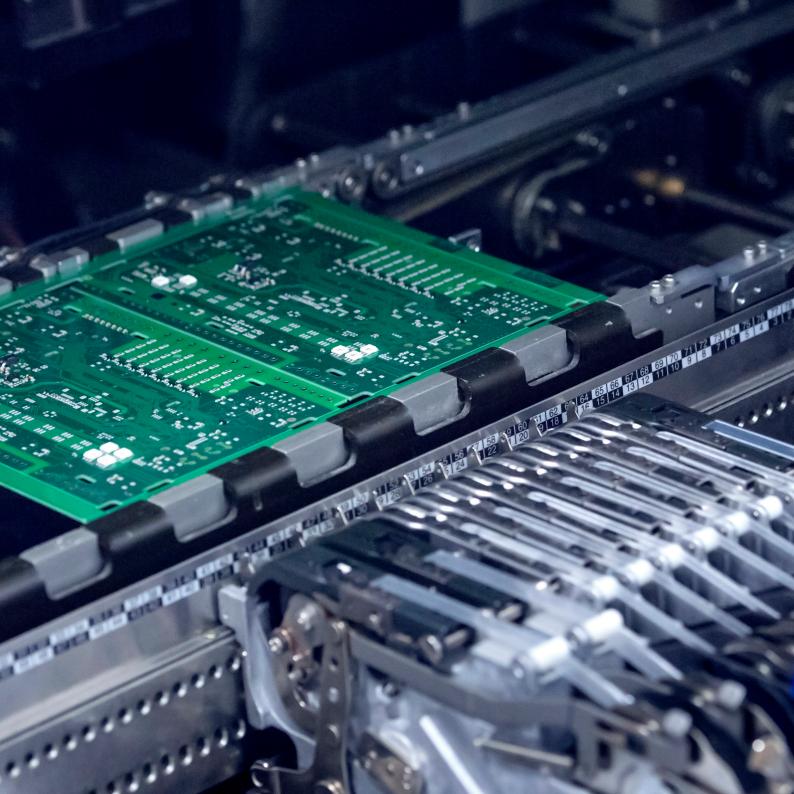


## **Research and Development**

ComAp has one of the largest in-house R&D teams in the industry. Our control products, software and accessories are designed and developed in house, via our teams based in Prague, Czech Republic and Košice, Slovakia.

Having an internal R&D team allows us to quickly react to customer needs and ensure that any product we develop meets the specifications of the market as closely as possible.





## **Quality and Certifications**

We are proud of the quality of our products and their reliability.

Our products are manufactured in Europe using the latest in technology. They are automatically inspected, but also undergo a secondary inspection by a team of highly skilled human operators to ensure quality and consistency.

A wide range of our products are certified by various authorities across many industries.

We are pleased that we are an ISO 9001 certified company and have been since 1998.

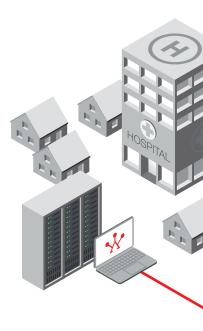


## **Smart Control Solutions**

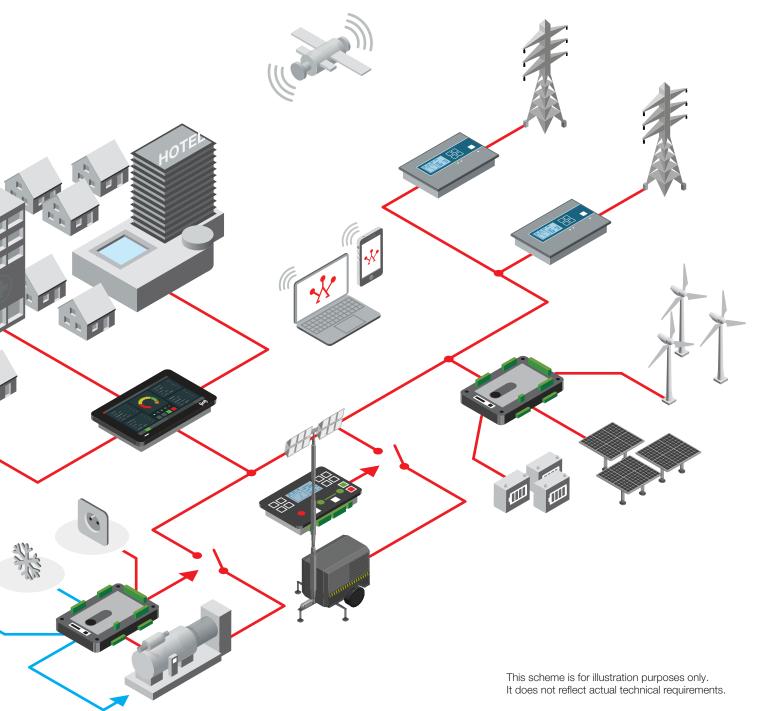
Flexible, intuitive, and scalable.

ComAp is always at the forefront of technological innovation in our industry. Our range of products always feature the most up-to-date, reliable technologies for communication, interface and configuration.

Mobile applications, touchscreens and GPS monitoring are all now common place at ComAp as we continue to develop the future of power control products to ensure we remain at **the heart of smart control**.







## **Case Studies**

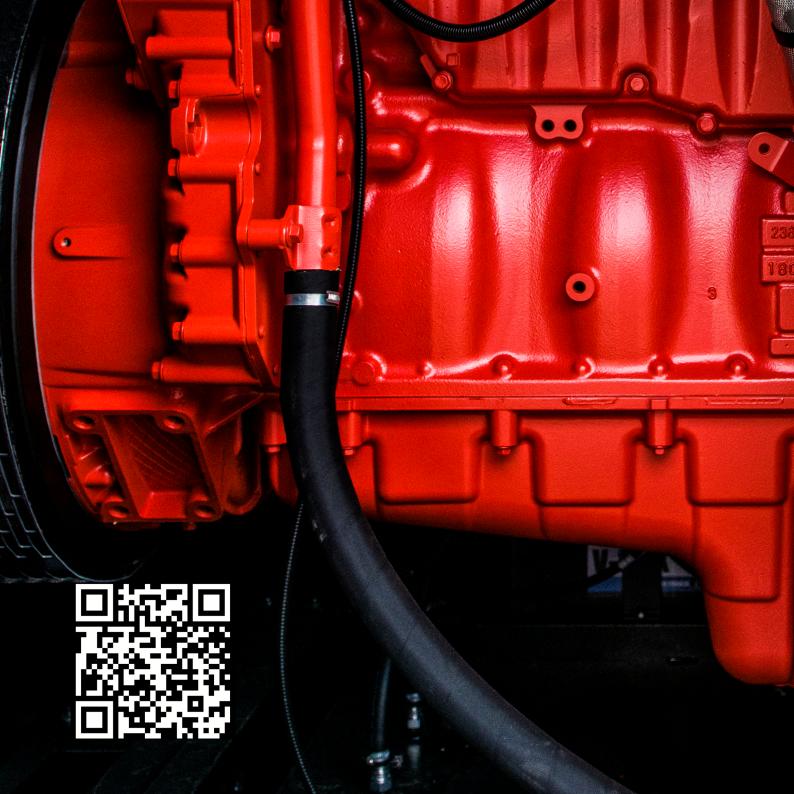
We're always proud to showcase the innovative ways that our customers and staff utilize the full potential of our products, keeping ComAp at **the heart of smart control**.

100+

case studies via comap-control.com



Don't forget to subscribe to our YouTube Channel to see our latest reference videos and much more.





# **Single Gen-set Controllers**

Standby and Prime Power Applications

#### **Application** Examples



## InteliNano MRS 3

Gen-set controller with 3 phase voltage and current measurement



Order Code: IN-NT MRS 3

- Controller for single gen-set operating in prime power applications
- > 3 Phase generator voltage and current measurement
- > Power measurement and energy counters
- > Connection type and voltage auto detect
- > Generator and engine protections
- > Icon based interface
- > Automatic or manual GCB control
- > 'Zero' power consumption mode
- > Battery voltage, service time and running hours indication
- > Automatic recharge of batteries
- > Configurable via front panel
- > Light Tower mode supported
- > Event log (15 events)
- > Up to 6 inputs/Up to 6 outputs
- > 2 high current outputs, for Starter and Fuel Solenoid, internally connected to the Emergency Stop input
- > D+ pre-excitation terminal
- > Magnetic pickup
- > ECU support (CAN J1939)
- > USB one-cord power supply and programming

- > License free PC configuration software (NanoEdit)
- > Standard cut-out dimension 96 × 96 mm
- > Outside dimension 110 × 100 mm
- > IP65 rated (if optional gasket is used)

## InteliNano<sup>NT</sup> Plus

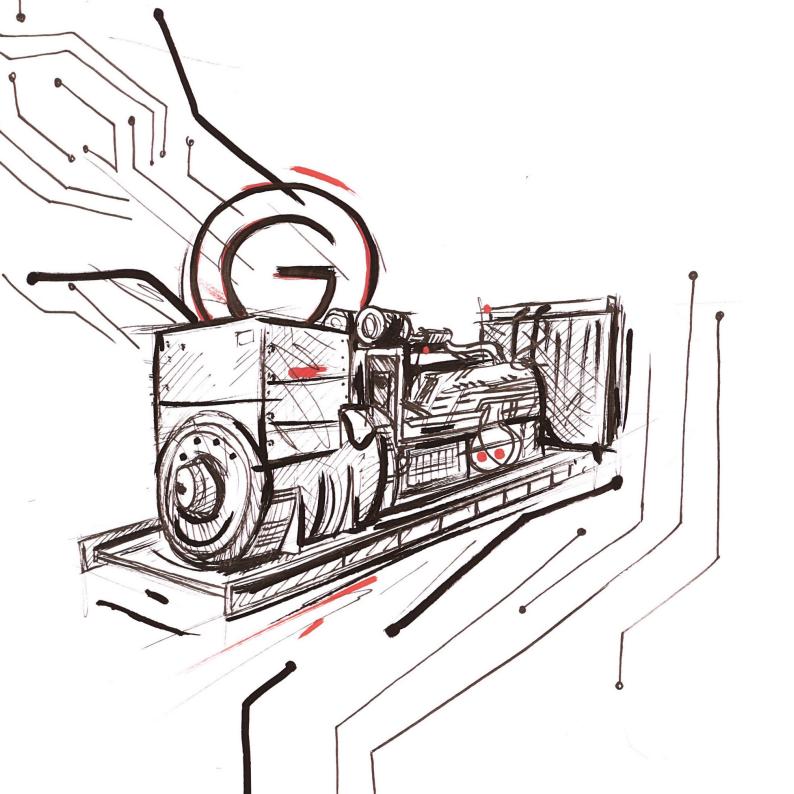
AMF and MRS controller with current measurement and support of EFI engines



Order Code: IN-NT PLUS

- > AMF and MRS controller in one model
- > 1/3 Phase generator voltage measurement (3/3 phase when used as a MRS controller)
- > Phase generator current measurement
- > Phase mains voltage measurement
- > Connection type and voltage auto detect
- > Various generator and engine protections
- > Icon based interface
- > 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 programming
- > Standard cut-out dimension 96 × 96 mm
- > Outside dimension 118 x 108 mm
- > IP65 rated (if optional gasket is used)



