# PRODUCT GUIDE



**Electronic edition – associated products** 





Take control of your gen-set or engine using the free remote monitoring feature

# "Smart and easy"

made possible by ComAp unique technology.















## **Control** is everything

ComAp is an innovative, creative company bringing power control solutions to industrial applications. Our range of power control products and accessories provide our customers with class-leading technology, ease of use, and environmental benefits.

Our products are in use all over the world, in many different situations: from tyre recycling plants in Turkey, to tomato growers in Australia; from oil rigs in Russia, to a soda factory in Ghana; ComAp products are a reliable and cost effective solution for the world's power control needs.



**Spain** Ferry



**United Kingdom**Data Center



Ghana Power Plant



**Nigeria** Pasta Factory



**USA**Manufacturing Facility



**Mexico** Warehouses



**Colombia**Oil Field



**Ecuador** Cruise Ship



**Peru** Ore Mine



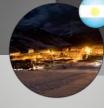
**Brazil**Paper Factory



**Bolivia**Power Plant



**Chile** Casino



**Argentina** Ski Centre



**Egypt**Cement Production Plant







### WELCOME TO OUR PRODUCT GUIDE

The ComAp Product Guide is more than just an overview of ComAp products – it's an illustration of the continued commitment of the many dedicated people at ComAp who continually develop new ways to support an ever-growing range of solutions for an ever-increasing global customer base.

As a result the guide is bigger and better than ever. It promises a flexible approach to engine and generator management through solutions deeply embedded with the latest web based communication technology to bring unrivalled efficiency, convenience and cost saving to standard operations. We've also extended our range and capability further with updated software, touch screen technology, bi-fuel packages and a family of compact and cost-effective control units.

Beyond innovative products, ComAp customers can be sure of outstanding service. Our global distribution network is dedicated to delivering an excellent experience with fully trained and knowledgeable partners providing responsive technical support where and when it's needed anywhere in the world.

We hope you find the guide useful and continue to be an important part of our future. Hearing what you think is very important to us, so if you would like to share your experience of using our products please let us know by emailing your story to info@comap.cz.

Regards Libor Mertl – Managing Director

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- Accessories
- **PC** tools
- 78 **Battery chargers**
- 78 **Electronic potentiometers**

### InteliVision 5

**NEW GENERATION 5,7" COLOUR DISPLAY UNIT** 

New generation colour display panel for localized visualisation and intended for shorter distances (up to 2 meters) from the controller.

InteliVision 5 is compatible with the following product line of controllers: InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup> and InteliMains<sup>NT</sup>.















Plug and play interface

Fro

ront P65

ScreenEditor

Short distance

Tier 4

Configurable soft keys

- 5,7" colour TFT display with 320×240 pixel resolution
- Local display intended for shorter distances (up to 2 meters) from the controller
- 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
- Fast access to important data
- Five configurable soft keys
- Support of Tier 4 icons
- Mounting screw available at the rear face of InteliVision 5 to mount a compatible controller
- Same language support as the controller including graphic languages
- Communication connection via RS485
- Same cut out as InteliGen<sup>NT</sup>
- Operating temperature: -40 to +70°C
- Face is sealed to IP65
- EMC, climatic and mechanical tests
- CE, UL certification

#### TYPICAL APPLICATION:

#### **Rental sets**

see page 90

### **Denmark**

**Hvidovre Hospital** 



Hvidovre Hospital is located just outside of Copenhagen. The hospital is one of Denmark's largest, with over 40,000 patients admitted each year. It has 35 different departments spread over 300,000 square meters of land. This posed quite a challenge when installing a back-up power system for the hospital complex. The backup system included five FG Wilson diesel generators, all equipped with InteliVision 5 displays for monitoring and control. Although the entire backup system was monitored from a control room using an InteliVision 17 Touch, an InteliVision 5 display attached to each generator allowed for individual monitoring of each generator, to ensure the generators were all available for use, should an emergency arise.



### InteliVision 5 CAN

**NEW GENERATION 5,7" COLOUR DISPLAY UNIT WITH CAN BUS INTERFACE** 

New generation remote display unit for InteliDrive DCU and InteliDrive Mobile controllers.

Designed as a simple, easy-to-use Plug and Play solution. Simpler, faster and more comfortable control for the user. More information in less time.











ScreenEdito





separated CAN interface



Backlit dimming analog input

- 5,7" colour TFT display, 320×240 pixel resolution, anti-glare front coating
- Same cut out as standard ComAp controllers, e.g. InteliDrive DCU
- Auto configuration based on controller application
- Same language support as the master controller including graphic languages
- Fast access to important data
- Five configurable soft keys
- Galvanically separated CAN interface
- Binary output for horn/buzzer control
- Sealed to IP65
- 8-pins Harness connection on rear side
- Drag & Drop customer screen configuration
- Analog input to control display backlit intensity

**TYPICAL APPLICATION:** 

**Forwarder** 

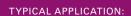
see page 116

### InteliVision 5 CAN Backlit

**NEW GENERATION 5,7" COLOUR DISPLAY UNIT WITH CAN BUS** INTERFACE AND BACKLIT BUTTONS

New generation remote display unit for InteliDrive DCU, InteliDrive Mobile, InteliGen<sup>NT</sup> and InteliSys<sup>NT</sup> marine certified controllers and controllers with installed GeCon software.

Designed as a simple, easy-to-use Plug and Play solution. Simpler, faster and more comfortable control for the user. More information in less time.



Ship power management system

see page 106

















Galvanically separated CAN interface

Backlit dimming analog input

Plug and play

Binary output

Internal buzzer

Front&Rear

In addition to InteliVision 5 CAN's specification, the InteliVision 5 CAN Backlit model also has:

Backlit buttons

### InteliVision 8

#### **8" COLOUR DETACHABLE DISPLAY UNIT**

InteliVision 8 is a colour display unit designed as a simple, easy-to-use Plug and Play solution and delivers high visibility of all engine data, monitoring information and trend history in a bright, colorful and forward looking design. It can be used for either InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup>, InteliMains<sup>NT</sup>, InteliDrive DCU and InteliDrive Mobile.

InteliVision 8 comes with the large high-resolution colourTFT display, which helps visibility and definition of onscreen information. The control interface has user-friendly, intuitive active buttons – giving users access to more information in less time. InteliVision 8 boasts the uniqueTRENDS monitoring as a standard feature, helping you evaluate past events easily on one screen. It offers a site data storage using a USB stick and permits adding external pictures for customization of screens.

InteliVision 8 includes ComAp's standard communication interface using RS232/485 and CAN bus communication. Designed to be mounted in either a monitoring or engine room, InteliVision 8 gives complete access to all control functions when connected to control unit.

