# PRODUCT GUIDE

**Electronic edition – Associated Control Products** 







The interactive simulator provides a taste of the new InteliVision, with demo and preview options illustrating screen information and function.



# **InteliVision**

ComAp

POWER

InteliVision is a new generation colour display unit for either InteliGen<sup>NT</sup> / InteliSys<sup>NT</sup> or InteliDrive controllers. It is designed as a simple, easy to use Plug and Play solution, which also features our unique TRENDS monitoring as a standard feature.

> It is the first colour display in the Power Generation field. More info on page 54.



# **SWITCHED ONTO INNOV**

# InteliDrive® MOBILE

InteliCompact

The InteliDrive Mobile is a highly flexible sophisticated mobile electronic controller, which features outstanding control, monitoring and protection for diesel and gas engines as well as driven technology.

The new controller offers range of specific functions suitable for mobile applications as hydraulic system control, communication with sensors and operational devices control.

Most commonly, these tailored applications meet the specific control requirements of mobile hydraulics, engine driven compressors and pumps.



# InteliCompact<sup>NT</sup>

InteliCompact<sup>NT</sup> models are new integrated controllers for gen-sets operating in both standby and parallel modes. Functionality, optimized for ease of use, installation and configuration, includes built-in synchronizer and digital isochronous load sharer. ... more on page 14

# ATION



more on page 40

InteliATS<sup>NT</sup> PWR

# InteliATS<sup>NT</sup>

teliDrive .

ComAp

The new InteliATS<sup>NT</sup> controllers are designed to monitor the incoming AC mains supply (1 or 3 phases) for under voltage, over voltage, under frequency, over frequency and voltage unbalance.

... more on page 8





## WELCOME TO OUR PRODUCT GUIDE

Following the positive feedback from our first Product Guide we have updated the second issue with more information on an ever-growing range of control products. In the meantime, our design and development teams have worked very hard to create exciting new control solutions to meet customers' application needs – all of which are detailed in the new guide.

We hope you find it just as useful and practical as before. Inside you will find technical information, product features and functions, alongside customer feedback on how the products have performance in the field. Hearing what you think is very important to us, so if you would like to share you experience of using our products please let us know by emailing your story to info@comap.cz

Overall the offers a comprehensive guide to our entire range of products and accessories. I hope you find it both helpful and invaluable.

> Regards Libor Mertl – Managing Director



# CONTENT

7
8
10
28
33
34
40
43
43 44
44
44 58
44 58 63
44 58 63 64

## About ComAp

What do all those abbreviations mean? It's easy. Go to page 62!

IA-NT, IL-NT, IC-NT, MC-NT, IG-NT, IS-NT, IGS-NT, IM-NT, ID, IV ...

89

# **Associated Control Products**

## Accessories

The comprehensive family of extension modules and control accessories enable users to custom design control systems to meet individual project requirements and bring wider scope and flexibility to ComAp control products.

## PC tools

ComAp dedicated PC software and configuration tools ensure operating and monitoring generator and engine controllers is both easy and accessible. The software is custom designed to ensure the optimum performance of ComAp controllers and helps users configure, supervise and monitor as well as management and interpret trend information.

## **Mains protections**

A family of mains protection modules that provide the necessary protection requirements for applications where generators operate in parallel with the mains.

## **Electronic potentiometers**

A choice of proven and reliable microprocessor controlled devices designed for control and regulation systems.



43

ComAp



58

63

64

## ACCESSORIES / EXTENSION MODULES

I-AOUT8 is an extension module with 8 configurable analog outputs for InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup>, InteliMains<sup>NT</sup> and InteliDrive controllers.

# **I-AOUT8** 8 ANALOG OUTPUTS EXTENSION MODULE

ANNOU OUTWATE ANNOU OUTBATE ANNOU

#### Features

- 8 analog outputs
  - Outputs are configurable to:
  - 0-10 VDC or 0/4-20 mA range or 1,2 kHz PWM
    Up to 4 I-AOUT8 can be connected to 1 controller

# ACCESSORIES / EXTENSION MODULES

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

# **ID-RPU**

## **REDUNDANT PROTECTION UNIT**



## Features

- Backup module for marine engines
  - Automatic switchover between primary and secondary power supply Monitors function of main InteliDrive 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



REDUNDANT PROTECTION UNIT

-----



# \_



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



# Features

- 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 controller body

# ACCESSORIES / EXTENSION MODULES

ID-SCM1 is a cost effective Analog Speed Governor interface for InteliDrive controllers.

SPEED CONTROL

MODULE

.....

# ID-SCM1 SPEED CONTROL MODULE



# D-SCM1

SPEED CONTROL MODULE

-----

- ID-SCM1 represents cost effective version of ID-SCM
- The module is mounted directly on InteliDrive controller body
   Analog output options:
  - Analog output options:
  - 0 to 10 VDC

Features

- + 0 to 10 VDC via 10  $k\Omega$
- PWM 5 V / 10 mA

ComAp 45

## ACCESSORIES / EXTENSION MODULES

IG-IOM is an extension module for InteliLite<sup>NT</sup>, InteliCompact<sup>NT</sup>, MainsCompact<sup>NT</sup> and InteliDrive Lite controllers.