## InteliLite 4 MRS 16

Advanced single gen-set controller for prime-power applications



Order Code: IL4MRS16BAA, II 4MRS16BLA

- > Backlit buttons
- 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
- > Inbuilt 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
   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
- Compatible with remote display
- > User setpoints and protections
- > 5 languages in the controller and Translator functionality
- > User Access Management
- > Cyber security improvement
- > Alternative configurations
- Multi-purpose schedulers
- Modbus register mapping
- Load shedding, dummy load management
- > Optional Geofencing based on GPS position
- > Cut-out: 187 mm × 132 mm
- Available also in low temperature version (Order code: IL4MRS16XBLA)

Single gen-set controller for standby and prime-power applications



Order Code:

**IL4AMF8XBAA** 

- > Standby 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 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
- > Compatible with remote display

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

Single gen-set controller for standby and prime-power applications



**Order Code:** 

IL4AMF9XBAA

- > Standby and prime-power application in one unit
- 8 binary outputs, 8 + 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 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
- > Dual mutual standby application

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

Advanced single gen-set controller for standby and prime-power applications



**Order Code:** 

IL4AMF20BAA

- > Standby and prime-power application in one unit
- > Backlit buttons
- > 6 binary outputs, 6 + 1 binary inputs, 3 analogue inputs (U/I/R)
- > +5V output reference for analogue inputs
- > 2 high-current binary outputs
- > USB Host
- > 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
   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
- > Compatible with remote display
- > User setpoints and protections
- > 5 languages in the controller and Translator functionality
- > User Access Management
- > Cyber security improvements
- > Alternative configurations
- > Multi-purpose schedulers
- Modbus register mapping
- > Load shedding, dummy load management
- > Optional geofencing based on GPS position
- > Cut-out: 187 mm x 132 mm

Advanced single gen-set controller for standby and prime-power applications



Order Code: IL4AMF25BAA, II 4AMF25BLA

- Standby and prime-power application in one unit
- > Backlit buttons
- > 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
- > Inbuilt 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
   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
- > Compatible with remote display
- > User setpoints and protections
- > 5 languages in the controller and Translator functionality
- User Access Management
- > Cyber security improvements
- > Alternative configurations
- Multi-purpose schedulers
- Modbus register mapping
- > Load shedding, dummy load management
- > Optional geofencing based on GPS position
- > Cut-out: 187 mm x 132 mm
- Also available in low temperature version (Order code: IL4AMF25XBLA)



## **Parallel Gen-set Controllers**

Standby and Prime-Power Applications

#### **Application** Examples



Backup Power



Startup Synchronization



Complex Applications

## InteliGen 200

#### Parallel gen-set controller



Order Code: IG3200XXBAA, IG3200XXBI A

- Synchronising Optimise 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
- 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 Customise your controller with our optional 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 gen-set using geofencing for theft or movement alert
- InteliConfig Our configuration and monitoring PC tool offers you multi gen-set control and monitoring as well as easy set-up
- > Remote Display compatible
- Low Temperature version available (order code IG3200XXBLA)

- Easy switching between parallel to mains or multiple gen-set applications
   Multiple gen-sets in parallel to mains
  - available together with the 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
- including Tier 4 Final supportTotal remote monitoring and control
  - InteliConfig for configuration, single gen-set or mutli gen-set/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



Order Code: IG3500XXBAA

- Synchronising Optimise 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
- 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 Customise 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 gen-set 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 gen-set applications

- Multiple gen-sets in parallel to mains available together with InteliMains 210 controller
- Multiple gen-sets and grids in parallel available together with Mains and BTB controllers
- 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
- > 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 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



Order Code: IG-NTC-BB

- 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 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 InteliVision 5 or InteliVision 8 colour displays
- > Support of engines with an ECU (Electronic Control Unit)
- > Complete integrated gen-set solution and signal sharing via CAN bus minimum external components needed
- Many communication options full remote supervision and monitoring
- > 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 synchronising and power control (via speed governor or ECU)
- AMF function, Baseload, Import/Export, Peak shaving, Voltage and PF control (AVR)

- Senerator 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 can 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
- > Customised firmware solution available

## InteliGen GSC-C

Parallel gen-set controller, compliant with the latest EU grid codes



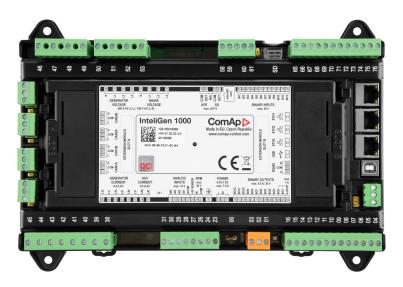
Order Code:
IG2GSCCXBAB

- 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 modular construction allows fast and intuitive installation with the potential for many different extension modules designed to suit individual customer requirements
- Compliant to the European Requirements for Generators, and VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, including Single Fault Tolerance
- > To be used in conjunction with InteliVision 5 or InteliVision 8 colour displays
- > Support of engines with an ECU (Electronic Control Unit)
- Complete integrated gen-set solution and signal sharing via CAN bus – minimum external components needed
- Many communication options full remote supervision and monitoring
- 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 synchronising and power control (via speed governor or ECU)
- AMF function, Baseload, Import/Export, Peak shaving, Voltage and PF control (AVR)
- Senerator 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 can 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
- Customised firmware solution available

### InteliGen 1000

Paralleling gen-set controller for advanced applications



- > Cooperation with up to 64 gen-set/mains/tie controllers
- > Direct communication with ECUs
- > Secure remote control and monitoring
- Highly flexible yet configurable solution for switchgear applications
- > Hardware compliant to the latest switchgear market needs
- State of the art AC accuracy measurement which allows it to be used on primary frequency control mechanism, grid balancing and demand response projects
- Öybersecurity by design, compliant to the ISA62433 standard
- A variety of both local and remote monitoring options, with a high number of connected clients split into "trusted" and "untrusted" zones
- Mains parallel operation with support of Grid Codes, compliant to European Grid codes (EN 50549, VDE-AR-N 4110:2018, VDE-AR-N 4105:2019, G99, TOR), American IEEE 1547 and others
- Multiple Island operation with cooperation with up to 64 additional gen-set/mains/tie controllers (InteliGen 1000 or InteliMains 1010)
- Several load transfer options with the possibility of less than 100ms load transfer

- > Redundant inter-controller line for critical applications like datacentres and hospitals
- > Double redundancy of the kW and kVAr sharing
- > User management allowing up to 30 unique users
- AirGate 2.0 makes sure that the connection to the controller is established faster from all around the world, and is more reliable than ever before
- Internal PLC interpreter with an easy to use PLC Editor, for simple and fast creation of specific logic
- > Up to 31 characters in texts, parameters, and alarms for system clarity and easy troubleshooting
- > Compatibility with ComAp InteliGen/InteliSys/ InteliMains-NT line, InteliGen 200, InteliGen500 controllers
- Enable/Disable of features and protections makes the system highly versatile yet simple and easy for both commissioning engineers and operators

## InteliMains 1010

Mains supervision controller for complex applications



- ComprehensiveMains/Utility/Tie-breaker controller for any site
- Synchronize set of gen-sets to the Mains/Utility when needed or requested
- Acts as Mains protection relay
- Pre-programmed functions allow fast and easy system set-up
- Large in-built PLC interpreter allows customization at no extra cost
- Hardware compliant to the latest switchgear market needs
- Supports latest Grid codes requirements from Europe, USA and Australia
- Cooperates with ComAp's InteliGen 1000 controllers forming a solution with up to 64 units without any extra repeaters
- Pre-programmed functions and internal PLC interpreter allows to make basic solutions fast and easy. Should the project require any specific requirements this can be done easily at no extra costs and with minimum effort or programming skills
- Cyber security is guaranteed on the whole solution level, compliant to the ISA62433 standard

- Handles large number of simultaneously connected clients like HMIs, SCADA, BMS and others, allowing easy and convenient monitoring from both local and remote areas
- AirGate 2.0 allows faster, more reliable remote connection from all around the
- Modbus client (master) functionality allows easy integration of Modbus based devices into the InteliMains 1010 to benefit from provided data - e.g. diagnostics
- Load transfer from gen-sets back to Mains/ Utility is adjustable, with an option of short time parallel operation, even below 100ms
- Double redundancy of the communication line with other controllers allows usage in complex applications like datacentres, hospitals and others
- For easy handling for operators or trouble shooting purposes the InteliMains 1010 of fers up to 31 characters in text fields which makes parameters, values and alarms self-explanatory and easy to understand for anyone

# InteliSys<sup>NTC</sup> BaseBox

Advanced parallel gen-set controller



Order Code: IS-NTC-BB

- Advanced 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 an electronic control unit (ECU) and mechanical engines
- > Complete control of the engine, alternator and any controlled technology from one unit, including synchronisation
- > Wide range of communication interfaces allows smooth integration into local monitoring systems
- Internal built-in PLC interpreter allows you to configure customised logic to meet demanding customer requirements on your own without extra programming knowledge
- Configurable event-based history (up to 4000 records) with 'pre-mortem' records - a valuable tool for troubleshooting and performance analysis

- > Plug and Play local and remote monitoring from a range of ComAp displays and dedicated PC tools or web based services, 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 conditions, 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

## InteliMains<sup>NTC</sup> BaseBox

Mains protection and supervision controller, compliant with the latest EU grid codes



Order Code: IM-NTC-BB

- > For multiple (up to 31) gen-sets operating in parallel to mains (or isolated parallel)
- Compliant to the European Requirements for Generators, and VDE-AR-N 4105:2018, VDE-AR-N 4110:2018
- To be used in conjunction with InteliVision 5, InteliVision 5 RD or InteliVision 8 colour displays
- > Many different power control modes available
- System baseload with limited export or minimal import
- > Import/Export power control of gen-set group
- > Temperature of the system by power control
- Dynamic changes of required system power via analog input
- Reverse synchronisation of the loaded gen-set group to mains
- > Forward synchronisation of Mains to gen-set group
- Coupling of several synchronised mains to a common bus

- Allows users to build complex applications with more mains incomers, bus-tie breakers, and load management
- > AMF function, Peak shaving
- Mains measurement: U, I, Hz, kW, kVAr, kVA, PF, kWh, kVAhr
- Bus measurement: U, Hz (kW, kVAr, PF via CAN from gen-set group)
- Selectable measurement ranges for AC voltages and currents – 120 / 277 V, 0–1 / 0–5 A
- Inputs and outputs configurable for various customer needs:
  - > 12 Binary Inputs
  - > 12 Binary Outputs
  - > 3 Analog Inputs
  - > 1 Analog Output
- Bipolar binary outputs can use BO as high or low side switch

- Many communication options full and intuitive remote supervising and monitoring:
  - 1x RS232 / 1x RS485 interface with Modbus protocol support
  - > Analog / GSM / ISDN / CDMA modem communication support
  - > SMS messages
  - RS485 converter is isolated (one RS485 display-dedicated port)
  - > AirGate support
  - > Ethernet connection (RJ45)
  - > USB 2.0 slave interface
  - Controller redundancy
- Event-based history (up to 1000 records)
   with customer-selectable list of stored values
- RTC