TYPICAL APPLICATION:

**Standby system with load shedding – advanced displays** 

see page 92

# InteliVision 8 Marine

MARINE APPROVED 8" COLOUR DETACHABLE DISPLAY UNIT

InteliVision 8 Marine is a marine certified colour display unit for either InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup>, InteliMains<sup>NT</sup> or InteliDrive DCU and InteliDrive Mobile controllers. It is designed as a simple, easy-to-use Plug and Play solution.

TYPICAL APPLICATION:

Ship power management system

see page 106















separated CAN and RS-485

ScreenEdito

+ 1







Front

- 8" colour TFT display with resolution of 800×600 pixels
- Auto configuration based on controller application
- Controlled by active buttons
- Comes with new TRENDS monitoring screen
- USB flash disk as file storage (export trends, history, firmware and archive to USB flash disk)
- User's pictures import to measurement screens
- Easy Drag & Drop screen configuration by customer in new graphical editor
- Four configurable soft keys at the bottom of the display
- Adaptive and color alarm list
- Quick auto login with USB stick
- Support of Tier 4 icons
- Allows full monitoring of one controller (in case of more controllers on CAN it is possible to switch over among controllers monitoring by change of CAN address)
- Connection via of RS232/485 and CAN bus
- Designed to be mounted in both monitoring and engine room
- Operating temperature from -20°C to +70°C
- Face is sealed to IP65
- EMC, climatic and mechanical tests
- CE, UL and ULC certification





### InteliVision 17Touch

#### 17" TOUCHSCREEN DISPLAY UNIT

The new InteliVision 17Touch is a seventeen-inch touchscreen display unit for use with the range of ComAp gen-set and generator controllers. It features an extended operating temperature range, and UL certification for use in complex installations. Optimized for ease of use, installation and configuration, the InteliVision 17Touch allows the monitoring and control of multiple controllers from a single screen, with the option of directly controlling gen-sets or breakers.

The InteliVision 17Touch comes with SCADA software enabling users to freely configure the screen with different on-screen components. There is also IGS-LOG software preinstalled and it is free of charge.

The InteliVision 17Touch is designed to mount into a panel in a power distribution centre or mount onto a wall using the VESA standard mount (optional). Communication is available via standard interfaces such as RS232, Ethernet and USB.

TYPICAL APPLICATION:

Combined heat and power (CHP) – cogeneration

see page 96



- UL Certification
- Extended temperature range (from -20°C up to 60°C)
- Front panel protection IP65
   NFMA4 standard
- Robust, industrial design with passive cooling
- LED Backlit, high resolution screen
- Two easy access USB ports
- Over and under voltage protection
- Complimentary IGS-LOG included
- Monitor and control any connected ComAp controller
- Monitor and Control all GCBs and MCBs
- Change set-points from one screen
- View history logs from all connected controllers
- Full-screen, and configuration modes
- Screen can be locked with a PIN

## Finland

#### **Meriaura Ltd**





Specialist deep sea cable laying vessel, the MV Aura, has been refurbished to enhance its ability to perform its demanding duties installing subsea energy cable for renewable energy projects at sea.

Meriaura Ltd, the owner of MV Aura, is a Finnish shipping company specialising in demanding cargo projects and transporting industrial bulk and raw materials. For its work in support of renewable energy projects MV Aura is part of its fleet of Cable laying vessels covering both deep water and shallow water cable laying and trenching capabilities.

The ships' systems has been fitted with a dynamic positioning system and two additional bow thrusters, two new diesel engines, deck cranes and also accommodation block with capability of housing up to 36 people. This modern and environmentally friendly vessel is designed to operate globally and can be utilised for various tasks including transport of demanding project cargo such as offshore wind farm structures. As its area of deployment includes the Baltic Sea area, the vessel is also capable of operating as an Icebreaker giving it year round capability to perform its duties. This wide scope of capability is further enhanced into an environmental protection role; MV Aura is also capable of operating in oil spill response activities. The main engines of the vessel can use environmentally friendly bio oil as fuel.

The scale of the refurbishment means that MV Aura has much greater demands for electricity than originally designed, so this area of the vessel was also significantly upgraded and Tapimec Oy (the official ComAp distributor in Finland) was pleased to be able to supply the system which powered it all.

Machinery Oy supplied three gen-sets in shipping containers, one switchboard container and one fuel container. In each gen-set container there is one 60L Cummins Marine diesel generator, a QSK60-D (with a power rating of 2095HP in Prime use) and one PI734G2 Stamford generator. Each container has a power output of 1800 kVA. In a normal situation, two gensets are running and the third is on stand-by. There is also a mode for load shedding.

### **IL-NT GPRS**

#### **INTEGRATED GSM MODEM AND INTERNET GPRS**

IL-NT GPRS is an integrated GSM modem and Internet GPRS solution for InteliLite<sup>NT</sup> and InteliATS<sup>NT</sup> controllers. It offers a unique solution for wireless monitoring and control over single or whole fleet of equipment. The main benefits include high reliability for your application, instant alarm events notification over SMS, on-line data access on Internet (using WebSupervisor), periodic data collecting in Excel format and SMS control.







- Wireless integrated solution
- Quick & easy installation
- Brings enhanced application reliability
- Support of WebSupervisor online cloud-based system monitoring & control
- Periodic data collection in Excel format
- Instant alarm SMS notification
- System control over SMS
- GSM modem
- GPRS modem
- Quad Band 850/900/1800/1900 MHz
- GPRS multi-slot class 10
- CSD up to 14.4 kbps
- TCP/IP communication over GPRS
- Excellent price/performance ratio

### **IB-Lite**

#### INTERNET / ETHERNET MODULE INCLUDING WEB SERVER

The IB-Lite module is a plug-in communication module with ethernet interface developed for InteliLite<sup>NT</sup> and InteliATS<sup>NT</sup>. Ethernet interface allows fast remote connection of LiteEdit or InteliMonitor to the controller from all the world through the Internet network, whereas all functions work the same way as when connected through a serial cable. The module also allows the controller to be integrated into a building management system using the Modbus/TCP or SNMP protocol. Simple web-based interface will allow basic monitoring and adjustment even those, who do not have LiteEdit or InteliMonitor, just using their web browsers.