# **IG-IOM** INPUT/OUTPUT MODULE



#### Features

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

# ACCESSORIES / EXTENSION MODULES

IGL-RA15 is an extension signaling unit for most Inteli and Mains brand controllers.

**INPUT/OUTPUT** 

MODULE

# IGL-RA15 REMOTE ANNUNCIATOR



# **GL-RA1**



REMOTE

#### Features

- 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 (based on the controller type)



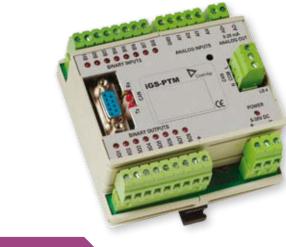
## ACCESSORIES / EXTENSION MODULES

IGS-PTM is an extension module for most Inteli and Mains brand controllers.

**INPUT/OUTPUT** 

MODULE

# IGS-PTM



#### Features

- 8 binary inputs and 8 binary open collector outputs
- 4 analog inputs and 1 analog output
- LEDs indicate the state of BI/BO
- 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 up to 4 units (based on the controller type)

# Portugal Neoenergia

Neoenergia – a leader in the market of "energy rental/hire" in Portugal. The company is using ComAp gen-set controllers and we asked the owner of the company to describe his experiences.

"Regarding our work, indeed we have been doing some very interesting applications with ComAp controllers, specially the last one with IG-NT controllers. The application involved paralleling two different gen-sets that already existed, working in Island.

This job was done in the biggest and most important Data Center of OPTIMUS (a large telecommunications company) where the power supply is vital. There are emergency gen-sets that start at the same time when mains failure occurs, they synchronize and parallel between themselves and provide power supply to a 1000 KVA UPS system, as well as the rest power of the facilities.

The original and technical curiosity is the fact that one gen-set is a SDMO 1000KVA with MTU engine (with MDEC ECU) and Leroy Somer alternator and the other is a F.G.WILSON 800 KVA with 3012 Perkins engine and Stamford alternator (2 different engines and 2 different alternators). We accepted this challenge and we have succeeded with fantastic results.

We have retired the installed controllers and we used the new IG-NT controllers, which significantly improved the capabilities of the system. Regarding the parallel application, we only use ComAp controllers for many reasons – the most advanced technology, the fantastic policy of ComAp in providing the software upgrades via Internet without costs, the constant evolution of software and the easy way of use. This special modern way of working (open and wide information) gives ComAp the leadership in their business."

João Capelão owner www.neoenergia.pt



IL-NT AOUT8 is an 8 analog gauge plug-in interface module for InteliATS<sup>NT</sup>, InteliLite<sup>NT</sup>, InteliCompact<sup>NT</sup>, MainsCompact<sup>NT</sup> and InteliDrive Lite controllers.

# **IL-NT AOUT8**

PLUG-IN INTERFACE MODULE



#### Features

PLUG-IN INTERFACE 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

## ACCESSORIES / EXTENSION MODULES

IS-AIN8 is an extension module for InteliGen<sup>™</sup>, InteliSys<sup>™</sup>, InteliMains<sup>№™</sup> and InteliDrive controllers.

# IS-AIN8



#### Features

- 8 analog inputs
- Precision of inputs is 1 %
- Accepts 2 or 3 wire resistive, current and voltage senders
- User and predefined sensor characteristics (Pt100, Pt1000, Ni100, Ni1000,
- thermocouple type J/K/L, 0/4-20 mA, 0-10 V, etc.)
- Connection via CAN bus up to 10 units (based on the controller type)







IS-BIN16/8 is an extension module for InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup>, InteliMains<sup>NT</sup> and InteliDrive controllers.

# **IS-BIN16/8** BINARY INPUT/OUTPUT MODULE



#### Features

- 16 galvanically separated inputs
- 8 open collector transistor outputs
- 2 impulse inputs (frequency measurement or pulse counting)
- LEDs indicate the state of BI/BO
- Connection via CAN bus

# ACCESSORIES / EXTENSION MODULES

NT-Converter is an interface module for InteliGen<sup>NT</sup> and InteliSys<sup>NT</sup> controllers

**BINARY INPUT/OUTPUT** 

MODULE

# **NT-Converter**

## LOAD SHARING INTERFACE MODULE



#### Features

- Connection of IGS-NT to an existing system consisting of IG/IS classic line controllers
  - Using Var Sharing and synchronized parameters
- Controller monitoring via IG-MU, IG-IB or I-LB/I-LB+



LOAD SHARING

**INTERFACE MODULE** 

for InteliATS<sup>NT</sup>, InteliLite<sup>NT</sup>, and InteliDrive Lite controllers.

# **IB-Lite**

ETHERNET MODULE



IB-Lite gives you easy and efficient access to controllers over Internet.