## InteliMains 210

Mains supervision controller

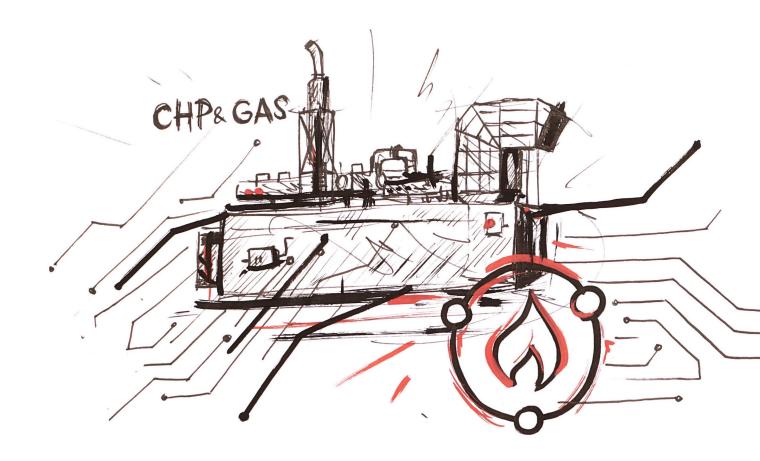


Order Code:

IM3210XXBAA

- Synchronising for multiple up to 31 gen-sets operating in parallel to mains
- Compliant to the European Requirements for Generators, and VDE-AR-N 4105:2018, VDE-AR-N 4110:2018
- > PLC Utilise our unique, and easy to use PLC drag-and-drop blocks for configuration
- > Flexibility to change the application e.g. MCB and MGCB
- Plug-in modules Customise 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 gen-set using geofencing for theft or movement alerts
- InteliConfig Our configuration and monitoring PC tool will offer you multi gen-set control and monitoring as well as easy set-up
- > Two types of synchronisation: Phase Match or Slip Synchro
- > Multiple grids (e.g. H-diagram) support together with the Bus Tie Breaker controller(s)
- > Total remote monitoring and control

- > InteliConfig for configuration and monitoring
- > WinScope for precise tuning of PID 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
  - 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 or v2c
- Internal PLC support with PLC editor and monitor included in InteliConfig
- > Active SMS and emails in different languages
- > Option for additional inputs/outputs
- > Flexible event based history with up to 350 events
- > Multipurpose flexible timers
- > UL listed





# **CHP and GAS Controllers**

Standby and Prime Power Applications

#### **Application** Examples



Cogeneration



Trigeneration



Industrial

# InteliSys Gas

Controller for gas gen-set applications compliant with the latest EU grid codes



Order Code:

IS2GASXXBAB

- InteliSys Gas is a controller for gas gen-sets mainly used in CHP (Cogeneration) and power generation applications. The InteliSys Gas controls, monitors and protects the generator set according defined setpoints and configuration settings
- Compliant to the European Requirements for Generators, and VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, including Single Fault Tolerance
- > Preconfigured functions, scalable and configurable I/Os, broad communication capabilities allows the controller to adapt to various applications with ease
- > Predefined adjustable functions tailored to gas engine's specific needs
- > Read in of all relevant mechanical and electrical signals via sensors, voltage and current transformers to control the entire gen-set
- > Full control of the circuit breakers like generator breaker and mains breaker

- > Automatic Synchronisation and kW/kVAr control to safely connect your generator to the bus and run in stable operation
- Baseload control, Peak Shaving, Import and Export Power Control to and from the grid for example to keep the power output within the limits as agreed with the distribution system operator (DSO)

## **ECON-4**

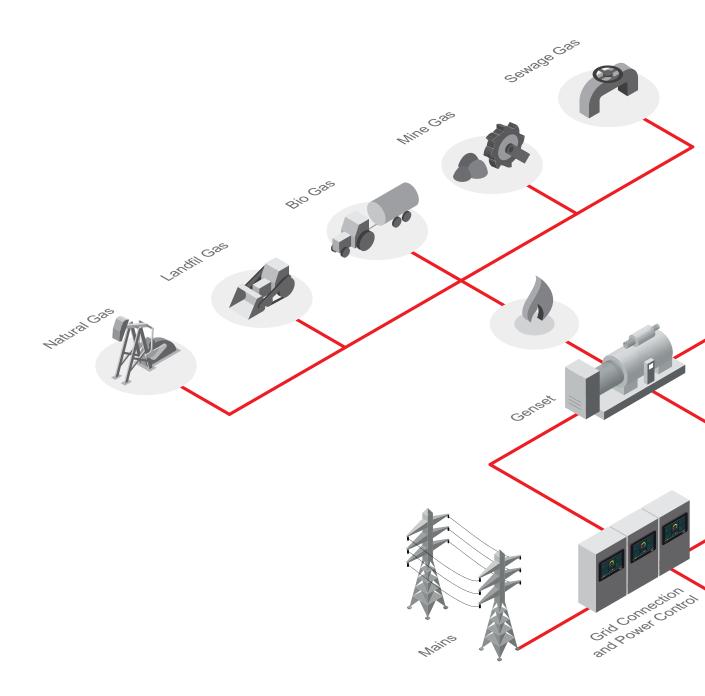
#### Digital speed governor

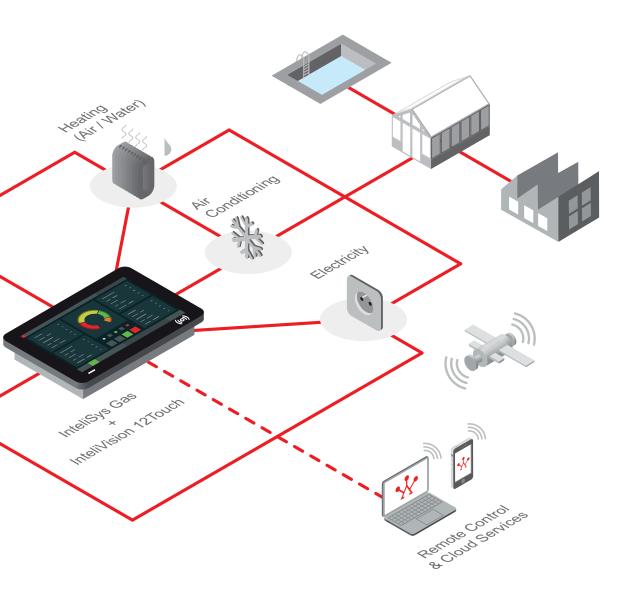


Order Code: ECON-4

ECON-4 is digital speed governor dedicated for speed control of gas or diesel engines. ECON-4 guarantees precise and fast speed control in island and network parallel operation. ECON-4 can control different types of actuators which makes it a general speed controller for almost every actuator on the market for engines in range of multiple MWel.

- > Greater stability for gas engine applications
- > Improved protection against tripping because of under/overshoot conditions
- > CAN connected with the gen-set control system which reduce and simplify wiring and commissioning work







# **Bi-fuel Controllers**

Dual Gas and Diesel Technology

#### **Application** Examples



Oil and Gas



Power Generation



Mining



Marine

## **InteliBifuel**

Bi-fuel control system for single speed engines



- The InteliBifuel package is a fully programmable solution designed for any single speed bi-fuel application, with its features perfectly suitable for Oil and Gas, Mining and Rental applications
- > Algorithm with automatic compensation for gas quality changes
- > Enables factory installation of a bi-fuel system
- > Simplified installation and commissioning
- > Extended PLC logic and history
- > Optional 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 to 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 AIN8TC 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

## **InteliBifuel LITE**

Bi-fuel control system for low-powered engines



- The InteliBifuel LITE package is a cost effective, compact solution designed for single speed bi-fuel applications at nominal output power up to 100 or 500kW.
- Suitable for the Rental market or any other power generation applications using many types of gas
- High or low pressure single point gas injection technology, gas injected before or after the turbocharger
- > Algorithm with automatic compensation for gas quality changes
- > Easy installation and commissioning
- > Harsh environmental design
- > IP-69 enclosure fits to any application
- > Compatible with InteliVision 5 and InteliVision 8 displays

# **InteliBifuel MOBILE**

Bi-fuel control system for mobile variable speed engines



- The InteliBifuel MOBILE package is a fully programmable solution designed for any mobile variable speed applications such as mine haul trucks, frack trucks, locomotive trains or marine propulsion engines
- > Fully configurable 3D maps
- IP-69 harsh environmental design allows full integration in applications with limited space
- > Remote monitoring
- > GPRS/GSM remote monitoring
- > GPS location
- > Extended PLC logic
- > Extensive history records
- Optional high or low pressure single point gas injection technology; gas injected before or after the turbocharger
- > Compatible with InteliVision 5 and InteliVision 8 displays

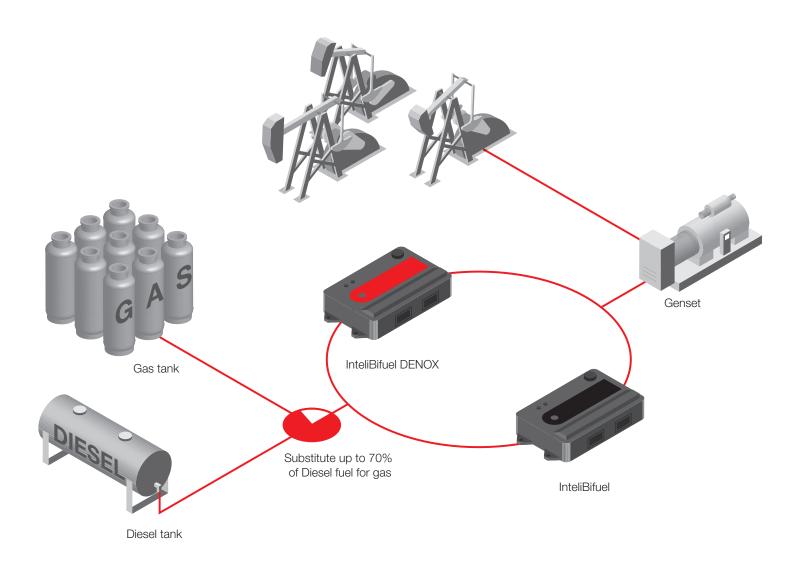
## **Gas Train**

Low pressure gas train for high speed engine conversions



- > Assembly of components necessary to reduce and control gas flow into the engine
- > Suitable for high speed engine conversions
- > Ended with electronic throttle valve
- > Low pressure output 10 30mbar
- > Inlet pressure range 150 350 mbar
- According gen-set power there are several types:Code name Note

Code name	Note
IBF-GT25	DN25, Outlet 1x 1BSP, up to 250kWe
IBF-GT40	DN40, Outlet 2× 1BSP, 250 - 650 kWe
IBF-GT50	DN50, Outlet 2× 5/4BSP, 600 - 1000 kWe
IBF-GT50A	DN50, Outlet 4× 1BSP, 600 – 1000 kWe
IBF-GT65	DN65, Outlet 4× 5/4BSP, 1000 - 1650 kWe
IBF-GT80	DN80, Outlet 4× 5/4BSP, 1650 - 2200 kWe