- 10/100 MBit ethernet interface in RJ45 socket
- Web interface for basic monitoring and adjustment of the controller
- ComAp/TCP protocol for remote access from LiteEdit or InteliMonitor
- MODBUS/TCP, SNMP protocols for integration of the controller into building management systems or other remote monitoring purposes
- Sending of active e-mails
- Web-based configuration and firmware update of the module
- Simply connected using AirGate technology

### 0

#### **IL-NT RS232**

RS232 EXTENSION BOARD



- Detachable plug-in module
- RS232 interface
- Support for direct connection to PC accessories via serial cable, GSM modem, Modbus-RTU

#### **IL-NT RS232-485**

DUAL PORT EXTENSION BOARD



- Detachable plug-in module
- RS232 and RS485 interfaces
- Support for direct connection to PC accessories via serial cable, GSM modem, Modbus-RTU (Buliding management, ECU Link)

#### **IL-NT S-USB**

SERVICE USB MODULE



- Detachable easily plug-in/plug-out module
- USB interface
- For service purposes

#### **IL-NT AOUT8**

ANALOG OUTPUTS FOR PWM GAUGES MODULE



- 8 programmable analog PWM outputs
- Resolution 10 bits
- For indication of almost every measured and computed value
- May indicate output power, RPM, voltage, current, etc.
- Support VDO style gauges
- Applicable to InteliATS<sup>NT</sup> version 2.4 and higher

### **IL-NT BIO8**

BINARY INPUT/OUTPUT MODULE



- Detachable plug-in module
- 8 binary inputs or outputs
- Arbitrary combination of inputs/outputs

#### IGL-RA15<sup>1</sup>

REMOTE ANNUNCIATOR



- 15 programmable LEDs with configurable colors either red, green or yellow
- Customizable labels
- Local horn output with adjustable alarm period
- Lamp test function
- Connection via CAN bus

#### IC-NT CT-BIO71)

HYBRID CURRENT INPUT & BINARY INPUT/OUTPUT EXTENSION MODULE



- Hybrid current input & binary input/output module
- One additional AC current (CT) measuring input for Earth Fault Current protection
- Up to 7 configurable additional binary inputs or outputs

#### IG-IOM<sup>1)</sup>

ANALOG/BINARY
INPUT/OUTPUT MODULE



- 8 configurable binary inputs and 8 configurable binary open collector outputs
- 4 configurable analog inputs and 1 analog output
- LEDs indicate the state of binary input/output
- Connection to the controller with IOM cable (2 meters)
- Resistance range 0-2400 Ohm
- Analog outputs 0–20 mA

### IL-NT GPRS

#### **INTEGRATED GSM MODEM AND INTERNET GPRS**

IL-NT GPRS is an integrated GSM modem and Internet GPRS solution for InteliCompact<sup>NT</sup> and MainsCompact<sup>NT</sup> controllers. It offers a unique solution for wireless monitoring and control over single unit or whole fleet of equipment. The main benefits include high reliability for your application, instant alarm events notification over SMS, on-line data access on Internet (using WebSupervisor), periodic data collecting in Excel format and SMS control.









- GSM Modem function for dial-up connection
- GPRS support for wireless Internet connection
- WebSupervisor system support for cloud-based monitoring and control of one or multiple controllers at the same time
- AirGate technology support for easy connection over GPRS, overcomes many of the issues traditionally experienced with Internet connection to embedded systems
- Locate suppport gen-set/engine locating on map in WebSupervisor, tracking of movement
- Remote access from LiteEdit or InteliMonitor
- Mobile and wireless solution
- Automatic SMS message on alarms or events
- SMS control of gen-set/engine available at some controllers

### **IB-Lite**

#### INTERNET / ETHERNET MODULE INCLUDING WEB SERVER

The IB-Lite module is a plug-in communication module with ethernet interface developed for InteliCompact<sup>NT</sup> and MainsCompact<sup>NT</sup>. The ethernet interface allows fast remote connection of LiteEdit or InteliMonitor to the controller from all the world through the Internet, whereas all functions work the same way as when connected through a serial cable. The module also allows the controller to be integrated into a building management system using the Modbus/TCP or SNMP protocol. Simple web-based interface allows basic monitoring and adjustment even those, who do not have LiteEdit or InteliMonitor, just using their web browsers.







- 10/100 MBit ethernet interface in RJ45 socket
- Web interface for basic monitoring and adjustment of the controller
- ComAp/TCP protocol for remote access from LiteEdit or InteliMonitor
- MODBUS/TCP, SNMP protocols for integration of the controller into building management systems or other remote monitoring purposes
- Sending of active e-mails
- Web-based configuration and firmware update of the module
- Simply connected using AirGate technology

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#### IC-NT CT-BIO7

HYBRID CURRENT INPUT & BINARY INPUT/OUTPUT EXTENSION MODULE

- Hybrid current input & binary input/output module
- Applicable to InteliCompact<sup>NT</sup> SPtM version 1.2 and higher
- Applicable to InteliCompact<sup>NT</sup> MINT version 1.3 and higher
- One additional AC current (CT) measuring input for Earth Fault Current protection or Peak Load Shaving function (InteliCompact<sup>NT</sup> SPtM only)
- Up to 7 configurable additional binary inputs or outputs

#### **IL-NT S-USB**

SERVICE USB MODULE



- Detachable easily plug-in/plug-out module
- USB interface
- For service purposes

#### **IL-NT RS232**

RS232 EXTENSION BOARD



- Detachable plug-in module
- RS232 interface
- Support for direct connection to PC accessories via serial cable, GSM modem, Modbus-RTU

#### **IL-NT AOUT8**

ANALOG OUTPUTS FOR PWM GAUGES MODULE



- 8 programmable analog PWM outputs
- Resolution 10 bits
- For indication of almost every measured and computed value
- May indicate output power, RPM, voltage, current, etc.
- Support VDO style gauges

#### **IGS-PTM**

ANALOG/BINARY
INPUT/OUTPUT MODULE

- 8 configurable binary inputs and 8 configurable binary open collector outputs
- 4 configurable analog inputs and 1 analog output
- LEDs indicate the state of binary input/output
- Measures the values from Pt100 and Ni100 sensors
- Analog inputs have the resistance range 0–250 Ohm, voltage range 0–100 mV, current range 0–20 mA – selectable via jumper
- Analog output 0–20 mA
- Connection via CAN bus

### IG-AVRi<sup>1)</sup>





- Interface ensuring voltage matching between InteliGen<sup>NT</sup> or InteliSys<sup>NT</sup> cotroller and generator AVR
- 4 kV electric insulation between controller and AVR
- DIN rail design

### IGL-RA15

REMOTE ANNUNCIATOR



- 15 programmable LEDs with configurable colors either red, green or yellow
- Customizable labels
- Local horn output with adjustable alarm period
- Lamp test function
- Connection via CAN bus

### InternetBridge-NT COMMUNICATION MODULE WITH

CELLULAR/ETHERNET CONNECTION

- Wireless high speed GPRS/ UMTS modem built in
- Supports all cellular packet data systems from GPRS to HSPA (2.5G to 3.75G)
- Full Multiband support modem works globally
- Ethernet wired connection for local LAN connection
- Single module can be used for multiple controllers on the same site (connected via CAN or RS485)
- MODBUS/TCP, SNMP protocol support direct connection to building management and other systems





ComAp



InternetBridge-NT

### COMMUNICATION MODULE WITH CELLULAR/ETHERNET CONNECTION

The InternetBridge-NT module allows efficient connection to the Internet for one or more ComAp controllers, either by Ethernet cable or by built in 3.75G Cellular modem.