Features

- Plug-in module •
- Ethernet 10/100Mbit RJ45 interface •
  - Web interface for configuration and firmware upgrade of the module
- Fixed IP address (no DHCP)
- ComAp protocol for communication with LiteEdit or InteliMonitor
- SMTP protocol with authentication for sending of active e-mails
- Modbus/TCP protocol for integration into building management systems
  - Web interface for basic monitoring and adjustment of the controller

# ACCESSORIES / COMMUNICATION MODULES

It can be used with InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup>, InteliMains<sup>NT</sup> and InteliDrive controllers.

ETHERNET MODULE

# I-CR

## **CAN REPEATER MODULE**



#### Features

- Intercontroller CAN bus extension (one or more I-CR modules can be used)
- Intercontroller CAN bus bus-tie bridging makes groups of controllers in segments A and B "invisible" to each other depending on bus-tie breaker state, keeping the PC communication in function for all controllers
- . Peripheral CAN bus extension



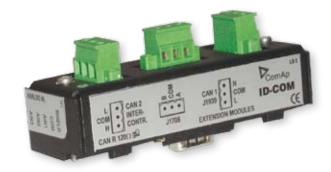
ComAp 50

# **CAN REPEATER** MODULE



ID-COM is a communication module for multiple engine installations, remote displays and redundancy communication with InteliDrive controllers.

# **ID-COM** COMMUNICATION MODULE



# COMMUNICATION MODULE

.....

# Features

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

# ACCESSORIES / COMMUNICATION MODULES

IG-IB is an Internet bridge for most Inteli and Mains brand controllers.

# IG-IB



#### Features

.

- Enables Internet connection between controllers and superior service or monitoring software
  - Ethernet or dial-up connection of the controller to the Internet
  - Supports single/multiple gen-set control via Internet
- Sends active e-mails in case of alarm on site
- For more gen-sets additional hardware key (IG-IB3, IG-IB7, IG-IB15, IG-IB32) is required

INTERNET BRIDGE



# InteliSys<sup>NT</sup>, InteliMains<sup>NT</sup> and InteliDrive controllers for local or remote monitoring and control.

I-LB / I-LB+

LOCAL BRIDGE



#### Features

- Direct, modem or USB (I-LB+ version only) connection to multiple controllers
- RS232 / RS485 / Modbus support for direct connection
- Analog/GSM/ISDN modem support •

# ACCESSORIES / COMMUNICATION MODULES

.....

LOCAL BRIDGE

# RS232 EXTENSION BOARD

IL-NT RS232-485 is an extension board containing RS232 and RS485 ports for InteliATS<sup>NT</sup>, InteliLite<sup>NT</sup>, InteliCompact<sup>NT</sup>, MainsCompact<sup>NT</sup> and InteliDrive Lite controllers.

# DUAL PORT EXTENSION BOARD

IL-NT S-USB is a USB module for InteliATS<sup>NT</sup>, InteliLite<sup>NT</sup>, InteliCompact<sup>NT</sup>, MainsCompact<sup>NT</sup> and InteliDrive Lite controllers.

PLUG-IN SERVICE USB MODULE 

# IL-NT RS232 / RS232 EXTENSION BOARD

Features

- Easy-detachable plug-in module
- RS232 interface
- Analog/GSM modem, Modbus support

IL-NT RS232-485 / DUAL PORT EXTENSION BOARD

Features

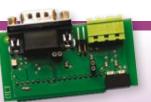
- Easy-detachable plug-in module •
- RS232 and RS485 interfaces
- Analog/GSM modem, Modbus, ECU link support



# IL-NT S-USB / PLUG-IN SERVICE USB MODULE Features

Easy-detachable plug-in module

- **USB** interface .
- For service purposes





I-CB is a communication device that bridges InteliGen<sup>NT</sup>, InteliSys<sup>NT</sup> and InteliDrive controller and the electronic control unit of the engine with a specific communication interface.

The I-CB module allows the user to fully utilize the potential possibilities of the engine's electronic control unit (ECU); the controller can display and monitor all engine parameters provided by the ECU in very easy way. I-CB is to be delivered with many even non-CAN based proprietary protocol implementations.

ECU COMMUNICATION BRIDGE

**I-CB** ECU COMMUNICATION BRIDGE



#### Features

- Available for CAT DIESEL, CAT GAS/MTU MDEC/DEUTZ TEME
- Less wiring and components integrated solution
- Very flexible solution
- User-friendly configuration tool
- Prepared I–CB configurations for fast start-up
- Remote access to detailed engine data remote servicing

## ACCESSORIES / REMOTE DISPLAYS

I-RD-CAN is a remote panel for InteliDrive DCU Industrial and InteliDrive DCU Marine controllers.

# I-RD-CAN

**REMOTE DISPLAY WITH CAN BUS INTERFACE** 



#### Features

- Remote control panel for the InteliDrive DCU master controller
  - Applicable up to 900 meters distance from the master controller
- The same front facia, LED's and button handling
- Two I-RD-CAN can be connected to one InteliDrive DCU controller
- RS232 (38,4 kbps) or CAN bus (50 or 250 kbps) interface is available

ACCESSORIES

I-RD-CAN



.....