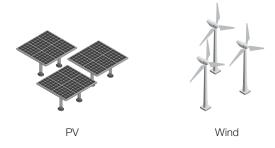




# **Hybrid Microgrid Controllers**

Standby and Prime Power Applications

#### **Application** Examples



# InteliSys<sup>NTC</sup> Hybrid

Renewable/diesel hybrid system controller



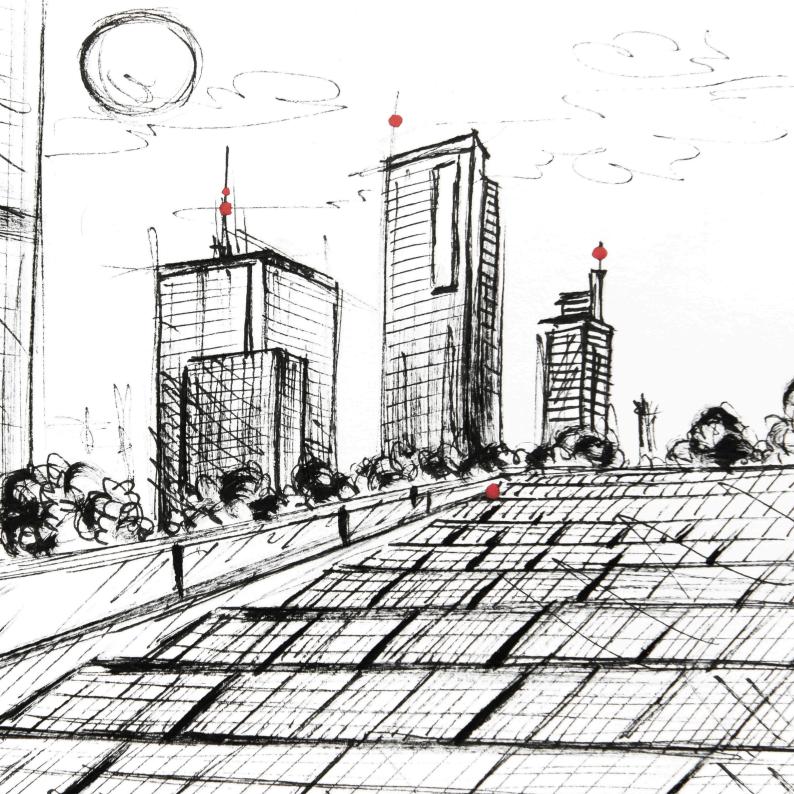
Order Code: IS-NTC HYBRID

- InteliSys<sup>NTC</sup> Hybrid is a standalone controller for hybrid applications that combine diesel gen-sets with renewable sources of power. It is suitable for off-grid (microgrids) as well as on-grid installations.
- Continuous monitoring and control of all sources of energy including solar, wind, hydro, energy storage and gen-sets
- > Interface to PV inverters via Modbus RTU or TCP\*
- Interface to ComAp InteliGen and InteliSys gen-set controllers\*\* via CAN
- Optimised system efficiency by minimising the necessary dynamic spinning reserve while keeping reliability during the PV output drops; the InteliSys<sup>NTC</sup> Hybrid controller calculates and distributes the dynamic spinning reserve to the gen-set controllers
- Extensive flexibility due to built-in PLC to cover complex site control and various operating scenarios
- Synchronisation of gen-sets with the mains and export/import limitation control to fulfill the utilities needs in on-grid application
- > AirGate connection and WebSupervisor offer remote monitoring and full control of the whole site

 Data acquisition from all power sources provides detailed statistics about energy yield in selected interval (day, week, month) and gen-set fuel consumption

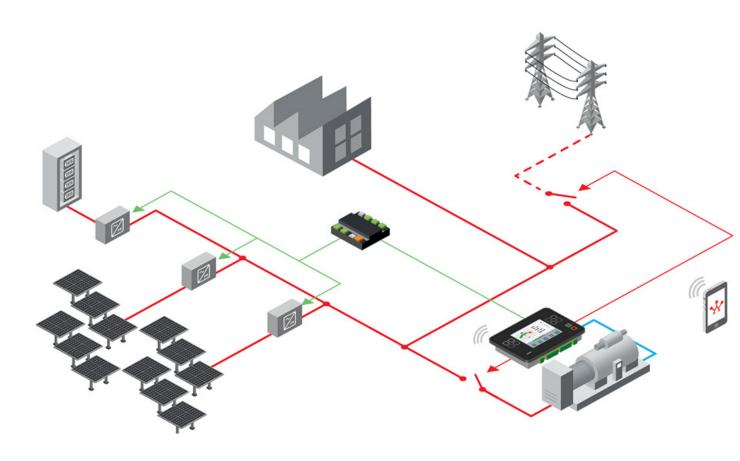
the Modbus master ability is achieved via additional PLC module (Product name: UC-7112-LX Plus, order code: CM17112LBGB)

<sup>\*\*</sup> IGS-NT-Hybrid 1.2.0 fw and Hybrid sw key must be used for compatibility and to ensure prevention from gen-set underloading



# InteliGen 500 Microgrid

New firmware solution for total microgrid control and energy management

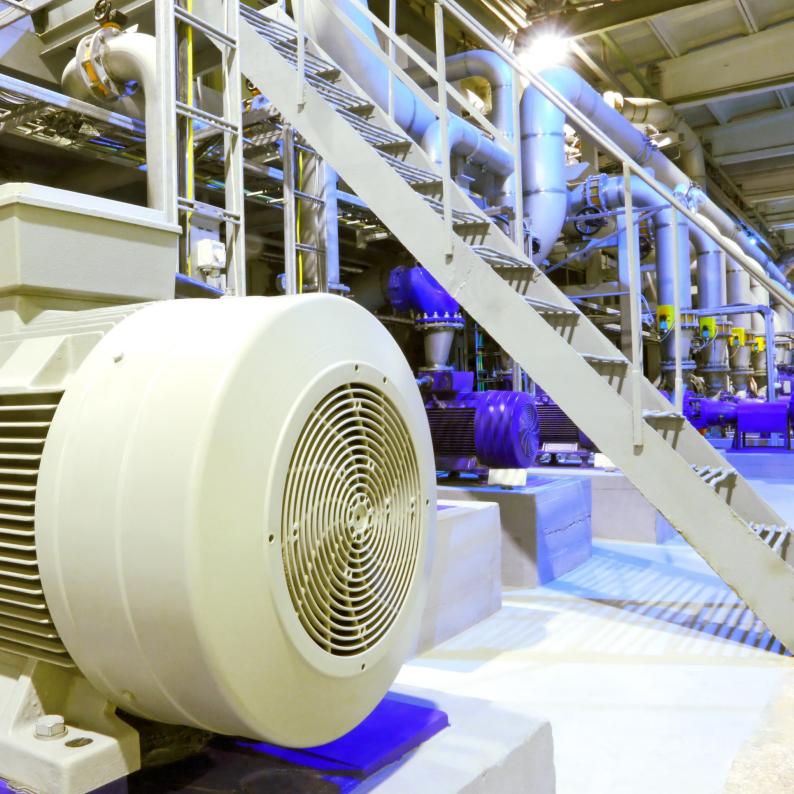


The InteliGen 500 Microgrid solution consists of the InteliGen 500 (gen-set controller), a custom microgrid firmware upgrade activated by a software key and an InteliFieldbus Gateway for interaction with third party products including solar inverters.



Order Code: SKMICROGR01

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



# **Engine Controllers**

Control for Industrial Engines

#### **Application** Examples



Compressors and Pumps



Machinery



Industrial

## InteliDrive DCU Industrial

Engine controller for pumps and compressors









**Order Code:** 

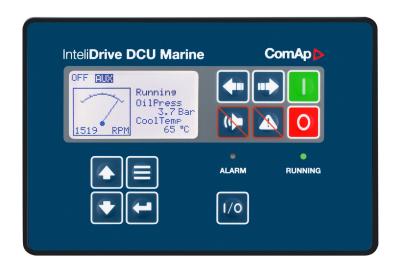
ID2DCUINBAA, ID2DCUINBLA(LT)

- 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 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

## InteliDrive DCU Marine

Modular certified engine controller for marine applications



**Order Code:** 

**ID-DCU** Marine

- Modular IACS certified engine controller for marine applications
- Control, monitoring, and protection for any type of marine engine
- Dedicated Emergency, Auxiliary, Harbour and Propulsion engines application
- Single speed application for generators and variable speed application for propulsion, pumps, compressors
- Support of wide range of EFI (ECU) engines with Tier 4F support
- > Support of multi CANbus devices
- Connection to engine via primary J1939 and backup J1587 buses or Cummins Modbus
- > Remote monitoring via Modbus, Ethernet and AirGate
- > Configurable Modbus RTU and Modbus TCP
- > RS232, RS485, Ethernet communication support
- > WebSupervisor support for remote supervision and monitoring
- > Redundant architecture: main unit + backup module
- > Backup ID-RPU module with broken wire protections
- > Speed/load control via J1939 or J1587 buses

- Symmetrical load sharing for propulsion engines with J1939 (via CAN bus)
- Power management controller cooperation over CAN bus (IG/IS-NTC-BB)
- > Integrated clutch control
- > 14 binary inputs, 14 binary outputs, 8 analog inputs
- Marine certified extension modules for expandable number of input/outputs
  - > 80× AIN, 32× AOUT, 112× BIN, 112× BOUT

## **Intuitive Power Control**

Pumps | Compressors | Crushers and screeners | Trucks

Our range of engine controller technologies is relied upon to provide unmatched control and monitoring in many different applications. Whether it is a sprinkler system in a tomato farm or to pumping out a multi-million-dollar mine site, our field tested products will support your business. Our products are rated for use in the harshest environments so you can always count on your equipment to be ready.





## InteliDrive IPU

Industrial power unit controller



Order Code:
ID2IPUXXBAA

- Engine controller for land-based and marine Tier 4 applications
- > Control, monitoring and protection for both mechanical and electronic diesel/gas engines in one unit
- > Automatic, manual or remote start/stop of the engine
- Support of engines with an Electronic Control Unit (ECU)
   J1939 or Cummins Modbus
- Analog oil pressure, water temperature, fuel level, battery voltage, engine speed (pick-up)
- > Smooth engine speed control by Up/Down controller buttons, binary inputs for predefined speed options, Speed Up/Down binary inputs or one analog input
- > Selectable protections alarm/shutdown
- > 3 levels of password protection
- > Ethernet, USB, GSM/GPRS, RS485 or RS232/Modem/Modbus communication
- > Automatic SMS on alarm
- > On-line control and monitoring over the internet (embedded web server)
- > 2 languages (user changeable)
- > Real time clock and event history log
- > Push buttons for simple control, lamp test

> Front panel sealed to IP65

## InteliDrive IPC

Irrigation pump controller



Order Code: ID2IPCXXBAA

- Engine and pump controller for land-based and marine Tier 4 applications
- > Control, monitoring and protection for both mechanical and electronic diesel/gas engines in one unit
- > Automatic, manual or remote start/stop of the engine
- Support of engines with an Electronic Control Unit (ECU)
   J1939 or Cummins Modbus
- Analog oil pressure, water temperature, fuel level, battery voltage, engine speed (pick-up)
- > Smooth engine speed control by Up/Down controller buttons, binary inputs for predefined speed options, Speed Up/Down binary inputs or one analog input
- > Pump functionalities: flow meter, flow switch, set of flexible timers
- > Selectable protections alarm/shutdown
- > 3 levels of password protection
- > Ethernet, USB, GSM/GPRS, RS485 or RS232/Modem/Modbus communication
- > Automatic SMS on alarm
- > On-line control and monitoring over the internet (embedded web server)
- > 2 languages (user changeable)