- Wireless high speed GPRS/UMTS modem built in
- Supports all cellular packet data systems from GPRS to HSPA (2.5G to 3.75G)
- Full Multiband support modem works globally
- Ethernet wired connection for local LAN connection
- Single module can be used for multiple controllers on the same site (connected via CAN or RS485)
- MODBUS/TCP, SNMP protocol support direct connection to building management and other systems
- Includes ComAp AirGate technology easy plug-and-play connection anywhere (no fixed IP needed)
- Designed for WebSupervisor fully supported by ComAp's cloud-based remote monitoring system
- Global positioning system built in keep track of your equipment
- Durable metal housing with DIN rail mount
- SIM card holder access without disassembly
- Web server for monitoring and adjustment of attached controllers
- Wide range 8-36 VDC supply voltage
- Works with ComAp monitoring software in either direct connection or via AirGate technology

# I-LB+ LOCAL BRIDGE

I-LB+ is a bridge for applications with InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup> and InteliMains<sup>NT</sup> controllers for local or remote monitoring and control.









- Direct, modem or USB connection to multiple controllers
- RS232/RS485/Modbus support for direct connection
- Analog/GSM/ISDN modem support

#### **IS-AIN8**

#### ANALOG INPUT MODULE

- 8 configurable analog inputs
- Precision of inputs is 1%
- Accepts 2 or 3 wire resistive, current and voltage measurement
- User and predefined sensor characteristics (Pt100, Pt1000, Ni100, Ni1000, thermocouple type J/K/L, 0/4-20 mA, 0-10 V, etc.)
- Up to 10 units can be connected to 1 controller

IS-AINSTC - Module for Thermocouple Measurement available

#### **IGS-PTM**

### INPUT/OUTPUT MODULE

- 8 configurable binary inputs and 8 configurable binary open collector outputs
- 4 configurable analog inputs and 1 analog output
- LEDs indicate the state of binary input/output
- Analog output 0-20 mA
- Connection via CAN bus
- Up to 4 units can be connected
- to 1 controller
- Analog inputs have the resistance range 0-250 Ohm, voltage range 0-100 mV, current range 0-20 mA - selectable via jumper

















#### Inteli IO8/8

**BINARY INPUTS/OUTPUTS** AND ANALOG OUTPUTS MODULE

- Two options of configuration: 8 binary inputs, 8 binary outputs + 2 analog outputs or 16 binary inputs, 0 binary outputs + 2 analog outputs
- Options: Binary inputs: Pull up or Pull down
- Binary outputs: high side switch or low side switch
- Analog output: voltage/current/PWM
- Up to 12 units can be connected to 1 controller









Lloyd's Register

#### **I-AOUT8**

ANALOG OUTPUT **EXTENSION MODULE** 



- 8 configurable analog outputs
- Outputs are configurable to: 0-10 VDC or 0/4-20 mA range or (1,2 kHz) PWM
- Up to 4 units can be connected to 1 controller











ANALOG INPUT MODULE

- 8 configurable analog inputs
- 1 impulse/RPM input
- Precision of inputs is 1 %
- Accepts 2 or 3 wire resistive, current and voltage measurement
- User and predefined sensor characteristics (Pt100, Pt1000, Ni100, Ni1000, 10 k $\Omega$ , 0/4-20 mA, 0-10 V, lambda probes support)
- Up to 10 units can be connected to 1 controller











### Inteli AIN8TC

ANALOG INPUT MODULE



- 8 configurable analog inputs
- Module is determinated for temperature measurement with thermocouples - thermocouple type J/K/L
- Up to 10 units can be connected to 1 controller

#### Inteli AIO9/1

ANALOG INPUT/OUTPUT MODULE

- 4 inputs for voltage DC measurement ±65 V
- 4 inputs for current DC measurement (via shunt) ±75 mV (possibility to connect thermocouple type J/K/L)
- 1 input for RTD 0-2400  $\Omega$
- 1 analog output (0-10V, PWM, 0-20 mA)
- Up to 5 units can be connected to 1 controller



### **IGL-RA15**

REMOTE ANNUNCIATOR



- 15 programmable LEDs with configurable colors either red, green or yellow
- Customizable labels
- Local horn output with adjustable alarm period Lamp test function
- Connection via CAN bus
- Up to 4 units can be connected to 1 controller





RINA









### IL-NT GPRS

#### **INTEGRATED GSM MODEM AND INTERNET GPRS**

IL-NT GPRS is an integrated GSM modem and Internet GPRS solution for InteliDrive Lite controllers. It offers a unique solution for wireless monitoring and control over single or whole fleet of equipment. The main benefits include high reliability for your application, instant alarm events notification over SMS, on-line data access on Internet (using WebSupervisor), periodic data collecting in Excel format and SMS control.







- GSM Modem function for dial-up connection
- GPRS support for wireless Internet connection
- WebSupervisor system support for cloud-based monitoring and control of one or multiple controllers at the same time
- AirGate technology support for easy connection over GPRS, overcomes many of the issues traditionally experienced with Internet connection to embedded systems
- Locate suppport gen-set/engine locating on map in WebSupervisor, tracking of movement
- Remote access from LiteEdit or InteliMonitor
- Mobile and wireless solution
- Automatic SMS message on alarms or events
- SMS control of gen-set/engine available at some controllers

### **IL-NT AIO**

**ANALOG INPUT/OUTPUT MODULE** 

IL-NT AIO is an extension board which increases the number of analog inputs and outputs of InteliDrive Lite controllers.