## ACCESSORIES / REMOTE DISPLAYS

InteliVision is a new generation colour display unit for either InteliGen<sup>NT</sup> / InteliSys<sup>NT</sup> (IGS-NT) or InteliDrive (ID) controllers. It is designed as a simple, easy to use Plug and Play solution and has been developed from our original IS-Display.

The new InteliVision screen features many significant improvements such as the large high-resolution colour TFT display, which helps visibility and definition for onscreen information. The control interface has also been updated with userfriendly intuitive active buttons – giving users access to more information in less time. InteliVision also features our unique TRENDS monitoring as a standard feature, helping you evaluate past events <u>easily on one screen.</u>

The InteliVision cut-out size is the same as the IS-Display (InteliSys<sup>NT</sup>), so InteliVision can be easily used as a replacement for (or an alternative to) IS-Display. Regardless of the size it can be also used as a replacement for (or an alternative to) IG-Display or I-RD-CAN.

InteliVision includes ComAp's standard communication interface using RS232/485 and CAN bus communication. Designed to be mounted in both monitoring and engine room, InteliVision gives complete access to all control functions when connected to InteliGen<sup>NT</sup> / InteliSys<sup>NT</sup> or InteliDrive controllers.

CONTROLLER COLOUR DISPLAY UNIT



# InteliVision

CONTROLLER COLOUR DISPLAY UNIT



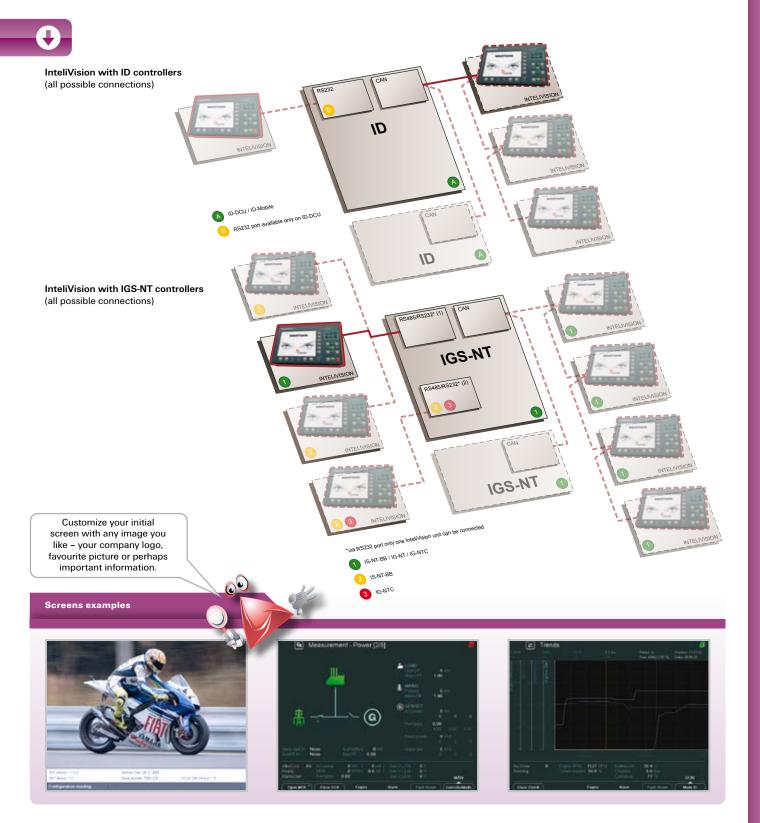
#### Benefits

- Large, high-resolution screen
- Colour TFT display
- TRENDS monitoring screen
- History columns' features and adjustment
- Simpler, faster and more intuitive control
- More information in less time
- Submenu navigation history
- New password management interface
- Same dimensions as IS-Display (InteliSys<sup>NT</sup>)
- IS-NT-BB can be mounted to the rear side of InteliVision
- Plug and Play operation (auto configuration based on controller application)
- Universal solution for both controller families IGS-NT and ID
- Direct connection to the controller (converters are not needed)

#### Features

- 8 colour TFT display with resolution of 800 × 600 pixels
- Controlled by active buttons
  - Comes with new TRENDS monitoring screen
- Windows CE operating system
- Same language support as InteliGen<sup>NT</sup> / InteliSys<sup>NT</sup> and InteliDrive (ID-DCU / ID-Mobile)
- Screen configuration by customer export to XML format with subsequent manual screen modification and import back to the controller (as IS-Display)
- Customizable initial screen logo and content of controller help
   This display gives complete access to all control and monitoring functions of InteliGen<sup>NT</sup> / InteliSys<sup>NT</sup> and InteliDrive (ID-DCU / ID-Mobile)
- Intended for connection to ONE controller: InteliGen<sup>NT</sup>/InteliSys<sup>NT</sup> or InteliDrive (ID-DCU/ID-Mobile)
- The same dimensions as IS-Display / InteliSys<sup>NT</sup> (including cut out dimensions)
- It is possible to mount IS-NT-BB to the rear side of InteliVision
- Can be used as a replacement for IG-Display, IS-Display or I-RD-CAN
- Connection to a controller via RS232/485 and CAN bus
- Auto configuration based on controller application (as IS-Display)
- Designed to be mounted in both monitoring and engine room
- Operating temperature: -20 to + 70°C
- CE, UL certification
- Sealed to IP65

ComAp 54



# **Mexico** Generator room at Hotel Sandos, Quintana Roo

The first InteliVision units operating in Mexico are installed in a prestigious hotel Sandos close to the famous Riviera Maya beach area.