- > Real time clock and event history log
- > Front panel sealed to IP65

## InteliDrive Lite FPC

Engine controller designed for diesel driven fire pump applications



Order Code: ID-FLX FPC

- Modular engine controller designed for diesel driven fire pump applications based on the NFPA 20 standard
- > Automatic and manual starting sequence based on two batteries according to NFPA 20 standard
- Support of engines equipped with an Electronic Control Unit (ECU) – J1939 or Cummins Modbus interface
- > Analog gauge (VDO, Datcon) outputs
- > Engine speed control
- > 3 configurable analog inputs + 2 analog inputs of battery voltage measurement
- > 7 configurable binary inputs and outputs
- 6 LED indicators (Alarm, Warning, Not Ready, Running, Battery A, Battery B)
- > Selectable protections alarm/shutdown
- > Password protection
- > USB, RS485/RS232/Modem/Modbus communication
- > Automatic SMS on alarm
- On-line control and monitoring over web pages (embedded web server) via IB-Lite
- > 2 languages (user changeable)
- > Real time clock and event history log

## InteliDrive Lite EM

Engine controller for electric asynchronous motors



Order Code:
INTELIDRIVE EM

- > Electric motor control, monitoring and protection
- All common ways to start asynchronous motor: direct, Y-D, and soft starter starting
- > 7 configurable binary inputs and outputs
- > 3 configurable analog inputs
- > Selectable protections alarm/shutdown
- > Setpoints adjustable via keyboard or PC
- > USB, RS485 or RS232, GSM/GPRS, ModBus communication
- > Real time clock and event history log
- > Automatic or manual start/stop of the motor
- > Push buttons for simple control, lamp test
- > Graphic back-lit LCD display 128 × 64 pixels
- > LED indicators
- > Front panel sealed to IP65
- > Power supply 8–36 VDC
- > 3 phase protections

## InteliDrive IPC Plastic Panel

Complete control panel for harsh environments

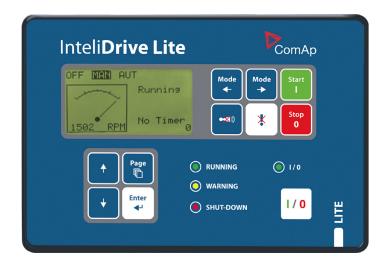


Order Code: ID2P2200BAA

- > Complete panel arrives prewired incorporating the InteliDrive IPC controller no need to build your own panel
- > Key switch for power on/off, resettable fuse for protection and relays for control are all included making the solution fast to install and commission
- Additional space allows for added extras like emergency stop buttons, ECU diagnostic connectors and communications options making upgrading simple
- Industry standard Deutsch connectors are used for easy connection to the engine harness
- The polycarbonate enclosure has been designed and sourced to be robust, meeting the very high quality standards of the industry
- The polycarbonate enclosure has an IP67 rating, ensuring a long life for the controller in even the harshest of environments.

## **InteliDrive Lite**

Engine controller for pumps and compressors



**Order Code:** 

**ID-FLX-LITE** 

- Engine controller for land-based and marine Tier4 applications
- Control, monitoring and protection for both mechanical and electronic diesel/gas engines in one unit
- > Automatic or manual start/stop of the engine
- > Programmable on/off panel button
- Support of engines with an Electronic Control Unit (ECU)
   J1939 or Cummins Modbus
- > Analog gauge (VDO, Datcon and others) outputs
- Smooth engine speed control
- > 7 configurable binary inputs
- > 7 configurable binary outputs
- 7 configurable analog inputs (3 resistive, 4 voltage) + 2 not configurable voltage inputs
- > Selectable protections alarm/shutdown
- > 3 level of password protection
- > USB, RS485/RS232/Modem/Modbus communication
- > Automatic SMS on alarm
- > On-line control and monitoring over the internet (embedded web server) via IB-Lite

- Optional GSM/GPRS modem/wireless Internet via IL-NT GPRS
- > AirGate support
- > 2 languages (user changeable)
- > Real time clock and event history log
- > PLC functions: PID loop, Comparators, Timers
- > Push buttons for simple control, lamp test
- > Front panel sealed to IP65
- > EN, UL certifications

# InteliDrive Mobile Logger

Data logger for diesel engine driven mobile and industrial applications



Order Code:
ID-MOBILE LOGGER

- Data logger outstanding, monitoring and history tracking for diesel engines as well as peripheral equipment
- > Plug and play support of engines with an ECU access to all available values
- > Built-in Event and Performance Log
- > Remote monitoring support
- > Fleet management program with GSM/GPS localisation and geofencing
- > History log out
- Engine measurement by sensors and actuators or via J1939
- > 8 Binary inputs
- > 11 x Configurable analog inputs
- > 1x Frequency input for RPM measurement
- > 2x Impulse inputs
- > LED status indication
- > Communication interface RS485, 2× CAN, J1939
- > Can be connected to external displays
- > Running-hours meter, number of starts counter, battery voltage measurement
- > Fuel consumption measurement

## **InteliDrive Mobile**

Electronic controller for off-road vehicles and machinery



Order Code: ID-MOBILE

- Diesel/gas engine control, monitoring and protection for off-road applications such as construction, quarrying and engineering equipment
- Control of hydraulic systems and engine driven compressors and pumps
- Designed for harsh environments the unit construction features a fully environmentally sealed enclosure and connector
- > Plug and Play EFI (ECU) engine support (CAN/J1939)
- > Master/slave support
- > Remote monitoring support
- > Fleet management via GPRS/GPS, geofencing
- Integrated PLC functions: analog switches, comparators with delay or hysteresis, counters, delay functions, filters, linear interpolation, logical and mathematical functions, PID loops, timers
- > Built-in event and performance log
- > History log out monitoring of wide range of parameters
- > 4 Binary inputs with detection of broken wire
- > 12 Binary bi-directional inputs for contacts switching
- 8 Binary configurable switches (High-side/Low-side 3A, PWM 3A, DC motor driver)

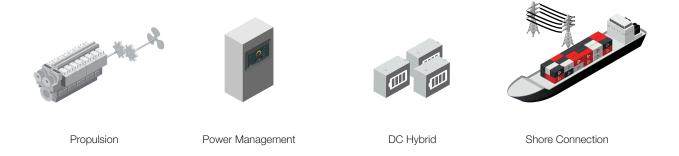
8 Binary Hi-side switches with max. current 3A and detection of broken wire



# **Marine Controllers**

Propulsion and Power Management Solutions

#### **Application** Examples



### **Certified Solutions**

ComAp has invested heavily in obtaining IACS certificates major certification societies around the world, thus ensuring compliance of your vessel to the IACS standard and a true mark of quality.









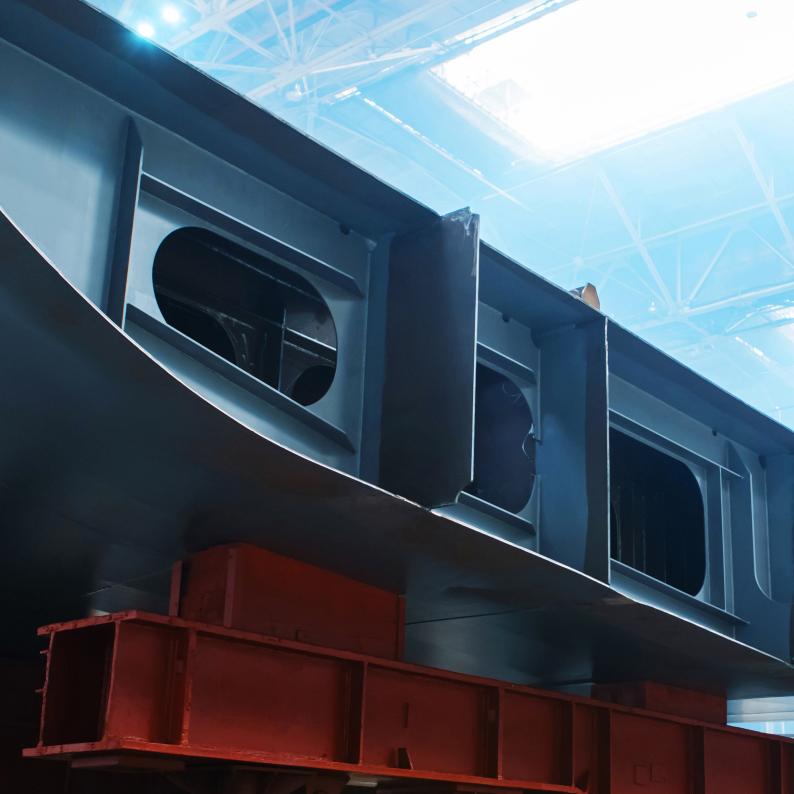












#### **InteliDrive Marine**

Engine controller for marine applications



Order Code: ID2C2004BAA

- Engine controller for marine Tier4 Final propulsion applications
- Control, monitoring and protection for any type of marine engine
- Support for EFI (ECU) engines via CAN/J1939 or Cummins Modbus
- Redundant architecture by using the backup redundant protection unit Inteli RPU
- Support of two independent power supplies via I-RPU module
- > 7 configurable binary inputs, 7 configurable binary outputs
- 9 configurable analogue inputs (3 resistive, 3 current 0-20mA, 3 voltage 0-10V)
- > Option for additional inputs/outputs
- > Selectable protections warning/cooling down/shutdown
- > 3 level of controller setting/operation password protection
- > Ethernet, USB, GSM/GPRS, RS485 or RS232/Modem/Modbus communication
- > Automatic SMS on alarm
- > On-line control and monitoring over the internet (embedded web server)
- > Real time clock and event history log

- > Toggle button with additional features adjustments
- Up/Down speed regulation buttons on the front facia
- > 2 languages (user changeable), Chinese language support
- > Front panel sealed to IP65

#### InteliDrive DCU Marine

Certified engine controller for marine applications



Order Code:

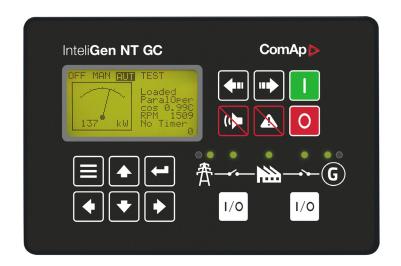
ID-DCU Marine

- > IACS certified engine controller for marine applications
- Control, monitoring and protection for any type of marine engines
- Dedicated Emergency, Auxiliary, Harbour and Propulsion engines application
- Single speed application for generators and variable speed application for propulsion, pumps, and compressors
- Support of wide range of EFI (ECU) engines with Tier 4F support
- Support of multi CANbus devices
- Connection to engine via primary J1939 and backup J1587 buses or Cummins Modbus
- > Remote monitoring via Modbus, Ethernet and AirGate
- Configurable Modbus RTU and Modbus TCP
- > RS232, RS485, Ethernet communication support
- > WebSupervisor support for remote supervision and monitoring
- Redundant architecture: main unit + backup module
- > Backup ID-RPU module with broken wire protections
- Speed/load control via J1939 or J1587 buses

- Symmetrical load sharing for propulsion engines with J1939 (via CAN bus)
- Power management controller cooperation over CAN bus (IG/IS-NTC-BB)
- > Integrated clutch control
- > 14 binary inputs, 14 binary outputs, 8 analog inputs
- Marine certified extension modules for expandable number of Input/Outputs
  - 80× AIN, 32× AOUT, 112× BIN, 112× BOUT