- Extension plug-in module increasing the number of analog inputs and output of selected engine controllers
- 4 configurable analog inputs for the sensors: in range 0–2400 ohm; 0/4–20 mA; 0–4 VDC
- 1 configurable analog output for the sensor: in range 0/4–20 mA;
   0–4,5 VDC; PWM 5 V/500 Hz

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#### **IB-Lite**

INTERNET / ETHERNET MODULE INCLUDING WEB SERVER

- 10/100 MBit ethernet interface in RJ45 socket
- Web interface for basic monitoring and adjustment of the controller
- ComAp/TCP protocol for remote access from LiteEdit or InteliMonitor
- MODBUS/TCP protocols for integration of the controller into building management systems or other remote monitoring purposes
- Sending of active e-mails







- Detachable plug-in module
- RS232 interface
- Support for direct connection to PC accessories via serial cable, GSM modem, Modbus-RTU

#### **IL-NT S-USB**

SERVICE USB MODULE



- Detachable easily plug-in/plug-out module
- USB interface
- For service purposes

#### **IL-NT BIO8**

BINARY INPUT/OUTPUT



- Detachable plug-in module
- 8 binary inputs or outputs
- Arbitrary combination of inputs/outputs

#### **IL-NT RS232-485**

DUAL PORT EXTENSION BOARD



- Detachable plug-in module
- RS232 and RS485 interfaces
- Support for direct connection to PC accessories via serial cable, GSM modem, Modbus-RTU (Buliding management, ECU Link)

### **IL-NT AOUT8**

ANALOG OUTPUTS FOR PWM GAUGES MODULE



- 8 programmable analog PWM outputs
- Resolution 10 bits
- For indication of almost every measured and computed value
- May indicate output power, RPM, voltage, current, etc.
- Support VDO style gauges

### IGL-RA15

REMOTE ANNUNCIATOR



- 15 programmable LEDs with configurable colors either red, green or yellow
- Customizable labels
- Local horn output with adjustable alarm period
- Lamp test function
- Connection via CAN bus

#### **IL-NT 101**

ANALOG OUTPUT AND BINARY INPUT MODULE



- Extension plug-in module increasing the number of analog outputs and binary inputs of selected engine controllers
- 4 configurable analog outputs (output range: 0 to +VBatt ±1V)
- 4 configurable binary inputs

### **ID-RPU**

#### **REDUNDANT PROTECTION UNIT**

ID-RPU is a redundant engine protection unit for InteliDrive DCU Marine controllers.





















- Backup module for marine engines
- Automatic switchover between primary and secondary power supply
- Monitors function of main controller unit
- In case of main unit failure switches to the backup mode and protects the engine
- RPM input with hardwired overspeed protection
- 5 shutdown channels with Broken Wire detection
- Fuel and Stop solenoids with BW detection

# ID-SCM<sup>2)</sup> SPEED CONTROL MODULE

ID-SCM is an interface module for InteliDrive DCU controllers for full support of internal PLC.



- RPM1, RPM2: Inputs for frequency measuring up to 8 kHz
- IMP1, IMP2: Inputs for integral (consumption) measuring up to 60 Hz
- AOUT1, AOUT2: Analog outputs 0–10 VDC or 0–20 mA
- Speed Governor Output: 10 VDC or 10 VDC via 10 k $\Omega$  or PWM (1,6 kHz)
- The module is mounted directly on InteliDrive DCU controller body

#### **ID-COM**

COMMUNICATION MODULE



- Interface for CAN1 Extension and J1939 modules
- Interface for CAN2 Inter-controller and I-RD-CAN modules
- Interface for J1708 redundancy line













#### Lloyd's Register

#### InternetBridge-NT

COMMUNICATION MODULE WITH CELLULAR/ETHERNET CONNECTION

- Wireless high speed GPRS/ UMTS modem built in
- Supports all cellular packet data systems from GPRS to HSPA (2.5G to 3.75G)
- Full Multiband support modem works globally
- Ethernet wired connection for local LAN connection
- Single module can be used for multiple controllers on the same site (connected via CAN or RS485)
- MODBUS/TCP, SNMP protocol support direct connection to building management and other systems







#### **IS-AIN8**

#### ANALOG INPUT MODULE

- 8 configurable analog inputs
- Precision of inputs is 1%
- Accepts 2 or 3 wire resistive, current and voltage measurement
- User and predefined sensor characteristics (Pt100, Pt1000, Ni100, Ni1000, thermocouple type J/K/L, 0/4-20 mA, 0-10 V, etc.)
- Up to 4 units can be connected to 1 controller























IS-AINSTC - Module for Thermocouple Measurement available

#### **IS-BIN16/8**

**BINARY INPUT/OUTPUT** MODULE



- separated inputs
- relays outputs LEDs indicate the state of
- binary input/output
- Up to 4 units can be connected to 1 controller









### Inteli AIN8

ANALOG INPUT MODULE

- 8 configurable analog inputs
- 1 impulse/RPM input
- Precision of inputs is 1 %
- Accepts 2 or 3 wire resistive, current and voltage measurement
- User and predefined sensor characteristics (Pt100, Pt1000, Ni100, Ni1000, 10 k $\Omega$ , 0/4-20 mA, 0-10 V, lambda probes support)
- Up to 10 units can be connected to 1 controller



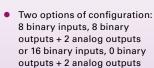






### Inteli IO8/8

**BINARY INPUTS/OUTPUTS** AND ANALOG OUTPUTS MODULE



- Options: Binary inputs: Pull up or Pull down
- Binary outputs: high side switch or low side switch
- Analog output: voltage/current/PWM
- Up to 12 units can be connected to 1 controller











#### IGS-PTM

#### ANALOG/BINARY INPUT/OUTPUT MODULE

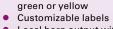
- 8 configurable binary inputs and 8 configurable binary open collector outputs
- 4 configurable analog inputs and 1 analog output
- LEDs indicate the state of binary input/output
- Measures the values from Pt100 and Ni100 sensors
- Analog inputs have the resistance range 0-250 Ohm, voltage range 0-100 mV, current range 0-20 mA - selectable via jumper
- Up to 4 units can be connected to 1 controller



RINA -







**IGL-RA15** REMOTE ANNUNCIATOR

Local horn output with adjustable alarm period Lamp test function

Connection via CAN bus Up to 4 units can be connected to 1 controller

















### LiteEdit

### PC CONFIGURATION AND MONITORING TOOL

LiteEdit is a PC configuration and monitoring tool for InteliATS<sup>NT</sup>, InteliLite<sup>NT</sup>, InteliCompact<sup>NT</sup>, MainsCompact<sup>NT</sup>, InteliDrive Lite and InteliPro controllers.