"The staff on site were delighted how easy and quick it was to inspect the gen-set using the new large colourful screens on the InteliVision unit, and the benefits provided by new features, especially trends reporting."

Agustin de Jesus Garcia Pastrana Dupont Elektric Mexico Technician www.dwppon.com



## ACCESSORIES / REMOTE DISPLAYS

ADDITIONAL

**REMOTE DISPLAY** 

# **IG-Display LT GC**

ADDITIONAL REMOTE DISPLAY



#### Features

- Remote signalling and control unit with RS485 interface, Low Temperature • display and Graphical Characters support, e.g. Chinese
- Gen-set can be controlled from IG-Display LT GC as well as from the master controller
- The distance from the master controller can be up to 1 km
- IG-Display LT GC screens displays the same values as the master controller •
- Buttons and LEDs have the same function •
- Marine modification available
- User administration

# ACCESSORIES / REMOTE DISPLAYS

# **IS-Display**



# Features

•

- Remote control and monitoring unit with RS485 interface
  - IS-Display can be mounted directly on IS-NT-BB or it can be used as remote display
- The distance from the master controller can be up to 1 km
- Up to three displays can be connected to one InteliSys^{NT} controller
- Available modifications: LT (Low Temperature), GC (Graphical Characters, e.g. Chinese), Marine
  - Numeric keypad for setpoints editing
- User administration

DETACHABLE DISPLAY MODULE



DETACHABLE DISPLAY MODULE

Portable unit, which simulates inputs and outputs of the real applications.

# PORTABLE SIMULATOR



Switchboard with Inteli controllers for simulating multiple gen-set applications including simulation of load sharing and synchronization.



# SIMULATOR OF VARIOUS APPLICATIONS

# **StarterKit**

PORTABLE SIMULATOR

#### Features

- Binary inputs are connected to switches
- Binary output states are indicated by LEDs
- Analogue inputs by potentiometers



MultiKit simulator of various applications

## Versions

- One mains and three gen-sets
- Two mains, four gen-sets and
- bus-tie breaker
- Two propulsion engines and two auxiliary gen-sets

# ACCESSORIES / ADDITIONAL MODULES

nterface between controller and various AVRs.

## AVR INTERFACE

Module connected between battery and controller power terminals to support controller operation during battery voltage dips.

## LOW BATTERY ADAPTOR



Interface module for galvanic separation of controller binary outputs.

8 OR 16 RELAYS BOARD

# IG-AVRI / AVR INTERFACE

• 4 kV electric insulation between AC and DC

# I-LBA / LOW BATTERY ADAPTOR



- 8 or 16 relays in socket
- Both n.o. and n.c. contacts
  24 V or 221 V (I PR 8/16 22)
- 24 V or 231 V (I-RB 8/16-231 version only)
   16 A secietive and 4 A is ductive load at 24 VPC
  - 16 A resistive and 4 A inductive load at 24 VDC DIN rail design



DriveMonitor is a PC monitoring tool for InteliDrive controllers.

# **DriveMonitor**

PC MONITORING TOOL

Cantral		_		A CONTRACTOR OF		-			2
Allarm Set			0FF			Runnin No Timi	-	Con	Ap
			011 017	•	•	s.n.: 101	400	6	
RC .	198	96	Of press	27.0-		0.80		ID BOUT	
			00	1,5	1.80	egercy stap	1	1 Stater	0
			Chol Serge	24.6	2.90	note stat	0	2 fve idential	1
			9	100	2.Re	nate stap	0	3. Day selected	0
			Mare In	24.00	1.84	NOWON	0	8. Cadeg pump	0
			10	455	3.88	INCOME CARE	0	5. Allert	0
			Mater Cut	155	5. Wa	Agree	0	8. E-BOUT 6	0
PCI AM	INFAULT STAT		00	10,0	7. W	ming D	0	7.6.80.17	0
1.000	1030		Ancus		8 W	nnyC	0	8 Caseson was	0
	South St.			200	8.00	Cent	0	B. Caremon and	0
		1	AniCU 8	atoxical -	13.144	rryE	0	10. Circ Inst	0
CS	1	3000	5	200	11.80	(Withinst	0	11 BOTT CHI# OB	0
	· 1		ANGUT	Minist.	12.74	d read	0	12 8012 Conveyor	0
	1794	- and	3	200	13.Re	nate lock	0	13. BO13 Webs	0
Battery vot		25,9 V	AnOUR	-	16.60	w beignitives	0	14 BO14 Geoleg R	0
110		100	S CARGO C	200					