### InteliGen NT GeCon Marine

Advanced, marine certified generator controller

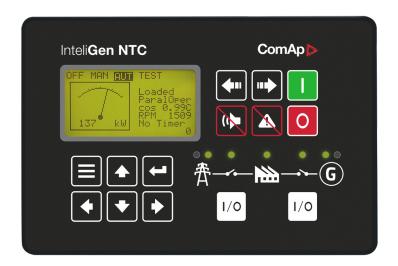


Order Code: IG-NT GC

- Marine certified generator controller for single or multiple generators operating in standby or parallel modes
- Many communication options full and intuitive remote supervision and monitoring
- > Generator performance log for easy problem tracing
- > Automatic synchronising and control breaker
- AMF function, baseload, import/export, peak shaving, voltage and PF control (AVR)
- > Generator measurement, mains measurement
- Inputs and outputs configurable for various customer needs
- > Controller redundancy
- Event-based history (up to 500 records) with customer-selectable list of stored values; RTC; statistic values
- > Integrated PLC programmable functions
- > Integrated fixed and configurable protections
- Marine approved by DNV, GL, Lloyd's Register, CRS and more

## InteliGen<sup>NTC</sup> GeCon Marine

Complex parallel generator controller



Order Code: IG-NTC GC

- Gen-set controller for single or multiple generators operating in standby or parallel modes
- > Support of engines with an ECU (Electronic Control Unit)
- Many communication options full and intuitive remote supervising and monitoring
- > Gen-set performance log for easy problem tracing
- Automatic synchronising and power control (via speed governor or ECU)
- AMF function, baseload, import/export, peak shaving, voltage and PF control (AVR)
- > Generator measurement, mains measurement
- > Inputs and outputs configurable for various customer needs
- > Controller redundancy
- Event-based history (up to 500 records) with customer-selectable list of stored values; RTC; statistic values
- > Integrated PLC programmable functions
- > Integrated fixed and configurable protections

# InteliSys<sup>NTC</sup> BaseBox GeCon Marine

Advanced cogeneration (CHP) generator controller



Order Code: IS-NTC-BB

- Advanced generator controller for both single and multiple gen-sets operating in standby or parallel modes
- Support of cogeneration (CHP) and other complex applications
- To be used in conjunction with InteliVision 8 or InteliVision 5 colour displays
- > Complete integrated generator solution and signal sharing via CAN bus minimum external components needed
- Many communication options full and intuitive remote supervision and monitoring
- > Generator performance log for fast and time-saving problem tracing
- > Automatic synchronising and control breaker
- Baseload, Import / Export, TempByPower, Peak shaving, Voltage and PF control (AVR)
- Senerator 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 output can use BO as High or Low side switch
- > 1x RS232 / 2x RS485 interface with Modbus protocol support; Analog / GSM / ISDN / CDMA modem communication support; SMS messages; secondary RS485 converter is isolated

### InteliGen<sup>NTC</sup> BaseBox GeCon Marine

Complex parallel generator controller



Order Code: IG-NTC-BB

- Comprehensive generator controller for both single and multiple gen-sets operating in standby or paralleling modes
- > To be used in conjunction with InteliVision 8 or InteliVision 5 colour displays
- > Complete integrated gen-set solution and signal sharing via CAN bus minimum external components needed
- Many communication options full and intuitive remote supervising and monitoring
- Senerator performance log for fast and time-saving problem tracing
- > Automatic synchronising and control breaker
- 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 can use BO as high or low side switch

- > 1x RS232 / 2x RS485 interface with Modbus protocol support; Analog/GSM/ISDN/CDMA modem communication support; SMS messages; secondary RS485 converter is isolated
- AirGate support

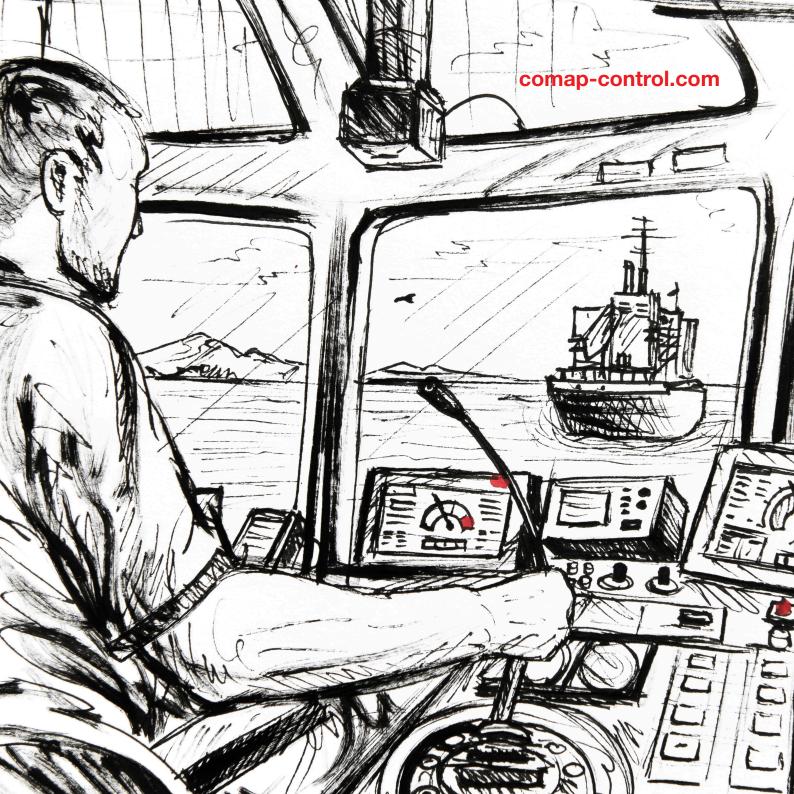
## InteliMains<sup>NTC</sup> BaseBox Marine

Controller for mains applications



Order Code: IM-NTC-BB

- > Mains supervision controller base unit
- > Many different power control modes available:
  - > System Baseload with limited export or minimal import
  - > Import/Export power control of gen-set group
  - > Temperature of the system by power control
  - > Dynamic changes of required system power via analog input
- > Reverse synchronisation of the loaded gen-set group to mains
- > Forward synchronisation of mains to gen-set group
- > Coupling of several synchronised mains to a common bus
- > Allows to build complex applications with more mains incomers, bus-tie breakers, and load management





# **Mains Protections and ATS Controllers**

Essential for all applications where generators operate in parallel with the mains



Mains

# **InteliPro**

#### Mains decoupling relay



Order Code: INTELIPRO

- InteliPro is a highly flexible mains decoupling relay with extensive range of protection functions to meet the strictest utility interconnection requirements. It can be used in various distributed generation applications, next to cogeneration units, renewable energy sources or as a back-up protection for gen-sets
- > Extensive frequency, voltage and current protections
- > Optional features enable to meet particular requirements of utilities
- Compliant with G59/3, G10, G83, IEEE 1547 and VDE-AR-N 4105
- > Certified according to IEC 60255, VDE 0126-1-1 and BDEW
- > Applicable for requirements of G59/3, G10, G83 and IEEE1547 and VDE-AR-N 4105



# **MainsPro LITE**

Mains decoupling relay



Order Code:
MAINSPRO LITE

- MainsPro LITE combines simple installation and usability with valuable mains protection
- > True RMS measurement for increased accuracy and reliable evaluation of failures
- > Compact design for installation in restricted spaces
- > Suitable for low voltage installations
- > Simple wiring with detachable connectors
- > Two-stage over/under voltage protection
- > Two-stage over/under frequency protection
- > Floating average over voltage protection
- > Phase supervision
- > Freely assignable variety of binary inputs and outputs
- > Event history log
- > Auto fault reset
- > CB Failure protection

### **MainsPro**

#### Mains decoupling relay



Order Code: MAINSPRO

- MainsPro is a protection relay for parallel-to-mains applications including generator sets, cogeneration units, micro turbines, or renewable energy sources such as photovoltaic plants or wind turbines. It provides adjustable voltage, frequency and loss of mains protections to safeguard both the distribution network and the generators.
- User friendly interface with easy settings (no SW tool needed)
- > Simple wiring with detachable connectors
- Integrated mechanical lock, history track and watchdog protection
- Compliant with G59/3, G83, UL508
- Certified according to IEC 60255, CEI 0-21, IEn NR 005/2012, VDE V 0126-1-1 and VDE-AR-N 4105

### InteliATS2 50

Automatic Transfer Switch (ATS) controller for stand-by and prime-power applications



Order Code: IA250XXXBAA

- > M Mains-To-Mains or Mains-To-Gen application
- > 6 binary outputs, 6 binary inputs
- > Connection and configuration in PC tool InteliConfig
- > Power over USB for controller configuration
- > RTC with battery back-up (full calendar)
- Slot for extension plug-in module (support of 4G, BI/BO, Ethernet)
- Full remote communications support (AirGate 2.0, WSV, InteliSCADA)
- > Internet access using Ethernet/4G
- > Modbus TCP/RTU, SNMP v1/v2c
- > Active SMS and emails
- > Cyber security improvement, Firewall
- > Modbus register mapping possibility
- > Elevator switch, Geo-Fencing
- > Remote display support
- > Detailed history log with up to 150 records
- > User setpoints and protections
- > True RMS measurement
- > Multi-purpose scheduler
- User Access Management
- > 5 languages in the controller & Translator functionality

> Cut-out: 172 x 112 mm

## InteliATS2 70

Automatic Transfer Switch (ATS) controller for stand-by and prime-power applications



Order Code: IA270XXXBAA

- > Mains-To-Mains or Mains-To-Gen application
- 8 binary inputs, 6 binary outputs + 2 high-current binary outputs
- Connection and configuration in PC tool InteliConfig
- > Power over USB for controller configuration
- > RTC with battery back-up (full calendar)
- > RS485 on board
- Slot for extension plug-in module (support of 4G, BI/BO, Ethernet)
- Full remote communications support (AirGate 2.0, WSV, InteliSCADA)
- > Internet access using Ethernet/4G
- Modbus TCP/RTU, ŠNMP v1/v2c
- > Active SMS and emails
- > Cyber security improvement, Firewall
- > Modbus register mapping possibility
- In-built PLC, complemented with a PLC monitoring tool in InteliConfig
- Current measurement in all phases
- > Load Shedding, Elevator switch, Geo-Fencing
- > Remote display support
- Detailed history log with up to 350 records

- > User setpoints and protections
- > True RMS measurement
- > Multi-purpose schedulers
- > User Access Management
- > 5 languages in the controller & Translator functionality
- > Cut-out: 172 × 112 mm



# **Displays**

A ComAp display for every application



### **InteliVision 5**

#### 5.7" Colour display



Order Code:
INTELIVISION 5

- Colour display for localised visualisation
- InteliVision 5 is compatible with the following product lines
   InteliGenNT, InteliSysNT and InteliMainsNT
- > 5,7" Colour TFT Display with resolution of 320 × 240 pixels
- > Local and/or remote display for single controller monitoring
- Plug and Play operation (auto configuration based on controller application)
- Direct connection to the controller (converters are not needed)
- > Simple, fast and intuitive control
- > Easy drag and drop screen configuration in graphical editor
- > Five active buttons fast access to important data
- > Configurable active buttons
- > Support of Tiers 4 icons
- Mounting screw available at the rear face to mount a compatible controller
- Same language support as the controller including graphic languages
- Communication connection via RS-485 (galvanically separated)
- > Operating temperature: -30°C to +70°C