- Remote control, monitoring and On-line/Off-line parameters adjustment
- Controller and extension modules configuration, programming and cloning
- Gen-set and ECU Alarm monitoring + complete real time history
- Power format and ECU units selection, password protection setting
- Controller text translation and language import wizard
- Editing of customized welcome text displayed on initial controller screen
- Direct (USB, RS232 or RS485), Modem, Internet, AirGate or off-line communication connection
- Support of electronic engines (values, alarms and commands)
- Configuration archive upgrading from older to newer software version
- Modbus or SNMP MIB tables generating

**PC TOOLS** 



### **WinScope**

### SPECIAL GRAPHICAL CONTROLLER MONITORING SOFTWARE

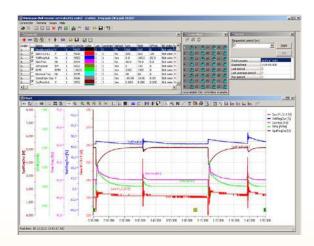
WinScope is a high-performance PC tool, which is used for monitoring and archiving trends of controller parameters and values.

It can be used for most ComAp controllers including ECON, INCON and EMCON5.

Basic WinScope version allows four channels on a single set and can be downloaded FREE from www.comap.cz







- Fast and convenient monitoring of the values' time behaviour
- Measures and displays great number of trends from all controllers connected via I-LB+ / IB-Lite / IG-IB / InternetBridge-NT or Ethernet connection
- Adjustable period (10–10000 ms)
- Easy choice of quantity from list
- Off-line mode for data analysis
- A large number of graphic functions
- Graph printing possibility
- Direct controller's setpoints change

### WebSupervisor

#### **CLOUD-BASED SYSTEM FOR MONITORING AND** CONTROLLING COMAP CONTROLLERS

WebSupervisor is cloud-based system designed for monitoring and controlling ComAp controllers via the Internet. This system offers a number of beneficial features that help optimize revenue for machinery fleets, as each piece of equipment can be individually monitored for all important operation values.

The system works when the controller sends regular updates to a remote secure server which then safely stores the information ready for users to view. Connection to the server is easily accessible to any registered user through an Internet enabled device such as PC, netbook, tablet or even a smart-phone - enabling equipment monitoring at any time or place.

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

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

Watch how WebSupervisor can help you to protect your gen-set/engine online.

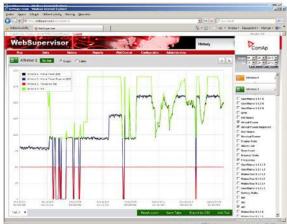


























- History charts of main values
- Reports for revenue stream support Secure offsite storage at dedicated data centre

Overview of controllers on the map

Smart equipment supervision-higher revenue and lower maintenance costs

Central controlling and monitoring of main values

- Easy to use, no special installations on PC required
- Customised report values in .xls format



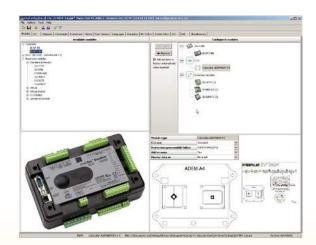
## **GenConfig**

**PC CONFIGURATION TOOL** 

GenConfig is an off-line PC configuration tool for InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup> and InteliMains<sup>NT</sup> controller customizing.





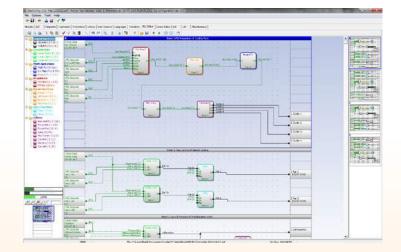


- Allows full configuration of the controller and its peripherals:
  - peripheral modules and ECU support
  - inputs/outputs
  - setpoints
  - commands
  - protections (for analog inputs/values)
  - PLC
  - history record
  - user sensors
  - languages
  - external display screen configuration
- Offers expert mode, consistency check and configuration cloning

### **PLC Editor**

## Part of GenConfig configuration tool for selected ComAp controllers

- PLC functions can be moved both horizontally and vertically
- Colour-coded and linked to relevant functions
- Blocks can be organized to reflect the real process flow
- Groups of blocks can be separated on each sheet to form sub-sets within the design
- Detailed descriptions of inputs and outputs come complete with useful hints
- Context help
- Block function description



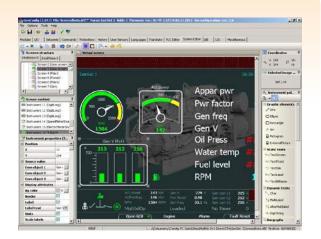


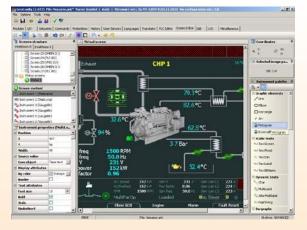
### **ScreenEditor**

### Part of GenConfig configuration tool for selected ComAp controllers

ScreenEditor allows you to personalise the interface on InteliVision 5 and InteliVision 8 models of colour displays by managing information content of screens, creating of user screens, selecting instruments and creating backgrounds from a toolbox of graphical elements.

- Check screen content and layout before uploading minimises corrections
- Prepare screens before site visit reduces commissioning time
- Everyone can use it no special knowledge required
- With InteliVision 8 you can also import externally generated images helping you brand screen displays





### RemoteCommGuide

### COMMUNICATION GUIDE FOR MOST COMAP GEN-SET CONTROLLERS

RemoteCommGuide is interactive communication guide for most ComAp gen-set controllers. It is a part of ComAp PC Suite. This useful tool helps you to easily select the proper gen-set controller according to required application and communications. RemoteCommGuide solves problem with projecting of communications and checks the wiring and settings during the commisioning.



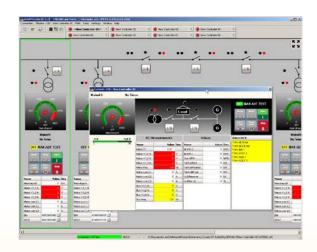
- Easier finding of required information
- See only relevant information
- Automatically check the accessibility of required communications
- Wizard for first steps with RemoteCommGuide makes easier to understand the logic of SW
- Spare time of customer
- Make Remote communications more understandable
- Information about all controllers in one place together

### **InteliMonitor**

#### **PC MONITORING TOOL**

InteliMonitor is a free PC SCADA software for on-line supervision of most ComAp brand controllers. The software is focused on comfortable monitoring of a group of controllers.





- Configurable site structure
- Easy site overview
- Values, setpoints, history display
- Statistics setting (kW hours, number of starts, etc.)
- User administration
- User defined SCADA
- Direct, modem or Internet connection

### **United Kingdom**

**Applied Power Engineering** 

Applied Power Engineering (APE) specialise in control solutions for the power generation and renewables markets. With expertise covering standby, Combined Heat and Power (CHP) and complex diesel installations for emergency standby and base load applications.