#### eatures

C MONITORING TOOL

::::::

#### • Active call receiving

- All measured values include J1939 data monitoring
- History record alarm and operational states listing
- Setpoints adjusting
- Engine remote control
- Direct, modem or Internet connection

## PC TOOLS / MONITORING SW

nteliMonitor is a free PC SCADA oftware for on-line supervision of most Inteli and Mains brand controllers. The software is focused on comfortable monitoring of a proup of controllers

# InteliMonitor



And DRUBOROV SHARE IN BUILDING AN INI S BRANDAN IN

#### Features

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

ip of controllers.



InteliSupervisor is a PC monitoring and control tool for fleet of gensets equipped with InteliGen<sup>NT</sup> or InteliSys<sup>NT</sup> controllers using Internet communication via IG-IB unit.

# InteliSupervisor

PC TOOL FOR GEN-SET FLEET MANAGEMENT



#### Features

- Gen-set fleet monitoring and control using Internet
- Optical indication of gen-set state
   Optical/sound indication of gen-set
- alarm connection
- Automatic data downloa
   Automatic e-mailing
- Automatic e-mailing
   Operational instanta
- Graphical interface
- Direct access to basic information about gen-set state, run-hours to next service, actual power etc.
- Interface display: graphical / tabular
   Selectable graphical background (underlay bitmap)
- Regular and alarm-triggered download of gen-set data
- In case of gen-set alarm, e-mail notifies the service personnel
- Allows simple access to PC tools for gen-set control and setting (InteliMonitor, WinEdit, MultiEdit)

## PC TOOLS / MONITORING SW

VinScope is a high-performance PC ool, which is used for monitoring and archiving trends of the

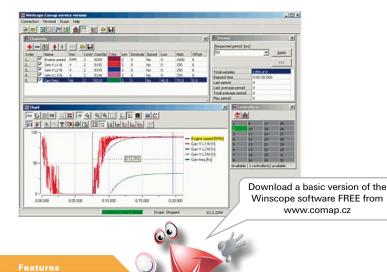
It can be used for all ComAp controllers including ECON, INCON and EMCON5.

SPECIAL GRAPHICAL CONTROLLERS´ MONITORING SOFTWARE



# WinScope

SPECIAL GRAPHICAL CONTROLLERS' MONITORING SOFTWARE



- Fast and convenient monitoring of the values' time behaviour
- Measures and displays great number of trends from all controllers connected via I-LB / IG-IB
- 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

DriveConfig is an off-line PC configuration tool for InteliDrive controller customizing.

# PC CONFIGURATION

....

# DriveConfig

PC CONFIGURATION TOOL

Modules 1/0  S	aboint PLC					
					M×	
10	Barret	Perspecty	Value		Logical function	Used
H Binary inputs	Beed: 1814	Barro	CE preso		LCD brightness	0
110	Beed: 1814	Bin.	Ew	•	Engine speed	
- Dinary outputs	Band: 8.14	Semer	4-ZINA KOVE	۲	Oil press	2
1.0	Need; 8.54	Resolution	0,1	•	Coolant press	
- Andeq incuts	Bood: 48	Sensor runge	10,0		Cost temp	
10	Band dil	Protection	Wits+Shubbywiti	111	Requested IPM	
Abst	Ofpress	Active when	Under InduFts		Engine terque	
All 2	Cooltone	Block type	PuerCnlyDBDet1		Cyl temp 1	
CRIN	Waterin	Bargraph 199%	10,0		Cyl temp 2	
7811	Water Out	Function	CROPESE		Cyl temp 3	
ABS	AR CUS				Cyl temp 4	
ARK	Ale CUS				Cyl temp 5	
ABK7	An CU 7				Cyl temp 6	1
ANK	An CUB				Cyl temp 7	
					Cyl temp 8	
					Cyl temp 9	
					Cyl temp 18	
-		H- At		_	A 41 44	10.0

#### eatures

- Inputs/Outputs modules addressing
- ID-DCU Inputs/Outputs configuration
- J1939 values configuration
- History record configuration
- Password protection activation
- Sensor characteristics configuration
- Programmable logic configuration
- Controller texts translation

## PC TOOLS / CONFIGURATION SW

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

# **GenConfig** PC CONFIGURATION TOOL



#### Features

- Allows full configuration of an NT controller and its peripherals:

   peripheral modules and ECU support
   inputs/outputs
   setpoints
   commands
   protections (for analog inputs/values)
   PLC
   history record
   user sensors
   languages
- Offers expert mode, consistency check and configuration cloning



# IB Config

PC CONFIGURATION TOOL

Netmark 255.255	CD-89-53	s [195.250.128.034 DNIS [195.250.128.234
IP Address 196 122	194.089	Acces Code

- IB Config enables to configure IG-IB for Ethernet LAN connection or dial-up connection
- Direct connection or remote Ethernet connection to IG-IB
- Information about MAC address of IG-IB •
- E-mail service setting