### InteliVision 5 CAN

5.7" Colour display with CAN bus interface

Order Code: InteliVision 5 CAN



#### InteliVision 5 CAN Backlit

Marine approved 5.7" colour display with backlit buttons and CAN bus interface

Order Code: InteliVision 5 CAN Backlit

### InteliVision 5.2

5" colour display



Order Code: RD2IV5BXBAA

- > 5" colour screen with resolution of 800 × 480 pixels
- > Plug and Play operation (auto configuration based on the controller application)
- Easy screen customisation using Screen Editor (part of InteliConfig)
- > 5 configurable user buttons under the screen
- > Modern look and graphical user interface
- Supported controllers:InteliGen 500
- > Fast and intuitive navigation
- > Multi-language support
- > Trends monitoring screen (up to 4 channels)
- > Communication with controller via Ethernet
- > Operating temperature: -30 °C to +70 °C (-40 °C to +70 °C if the device is powered on above -30 °C)
- > Front face is sealed to IP65
- > 1x Analog Input, 1x Binary Output
- > Easy-to-use mounting system
- > Same cut out as InteliGen 500
- > EMC, climatic and mechanical tests
- > CE and UL certification

### InteliVision 8

8" colour display



Order Code: INTELIVISION 8

- > For InteliSysNT, InteliGenNT, InteliMainsNT, InteliDrive DCU and InteliDrive Mobile Controllers
- > 8" colour TFT display with resolution of 800 × 600 pixels
- > Plug and Play operation (auto configuration based on controller application)
- > Complete access to all control and monitoring functions
- > More information in less time
- > Fast and intuitive navigation
- > Trends monitoring screen
- USB flash disk file storage (export/import trends, history, archive of controller and InteliVision 8 firmware to a USB stick)
- > Quick auto login with USB stick
- > User photo import
- Easy Drag and Drop screen configuration in graphical editor
- > Adaptive and colour AlarmList
- > Configurable buttons
- > Binary signal activation S/R button/toggle button/pulse generator
- Association to various gen-set commands
- Large History screen

### InteliVision 8 Marine

Marine approved 8" colour display for InteliGenNT/InteliSysNT and InteliDrive controllers



Order Code: InteliVision 8 Marine

- Marine approved display for InteliGenNT, InteliSysNT, or InteliDrive controllers
- > 8" colour TFT display with resolution of 800 × 600 pixels
- > Controlled by active buttons
- > Trends monitoring screen
- > Simpler, faster and more intuitive control
- > More information in less time
- Same language support as InteliGenNT/InteliSysNT and InteliDrive controller
- > Easy Drag and Drop screen configuration in graphical editor
- > Direct connection to the controller (converters are not needed)
- It is possible to mount InteliSysNT BaseBox to the rear side of InteliVision 8

#### InteliVision 12Touch

#### 12.1" colour touchscreen display



Order Code: RD1IV12TBZH

- Industrial operator panel equipped with 12.1" colour TFT multi-touch screen with resolution of 1280 x 800 pixels
- Touch based user interface with support for multi-touch gestures
- Plug and Play operation (auto configuration based on controller application)
- > Complete access to all control and monitoring functions
- > Fast and intuitive navigation
- > Extended trends monitoring screen
- Compatible with ScreenEditor software
- VSB flash disk file storage (export/import trends, history, archive of controller and InteliVision 12Touch firmware and others to a USB stick)
- > User photo import
- > Adaptive and colour alarm list
- > Large history screen
- Adjustable setpoints help
- > Communication connection via RS-485, CAN or Ethernet
- Multi language support
- > Integrated, easy to use mounting system
- Designed to be mounted in either monitoring or engine room

- > Industrial and robust design
- Rugged housing manufactured from a single piece of aluminium alloy
- Chemically strengthened front glass (8 times stronger than normal glass)
- > Sunlight-readable display (1000 cd/m2)
- > Automatic brightness control
- > Operating temperature: -30 to + 70°C
- > Face is sealed to IP65
- > EMC, climatic and mechanical tests
- > CE certification
- OL Certification
- Supported controllers:
  - InteliSys GASInteliGenNT BaseBox
  - > InteliGenNTC BaseBox
  - > InteliSysNTC BaseBox
  - > InteliMainsNTC BaseBox
  - > InteliSysNTC Hybrid
  - > InteliDrive DCU Marine from HW version 2.0
  - > InteliDrive Mobile from SW version 2.6.0

### InteliVision 12Touch OEM

12.1" colour touchscreen display



Order Code: RD1120EMBZH

- Marine Approved 12.1" Colour Display Unit with no ComAp branding on fascia
- > 12.1" colour, multi-touch screen, TFT display unit with resolution of 1280  $\times$  800 pixels
- > Touch based user interface, support for multi-touch gestures
- Plug and Play operation (auto configuration based on controller application)
- > Complete access to all control and monitoring functions
- > Fast and intuitive navigation
- > Extended trends monitoring screen
- > Compatible with ScreenEditor software
- USB flash disk file storage (export/import trends, history, archive of controller and InteliVision 12Touch firmware and others to USB stick)
- > User photo import
- > Adaptive and colour alarm list
- Large history screen
- > Adjustable setpoints help
- > Multi language support
- > Communication connection via RS-485, CAN or Ethernet
- > Integrated, easy to use mounting system

- > Designed to be mounted in either monitoring or engine room
- > Industrial and robust design

### InteliVision 13Touch

13.3" Colour Display Unit



Order Code: RD1IV13TBME

- > 13.3" Multi-touch projected capacitive display with a resolution of 1920 × 1080 pixels
- > EU RO MR Marine certification
- > Multi-controller support for up to 4 controllers
- > Buttons for brightness change on front face
- > Windows 10 IoT Enterprise 2019 LTSC (64bit)
- > ComAp PC tools pre-installed
- > Setpoints configurable from one device
- > History logs of all controllers
- > Fullscreen mode with lock protection/PIN
- > Front face protection compliant with IP66
- > Intel Atom® x5-E3930 Processor
- > 4 GB RAM
- > 32 GB eMMC, 240 GB SSD
- > 2 × Ethernet, 2 × USB 2.0, 2 × USB 3.0
- > Operating temperature: -15 °C to +55 °C
- > Power input 10-31 V DC
- Identical compatibility with controllers as InteliVision 18Touch - majority of the ComAp controllers

### InteliVision 18Touch

18.5" colour touchscreen display



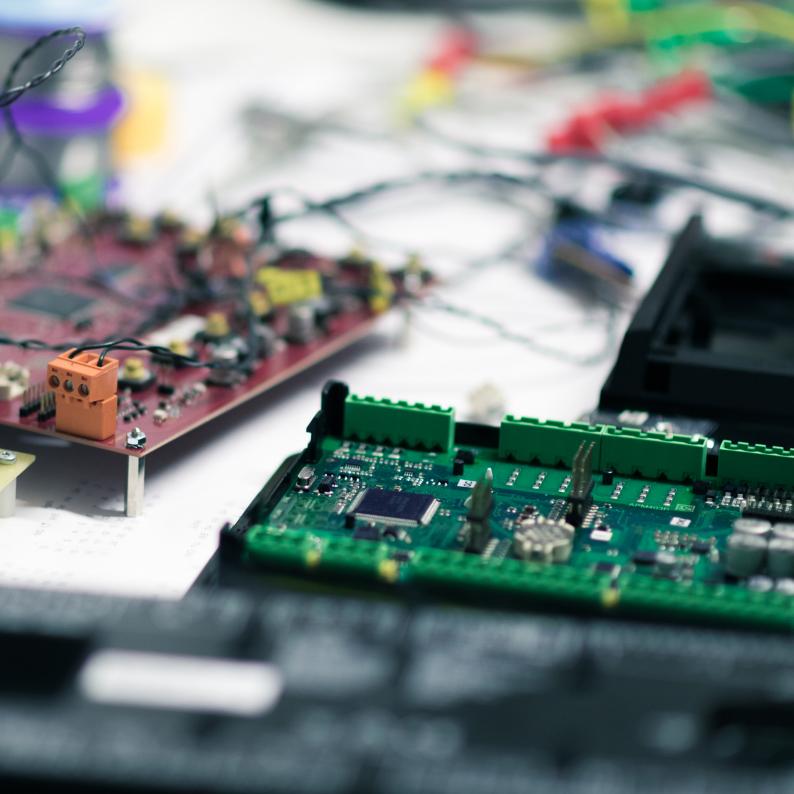
Order Code: RD31840PBIE

- > Panel suitable for use with a wide range of ComAp controllers
- > Display for monitoring and control of the entire site
- Possible to use for remote monitoring and control through the internet
- 18.5" LED backlit projected capacitive touchscreen with a resolution of 1366 × 768 pixels
- > Operating temperature -10 °C to +60 °C
- > Powerful Intel® Celeron® quad core processor J1900
- 3x USB, 2x mini-PCle sockets, 1x CFast, 2x RS232/422/485/, 2x RJ45
- > 32 GB SSD
- > Front protection compliant with IP66
- Mounting support: panel/wall/stand/VESA 100mm × 100mm
- > Power input 12-30 VDC
- > ComAp PC tools preinstalled
- > Setpoints configurable from one device
- > History logs of all controllers
- > Fullscreen mode with lock protection/PIN
- Onscreen keyboard

> Windows operating system

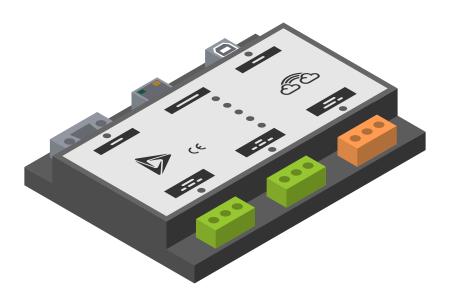


From one device you can configure setpoints of your controllers, control breakers and much more using just your finger. The fast processors and latest multi-touch technology ensures controlling your installation is easy and intuitive.