With a focus on bespoke solutions and customer satisfaction APE make full use of ComAp's comprehensive product range and integrated remote monitoring and control software:

"Our customers demand the most technologically advanced and costeffective solutions." says Darren Bailey, APE Managing Director. "ComAp have always been innovators and over the past 12 years the software packages have developed significantly, providing continuous improvements to enhance monitoring and control.

InteliMonitor has provided us with the ability to support clients with additional services in demanding markets. It provides standard operator interface features for use as a direct connect, on-site remote monitoring and control, as well as off site connectivity.

We've also found the Line Editor an invaluable tool for creating single-line diagrams of complex diesel application schemes. Our Combined Heat & Power (CHP) applications have been furnished with functional screen P&ID detail that show a generator's mechanical and electrical values, system heat values, and the position status of valves all as a colourful representation of the sites infrastructure. The client has the benefit of viewing his site information on a single- or multiple-site operator interface PC(s) or industrial touchscreen panel mount PC(s).

APE and our customers will continue to benefit from ComAp products and remote monitoring packages, and we're excited to see what's developed next."

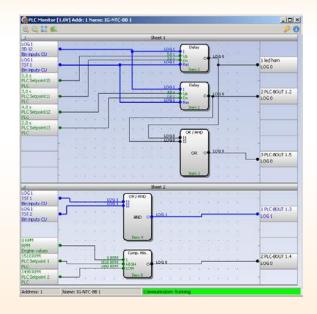




### **PLC Monitor**

## Part of InteliMonitor monitoring tool for selected ComAp controllers

- Easy online monitoring of PLC values
- Big progress in PLC support within InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup> and InteliMains<sup>NT</sup> controllers
- Significantly saves time during commissioning provides overview of all current PLC values
- Besides PLC Editor which allows to compose PLC program we can now offer online presentation of actual PLC data
- Intuitive operation and easily visible signals
- Graphics consistent with PLC Editor
- Zoom functions for optimized reading



#### **PC TOOLS**



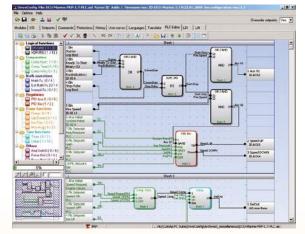
## **DriveConfig**

**PC CONFIGURATION TOOL** 

DriveConfig is an off-line PC configuration tool for customising InteliDrive DCU and InteliDrive Mobile controllers.









- Inputs/Outputs modules addressing
- The controller Inputs/Outputs configuration
- J1939 values configuration
- History record configuration
- Password protection activation
- Sensor characteristics configuration
- Programmable logic configuration
- Controller texts translation
- Graphical, user-friendly PLC editor

### **InteliCharger** 60 12-A / 60 24-A

**AUTOMATIC BATTERY CHARGERS** 

- Sealed electronic construction
- Protection: short circuit / overload / over voltage / over temperature / reverse battery
- Universal AC input ranges
- Low ripple output
- Naturally cooled
- Voltage adjust potentiometer
- Optional fail alarm relay 1)
- Charger can be used as a standalone power supply



### InteliCharger 500

**AUTOMATIC BATTERY CHARGER** 

- 20 A nominal outputs
- High power and efficiency
- High reliability
- Suits all battery types
- Fully automatic operation
- 24 V nominal outputs
- Naturally cooled fan less design
- Optional alarms (& bi-colour led's)
- Optional intelligent multi-stage charge profile with auto equalise
- Optional boost charging system

### **InteliCharger** 120 12

**AUTOMATIC BATTERY CHARGER** 



- 12 V / 10 A nominal output
- Adjustable voltage and current output
- Microprocessor controlled charging algorithm
- Protections: short circuit / overload / over temperature / reverse battery / battery under voltage
- Universal AC input range
- Naturally cooled
- Fail alarm relays
- Charger can be used as a standalone power supply
- NiCd battery support

### **InteliCharger** 240 24

AUTOMATIC BATTERY CHARGER



- 24 V / 10 A nominal output
- Adjustable voltage and current output
- Microprocessor controlled charging algorithm
- Protections: short circuit / overload / over temperature / reverse battery / battery under voltage
- Universal AC input range
- Naturally cooled
- Fail alarm relays
- Charger can be used as a standalone power supply
- NiCd battery support

### **InteliCharger** 240 12-24

Inteli**Charge** 

**AUTOMATIC BATTERY CHARGER** 



- 24 V / 5 A or 12 V / 6 A nominal output (dual voltage)
- Adjustable voltage and current output
- Microprocessor controlled charging algorithm
- Protections: short circuit / overload / over temperature / reverse battery / battery under voltage
- Universal AC input range
- Naturally cooled
- Fail alarm relay
- Charger can be used as a standalone power supply
- NiCd battery support

1) This feature is available with InteliCharger 60 12-AF and InteliCharger 60 24-AF models, also offered by ComAp.

#### **ELECTRONIC POTENTIOMETERS**



**FLECTRONIC POTENTIOMETER** 

- Microprocessorcontrolled device designed for control and regulation systems
- 3 binary inputs (increase, decrease, init), one 2-pole output of
- Position of the wiper is controlled by binary inputs
- Current percentage value is indicated by LED bar graph on the front panel
- Setpoints (position change rate and init position) are adjustable via DIP switches

### **EP300**

**FLECTRONIC POTENTIOMETER** 



- 3 binary inputs (increase, decrease, init), one 3-pole output of variable resistance (potentiometer)
- Position of the wiper is changed by binary inputs
- Current percentage value is indicated by LED display on the front panel
  - Setpoints (position change rate, position limits, init position and others) are adjustable via buttons and LED display on the front panel



## **About ComAp**





### **ComAp**

ComAp is a dynamic international company with a solid reputation for delivering innovative electronic solutions to the power generation, industrial engine and equipment markets. By providing customers with state-of-the-art products, ComAp has built a name for delivering excellent reliability and good value.

#### **Excellent and reliable product solutions**

ComAp specializes in creating electronic control and management solutions for use in the power generation industries and drive power markets. Our portfolio of products, software and accessories is designed to support emergency power, standby power generation and engine driven applications all over the world. We also work closely with our customers to develop unique customized and turn key solutions for ordinary and extraordinary applications delivering high standards of excellence on every project.



ComAp products represent some of the most reliable solutions on the market today. Every component and product undergoes the most rigorous standards during manufacture, with every stage being undertaken in accordance with international ISO 9001 certification. Our products are backed with the approvals from major Marine Certification Societies. Accreditation



at the highest-level breeds confidence, and every ComAp product is supplied with an appropriate warranty and after-sales support for complete peace of mind.