## PC TOOLS / CONFIGURATION SW

# **I-CBEdit** PC CONFIGURATION TOOL

	I 48								
A		· • •	wanter the state galaxies	ndjula (***	Instruction C Bray setup C Desired	· * b		AL	
ALC: NO. 1	Deedlan	Periald	Sulful numb Salest	(cen	Auro	des:	Úw.	Card	Het
taby 11	Post	1	4		Digre Servi (853)		191	1880	
anang	Post				EUL/Power leggly holizon		4.	1004	
energy.	input	2	4		Paale OCDU	4	104	1000	
Andre	had	3	3		P-Duran Ar	4	-	1000	23
hulug	2 and		Advanted realizes also		11	8	10	1.000	
andria	treat		IC9 address	14		8.1	1	1000	
pilule	inut		MODE antikens	100	2	8	15	100	34
hilling	land .	3		1 P			14	1446	34
Maine .	int	3	Proc shelper address	+	1	8	15	LUN.	
Andrea .	Output .	1	Swi abordio pion	Da		*****	1940	10114	
inery:	304	1	Property manager	1000				1880	2
ivery .	lipst		Propert mesone	19	I - 200			1000	
iner:	inst		Project redification.	10	# ##000			1000	10
and a	Storil	1	Fai cole carvel	Figs.	1			1000	12
Distor .	True	1		Contract of				1.000	
inely .	input	4	Fal colt ma	28				1000	
inter .	input	2	Gibl restate type	10	2			1004	10
Birminy .	Sipul	2			Contraction of the local division of the loc			1000	
N'rei y	Test	1	6	100	X Caver 1			1005	
inter	input		-	-				1005	
INNY	input	2			ins trader ce			1005	87
and a	200.8	-3	4		Mill Paule Of			1005	

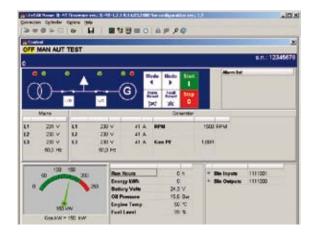
- Creating and modification of configuration tables for I-CB •
- Enables selecting of values from the predefined databases • •
- User definable ECU parameters
- Enables off-line configuration •

PC TOOLS

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> and InteliDrive Lite controllers.

# LiteEdit

PC CONFIGURATION AND MONITORING TOOL



# PC CONFIGURATION AND MONITORING TOOL



#### Features

- Remote control, monitoring and parameters adjustment
- Controller configuration and firmware update
- Support of electronic engines
- Connection via RS232 or modem
- Direct, off-line or modem communication to controller

## PICTOGRAMS AND SHORT NAMES

These pictograms are designed to help you visually associate which Accessories and PC tools are suitable for use with which controllers.

We have also provided both the full product names and their abbreviated shorter names to help you recognize and identify the products more easily.

If you look throughout the brochure you will see these icons appearing next to the relevant or associated product.

Full name	Short name	Pictogram
InteliATS <sup>NT</sup>	IA-NT	
InteliLite <sup>NT</sup>	IL-NT	
InteliCompact <sup>NT</sup>	IC-NT	::
MainsCompact <sup>NT</sup>	MC-NT	
InteliGen <sup>NT</sup>	IG-NT	
InteliSys™	IS-NT	
InteliGen <sup>NT</sup> and InteliSys <sup>NT</sup>	IGS-NT	
InteliMains <sup>NT</sup>	IM-NT	
InteliDrive Lite	ID-Lite	
InteliDrive	ID	::
InteliVision	IV	_

# \_\_\_

ComAp 62

The NPU is a 3-phase mains protection unit for applications with generators operating in parallel to mains. It provides adjustable voltage, frequency and vector shift protections to safeguard both the power supplier and the generators.

# **NPU-FUV**

**3-PHASE MAINS PROTECTION** 



#### Features

- Vector shift protection
- 2 stage over/under frequency protections
- 2 stage over/under voltage protections
- Voltage asymmetry protections
- Phase sequence supervision

## MAINS PROTECTIONS

InteliProted

InteliProtec is a modular panel-mounted protection for generators operating in parallel to mains applications.

**3-PHASE MAINS** 

PROTECTION

It incorporates a wide range of protection features, which include: voltage, frequency, vector shift, rate of change of frequency (ROCOF), directional overcurrent, overcurrent, earth fault, current, NVD and reverse power.

It also provides communication capabilities for local or remote communication via modem or Internet.

# MAINS PROTECTION MODULE

# InteliProtec



## Features

- 2 stage over/under voltage and frequency protections
- Vector shift
- Rate of change of frequency
- Over current
- Directional over current
- Neutral voltage displacement
- Current unbalance protection
- Reverse power
- Earth fault protections
- Short term parallel protection
- RS232 interface with Modbus support
- Analog / GSM / ISDN modem support; SMS messages



## ELECTRONIC POTENTIOMETERS

EP250 is a microprocessor controlled device with variable resistance at the output terminals.