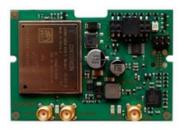


# **Communications and Accessories**

Extension and communication modules, and accessories



#### CM2-4G-GPS



Order Code: OT2A4GGPSCX OT1A4GGPSCX

- > Wireless internet connectivity (4G - LTE,3G - UMTS,WCDMA, HSPA, 2G - GSM)
- > WebSupervisor system support
- > AirGate technology support
- > SMS control of gen-set/engine
- > GPS location with geofencing and tracking

#### **CM3-Ethernet**



Order Code: CM3FTHFRXBX

- > Wired Internet connection via Ethernet port
- > AirGate 2 support
- > WebSupervisor support
- > Active e-mails
- > Modbus, SNMP protocols for local monitoring

#### CM-4G-GPS



Order Code: CM14GGPSXBX

#### **CM-Ethernet**



Order Code: CM2ETHERXBX

- > Communication module providing wireless internet connectivity
- > 4G LTE
- > 3G WCDMA, HSDPA, HSUPA, HSPA+
- > 2G GPRS, EDGE
- > GSM (850 / 900 / 1800 / 1900 Mhz)
- > Remote access and control over InteliConfig and WebSupervisor
- > AirGate
- > GPS location with geofencing and tracking

- > Internet / Ethernet module with 10/100 Mbit interface over RJ45 socket
- Embedded webserver for monitoring and basic adjustments
- > ModBus TCP support
- > SNMP V1/V2C support
- > Remote access and control over InteliConfig and WebSupervisor
- > Active e-mails sending
- AirGate

#### **CM-GPRS**



Order Code: CM2GPRSXXBX

- > Communication module providing wireless internet connectivity over GPRS and GSM communication
- > Remote access and control over InteliConfig and WebSupervisor
- > Automatic SMS / Emails alerts and control
- > AirGate

#### CM-RS232-485



Order Code: CM223248XBX

- Communication module with dual port for RS232 and RS485
- > Modbus RTU support
- Direct access and control over InteliConfig

#### InternetBridge-NT 4G



- > Communication Module with 4G/Ethernet Connection
- Internet connection for one or more ComAp controllers, either by Ethernet cable or by built in cellular modem

#### InteliFieldbus Gateway



Order Code: CM1IFGATBBB

- Modbus master
- MVersatile programmable interface unit between InteliGen NT(C), InteliSys NT(C), InteliGen GSC(-C), InteliSys GSC(-C), InteliSys Gas and InteliSys, Hybrid controllers and any Modbus TCP/RTU device
- > Predefined databases of Modbus devices
- > User-defined Modbus communication
- > 2x RS485, 1x Ethernet, 3x CAN interfaces
- > Connection to ComAp controller via CAN interface
- 8 byte values and byte operation support

#### **InteliGateway**



Order Code: CM1INGATBBB

- Versatile programmable interface unit between WebSupervisor fleet management system and any Modbus TCP/RTU device
- > Predefined databases of Modbus devices
- > User-defined Modbus communication
- > 1x RS485, 1x Ethernet, 1x CAN
- > 8 byte values and byte operation support
- > Support of up to 16 devices on each port RS485, Ethernet (32 in total)

#### I-CB



Order Code: I-CBxxx

- Versatile programmable interface unit between InteliGen NT, InteliSys NT or InteliDrive controllers and the Engine Control Unit
- > CAN bus interface
- Selected analog and binary values are received from ECU via i-CB

#### I-LB+



Order Code:

- > Communication bridge for sites with multiple controllers for local or remote monitoring and control
- > Direct (RS232, RS485), modem, Modbus or USB connection to multiple controllers
- > Communication speed up to 57600 bps (including Modbus mode)
- > Analog / GSM / ISDN / CDMA modem support

#### I-CR



Order Code: I-CR

- Intercontroller CAN bus extension (where the maximum distance limit would be exceeded)
- Intercontroller CAN bus bus-tie bridging makes groups of controllers in segments A and B "invisible" one for another depending on bus-tie breaker state, keeping the PC communication in function for all controllers

### I-CR-R



**Order Code:** I-CR-R

- > Provides intercontroller CAN bus redundancy by adding parallel RS485 communication bus
- > Provides intercontroller bus extension as well
- > Intended for achieving high reliability of the intercontroller communication in complex applications where the parts of the technology are separated from each other and the intercontroller bus is exposed to a risk of interruption
- > I-CR-R may be used as a redundancy module for a maximum of 20 controllers (counted all controllers on the CAN2 bus)

## **EM-BIO8-EFCP**



Order Code: FM2BIO8FXBX

- > Extension module with 8 BI/BO
- > Earth fault current measurement and protection

## **IGS-PTM**



**Order Code: IGS-PTM** 

- > 8 binary inputs (pull up), 8 binary outputs (low side switch)
- > 4 analog inputs, 1 analog output (current 0-20mA)
- > Pt100 and Ni100 sensors
- > Analog inputs (resistance range 0-250  $\Omega$ , voltage range 0-100mV, current range 0-20mA – selectable via jumper)

## **Inteli AIN8**



**Order Code:** I-AIN8

- 8 analog inputs (sensors)
- > Resistance (PT100, PT1000, Ni100, Ni1000,  $0-250\Omega$ ,  $0-2400\Omega$ ,  $0-10k\Omega$ )
- > Current (±20mA , 0-20mA, 4-20mA)
- > Voltage (±1V, 0-2,4V, 0-5V, 0-10V)
- > Lambda probes

## Inteli AIN8TC



**Order Code:** I-AIN8TC

- > 8 analog inputs designed for thermcouples
- > J, K and L types
- > Cold junction compensation support

## Inteli IO8/8



**Order Code:** I-I08/8

- > 8 binary inputs (pull up/pull down), 8 binary outputs (high side switch/low side switch)
- > Alternatively 16 binary inputs, 0 binary outputs (switchable inside the module)
- > 2 analog outputs (voltage 0-10V, current 0-20mA, PWM (5V, 200-2400 Hz)

## Inteli AIO9/1



**Order Code:** 

# I-AIO9/1

- > 4 channels for differential voltage measurement: range ±65V DC (for example battery voltage measurement)
- > 4 channel equipment sensors: thermocouples J,K,L, ±75mV (for current measurement via resistor shunts)
- > 1 channel for resistance measurement 0-2400Ω (sensors: 0-2400Ω, PT1000 or NI1000)
- > analog output with options: 0-20mA, 0-10V or PWM

## Inteli AOUT8



**Order Code:** I-AOUT8

- > 8 configurable analog outputs
- > 0-10VDC or 0/4-20mA range or 1200 Hz pwm
- > Up to four I-AOUT8 can be connected to one controller







Find more modules, battery charges, simulators, dongles, spare parts and other products at

comap-control.com

# **Configuration and Monitoring**

Easy-to-use software

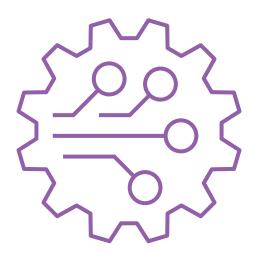
ComAp offers a complete portfolio of configuration and monitoring tools. Fast and intuitive installation and easy-to-use software enable application of controllers in the most advanced scenarios.

### **Configuration** tools

- > InteliConfig
- > GenConfig
- > LiteEdit
- DriveConfig

### **Monitoring** tools

- > Inteli**SCADA**
- > WebSupervisor
- > InteliMonitor
- > IGS-LOG





## **InteliSCADA**

PC based monitoring

InteliSCADA is a PC software for monitoring and management of ComAp controllers and accessories. It is PC software with a modern look and feel that has been developed with current web technologies, so the interface and overall user experience are much more intuitive.

### Easy to use

SCADA systems can be very complicated. They require a lot of programming knowledge and can take a lot of time to master even the basics. InteliSCADA makes it easy. It comes with pre-configured templates for different ComAp devices – users can just add devices and controllers and just one-click is needed to get InteliSCADA programmed and start monitoring the site.

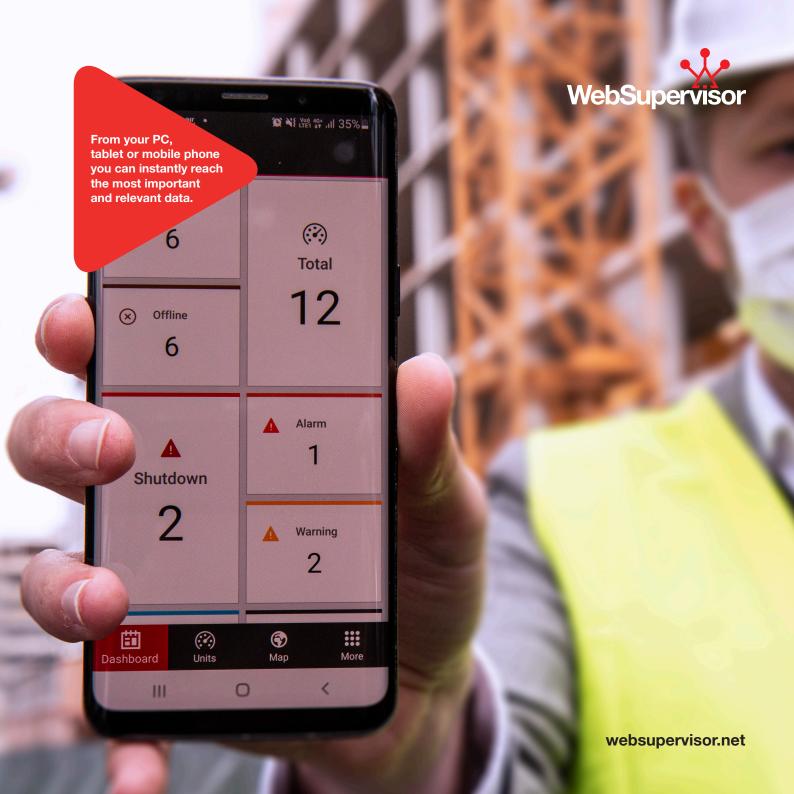
Users can add different monitoring instruments including start/stop buttons, gauges, alarm lists, and even a video feed from a web-connected camera. Then, InteliSCADA automatically connects the particular instrument to a controller. Going through a long list of all possible options is not needed.

#### Secure and reliable

InteliSCADA brings security that meets industrial standards. What's more, InteliSCADA has been tested heavily and went through a long validation process. So, it makes InteliSCADA is suitable for complex projects.

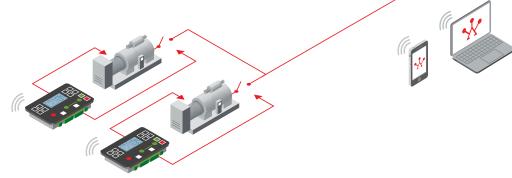






# WebSupervisor

ComAp's cloud-based application that enables remote monitoring, management and analysis 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 customisation 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 3rd 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)
- Customisable look with your logo and URL
- > User management with several levels of permission



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

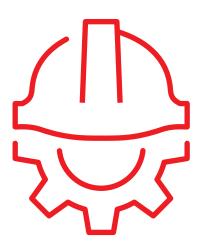


# **Full Support of Your Projects**

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.



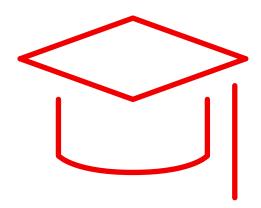


# **Training**

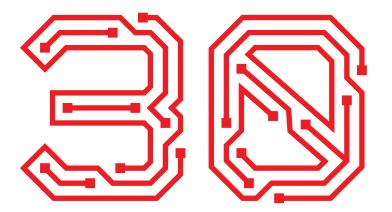
Get the best out of your ComAp controllers

We have many different training courses available, from beginners to advanced, and focus on both classroom-based theory instruction and hands-on training with ComAp products.

- > From beginner to advanced
- > Purpose-built training centres
- Various locations
- > Online training
- > Hands-On training
- > Virtual Hands-On training
- YouTube Video Tutorials







### **30 Years of Smart Control:**

ComAp celebrates 3 decades of success through continuous innovation and growth.

Scan the QR code >>>

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 450 employees, and a network of more than 60 distributors. The company is still in the hands of its founders who have an ambitious vision for further growth and investment in acquisitions and partnerships. But it is the trusted relationships with our customers that is the central focus of ComAp.

Watch the video to see the milestones of our astonishing company journey, starting back in the early 1990s in central Europe, to becoming a global leader in the world of independent and backup power generation, whilst always remaining at **the heart of smart control.** 

## **Comap Cares**

Our Social and Environmental Responsibility

At ComAp, we take our impact on the world seriously. Our corporate responsibility practices touch everything from our daily business to the company culture. Three important pillars reflect our sustainability attitude, forming the basis of our valued CSR programme.







Products & Solutions



People & Community

Find out more comap-control.com/comapcares





comap-control.com