#### People make the difference

ComAp's key strengths are flexibility, experience, knowledge and enthusiasm. This blend of values defines our personality and gives you the assurance of a truly honest and positive relationship. By supporting our people, investing in their development and encouraging creativity, our teams work hard to find new opportunities, technologies and solutions that enable us to successfully help our customers solve their problems effectively.

At ComAp, we believe passionately in the importance of continuously developing new technology along with forward thinking software and hardware to maintain the enviable position as worldwide leader in communication and control for power generation and drive power applications.

At the heart of this process is a strong desire to exceed our customers' expectations by finding outstanding solutions for them and drawing upon the company's most valuable







asset – people. Over 80 % of ComAp employees are graduates with specialized electronic and programming knowledge appropriate to the innovative development of market-orientated engine management systems. This unique know-how is matched by ComAp's significant investment at every stage of the research and development process, resulting in the creation of leading edge modern development facilities. ComAp is proud to continue being one of the top companies in the

world, an achievement which is challenging to sustain, but something we endeavour to preserve. We consistently set high standards, and try to be the best, something which is reflected by our achievement in the 'Best Employers Study in the Czech Republic' (conducted by Hewitt Associates), where we were awarded first place in 2009.

And, amidst fierce competition, in 2011 we were delighted to be amongst the top five companies in the Czech Republic once again. Our passion for excellence pushes us ever forward, and you can be sure that whatever the future brings, we will be there.

#### **Putting customers first**

ComAp's expertise extends beyond innovative controllers, our key strengths are flexibility, experience, knowledge and enthusiasm, enabling us to successfully help our customers solve their problems quickly and effectively. Using our vast global distribution network with 24 hour technical support, and a free dedicated training centre in Prague, we are able to work closely with our clients, maintaining the highest level of satisfaction, something we are very passionate about, and constantly strive to achieve.



#### **Key Milestones**

#### 1991

ComAp is established.

#### 1993

Successful commissioning of four Gen-set Control Systems made by ComAp on several islands in the Mediterranean.

#### 1994

MX controller, the second generation of ComAp's gen-set control systems, is launched.

#### 1996

PX, the revolutionary gen-set controller with configurable input and outputs, is developed.

#### 2000

InteliGen, the first member of the Inteli family and flagship of their gen-set control systems, is released.

#### 2001

ComAp Ltd. – The first foreign ComAp subsidiary is established close to Bristol.

#### 2002

InteliSys, a top end product dedicated to CHP and large engine control applications, is released. New mid-range product InteliLite is launched for AMF and – InteliDrive controllers for non gen-sets, engine driven applications is released.

#### 2006

ComAp LLC – ComAp subsidiary to promote products in the USA and Canada is established.

#### 2007

InteliVision 8 – the first color display unit in the power generation field.

#### 2008

InteliCompact – controller for simple paralleling gensets is launched.

#### 2010

InteliVision 5 and InteliGen<sup>NT</sup> BaseBox controller concept are released.

#### 2012

Application for Apple iOS devices and Google Android devices is launched allowing product control via smartphones and tablets.

#### 2014

ComAp's WebSupervisor is translated into its 10th language: Portuguese.





### TRAINING CENTRE

#### Learn more about our products

The ComAp state-of-the-art Training Centre in Prague, Czech Republic allows ComAp customers unrivalled use and access to ComAp products in a modern purpose built facility. The centre has been designed for both theoretical classroom-based training sessions, and also practical experience based training using the latest ComAp products on operational gen-sets.

The group of installed gen-sets are able to simulate real-world conditions to allow customers to understand the practical application of ComAp products. This practical experience is invaluable in creating a learning environment and was a key consideration when building the new facility.

The embedded control systems allow users to simulate any application from simple applications with just basic controllers to complex (multiple Mains/gen-set) applications with bus tie breakers and feeders. Users can experience simulated drops in power, load shedding and many other scenarios without risking damage to expensive

equipment, as the demonstration machines have been specifically designed for training purposes.

For the price of travel and a hotel, you can learn at your own speed, without risking damage to expensive equipment. Hands-on training helps lower downtime, which helps keep costs down, through users enjoying and understanding the full benefits of their systems, taught by product specialists selected for their expertise.

#### Our programme of training includes the following courses:

- Standard A
- Standard B
- Advanced
- Advanced Plus
- Engine
- Bi-fuel



Simply register online for our hands-on training courses.

For details of each course refer to the ComAp website

### www.comap.cz/support/training/hands-on/





### **TECHNICAL SUPPORT** Call us on +420 246 012 666

Our technical support specialists will help you to solve your requests. Detail info at www.comap.cz/support/technicalsupport

Available Monday to Friday (excluding national holidays).

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### Order codes (The overview of selected products and their order codes)

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InteliNano <sup>NT</sup> MRS	IN-NT MRS
InteliNano <sup>n⊤</sup> AMF	IN-NT AMF
InteliNano <sup>n™</sup> Plus	IN-NT PLUS
InteliLite <sup>NT</sup> MRS 10	IL-NT MRS10
InteliLite <sup>NT</sup> MRS 15	IL-NT MRS15
InteliLite <sup>NT</sup> MRS 16	IL-NT MRS16
InteliLite <sup>NT</sup> AMF 20	IL-NT AMF20
InteliLite <sup>NT</sup> AMF 25	IL-NT AMF25
InteliCompact <sup>NT</sup> SPtM	IC-NT SPTM
InteliCompact <sup>NT</sup> MINT	IC-NT MINT
MainsCompact™	MC-NT
InteliGen <sup>NT</sup>	IG-NT GC
InteliGen <sup>NTC</sup> BaseBox	IG-NTC-BB
InteliSys <sup>NTC</sup> BaseBox	IS-NTC-BB
InteliMains <sup>NTC</sup> BaseBox	IM-NTC-BB
InteliATS <sup>NT</sup> STD	IA-NT STD
InteliATS <sup>NT</sup> PWR	IA-NT PWR

Product name	Order code
InteliPro	INTELIPRO
MainsPro	MAINSPRO
InteliDrive Nano	ID-NANO
InteliDrive Nano WP	ID-NANO WP
InteliDrive Lite	ID-FLX-LITE
InteliDrive Lite EM	INTELIDRIVE EM
InteliDrive Lite FPC	ID-FLX FPC
InteliDrive DCU Industrial	ID-DCU
InteliDrive DCU Marine	ID-DCU MARINE
InteliDrive Mobile	ID-MOBILE
InteliDrive Mobile Logger	ID-MOBILE LOGGER
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InteliBifuel 20	
InteliVision 5	INTELIVISION 5
InteliVision 8	INTELIVISION 8
InternetBridge-NT	IB-NT





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Customer satisfaction is our mission. We continuously develop our people to be the best to succeed in our mission