The device is designed for application in control and/or regulation systems, where the input to the controlled device is a variable resistance.

# EP250

**ELECTRONIC POTENTIOMETER** 



#### Features

- Microprocessor-controlled device designed for control and regulation systems
  - $\ensuremath{\textbf{3}}$  binary inputs (increase, decrease, init), one 2-pole output of variable resistance
- Position of the wiper is changed 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

## ELECTRONIC POTENTIOMETERS

EP300 is a microprocessor controlled device with variable resistance (3 wires potentiometer) at the output terminals.

The device is designed for application in control and/or regulation systems, where the input to the controlled device is a potentiometer.

**ELECTRONIC** 

POTENTIOMETER

# **EP300**

## **ELECTRONIC POTENTIOMETER**



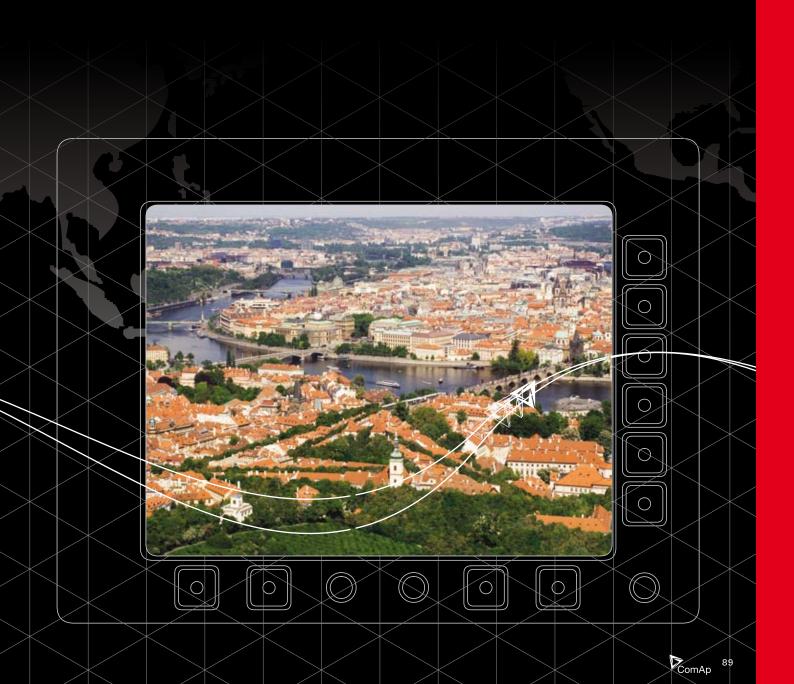
#### Features

- Microprocessor-controlled device designed for control and regulation systems
- 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

ELECTRONIC POTENTIOMETER

ComAp 64

# **About ComAp**





## **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 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.





ACCASE OF	
CERTIFICATE	
And And	
Second and second	
150 9001:2000	
Enterspectorenerates	
Contraction of the	
At the	
and showing	
Maximum Contractor	

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.

## **Professional partnerships**

ComAp products are directly available in more than 60 countries, spanning almost every continent in the world. Through our professional and highly dedicated global distributor network we can satisfy customers' needs, however challenging.

Each ComAp distributor is carefully selected for their professionalism, product expertise and recognized quality standards and accreditation, and as such can advise customers on any matter relating to ComAp products and their applications.



## 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 consistently set high standards, reflected in our third place in the 'Best Employers Study in the Czech Republic' (conducted by Hewitt Associates) in consecutive years (2006 and 2007).

## **ComAp Systems**

ComAp's expertise extends beyond innovative controllers to include a range of subsidiary businesses specializing in related services including bi-fuel conversions, power energy systems solutions and electronic component distribution.

These subsidiaries are located in key strategic regions around the world ensuring our customers benefit from local capability coupled with global reach. Most of them are named ComAp Systems and more information is available on each business at **www.comapsystems.com**.



## **Key Milestones**

#### 1991

Establishment of ComAp.

#### 1993

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

#### 1994

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

#### 1996

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

#### 1999

The strategic co-operation with HuegliTech Company significantly increased our distribution network.

#### 2000

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

## 2001

ComAp Ltd. - 100% UK based ComAp subsidiary was established close to Bristol.

#### 2002

InteliSys, our top end product dedicated to CHP and large engine control applications, was released. New mid-range product InteliLite was launched for AMF and MRS applications.

## 2004

InteliDrive controller for non gen-set, engine driven applications was released.

#### 2006

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

#### 2007

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

## 2008

InteliCompact – controller for simple paralleling gensets.



We are looking forward to your visit.

Manufacturer

# ComAp, spol. s r.o.

Kundratka 2359/17 • 180 00 Praha 8 • Czech Republic Phone: + 420 246 012 111 • Fax: + 420 266 316 647 info@comap.cz • www.comap.cz

## Local Distributor / Partner



© ComAp. 2009-01/CPCEPRGU. All rights reserved. Specifications in this Product Guide are subject to change without notice.