

## ADVANCED DATALOGGER WITH ALARM MANAGEMENT, BUILT-IN I/O's AND TELECONTROL FUNCTION

## Highlights

- Nr 1 10/100 Mbps Fast ethernet port (RJ45)
- RS485 ModBUS Master,
- · RS485/RS232 on terminal,
- · Available with modem 2G or 3G+
- SeAL software platform
- · Webserver embedded
- Voice Alarm and DTMF commands
- Log and real-time ModBUS / Ethernet variables, I/O's channels, thresholds, controls and bit operations management
- Firmware update and remote configuration via ftp and webserver
- ModBUS TCP-IP, ftp, webserver, http functions

Z-LOGGER3, Z-GPRS3, Z-UMTS are multiprotocol unit, with built-in I/O's for high-performance data acquisition, datalogging, measurements and M2M telemetry. They can work stand-alone or networked over ModBUS RTU as Master or ModBUS TCP-IP as clientserver.

These dataloggers operate with built-in I/O's and Ethernet interfaces Master Modbus unit on RS485 serial ports and can support 2G/3G+communication.

The free software package SEAL is an object oriented programming tool, allows logic control, automation routines, alarms, thresholds, timers, report management with the possibility to configure and upgrade the device from remote.









## **Z-LOGGER3, Z-GPRS3, Z-UMTS**

## ADVANCED DATALOGGER WITH ALARM MANAGEMENT, BUILT-IN I/O's AND TELECONTROL FUNCTION



#### **#4 DIGITAL INPUTS**

PNP, NPN (resettable counters or totalizers @32bit up to 30 Hz)



#### **#2 ANALOG INPUTS**

0..20 mA, 0..30 V Accuracy 0,1% f.s.



#### **MEMORY**

RAM 256 kB Flash 1MB+8MB (log)



#### **AC/DC POWER SUPPLY**

11..40 Vdc (\*); 12..28 Vac Power failure battery backup

(\*) 19..40 Z-UMTS



#### **RS485 MODBUS MASTER**

#2 serial interfaces for I/O extension with programmable parameters



#### **BUILT-IN MODEM**

GSM, GPRS, UMTS, HSPA+



#### **#2 RELAY OUTPUT**

SPDT free contacts (max 2A - 250 Vac)



## ETHERNET MODBUS TCP/IP INTERFACE

10/100 Mbps (RJ45)



#### MICRO USB INTERFACE



#### **COMPACT DIMENSION**

100 x 112 x 35 mm (h x d x w)

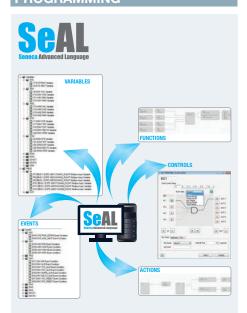
	BUILT-IN Modem	PROTOCOLS	BUILT-IN I/OS	VOICE ALARMS/ COMMANDS	INTERFACES
Z-LOGGER3	-	FTP, SMTP, MODBUS TCP, MODBUS RTU	4DI, 2AI, 2DO	-	1 ETH 1 RS485 1 RS485/RS232 1 MICRO USB
Z-GPRS3	GSM/GPRS	PPP, FTP, SMTP, MODBUS TCP, MODBUS RTU	4DI, 2AI, 2DO	<b>√</b>	1 ETH 1 RS485 1 RS485/RS232 1 MICRO USB
Z-UMTS	GSM, GPRS, UMTS, HSPA+	PPP, FTP, SMTP, MODBUS TCP, MODBUS RTU	4DI, 2AI, 2DO	<b>√</b>	1 ETH 1 RS485 1 RS485/RS232 1 MICRO USB

## **ADVANCED DATALOGGER**

	Z-LOGGER3		Z-GPRS	3	Z-UMTS
	COMING	NEW			COMING
	Datalogger with built-in I/Os and telecon functions		PRS datalogger wi econtrol functions		3G+ datalogger with built-in IOs, telecontrol functions, voice alarm
GENERAL DATA					
Power Supply	1140 Vdc; 1928 Vac	1140 Vdc/	1928 Vac		<b>1940</b> Vdc/ 1928 Vac
Power transducer	Yes, +12Vdc@40mA	Yes, +12Vdc	@40mA		Yes, +12Vdc@40mA
Consumption	Max 3,5 W	6,5 W (max)	6,5 W (max)		6,5 W (max)
Backup battery	Yes (approx 60 min lifetime)	Yes (approx 6	Yes (approx 60 min lifetime)		Yes (approx 60 min lifetime)
On/Off button	Yes	Yes	Yes		Yes
SD ejection button	Yes	Yes	Yes		Yes
Voice Alarm and DTM Commands		Yes			Yes
solation	1.500 Vac		1.500 Vac		1.500 Vac
Protection degree	IP20			IP20	
LED status indicators Operating temperatur	SD card - Input / Output status		Power Supply – Serial Communication – Ethernet – SD card – Input / Output status – Modem Status		Power Supply – Serial Communication – Ethernet – SD card – Input / Output status – Modem Status -10+50°C
Weight	250 g	280 g			280 g
Dimension (wxhxd)	· ·		35 mm		100 x 112 x 35 mm
lounting DIN rail		DIN rail	00 111111		DIN rail
Case	PBT, black	PBT, black			PBT, black
I/O CHANNELS		2., 5.001			• • • • • • • • • • • • • • • • • • •
	10/100 Mbps /D I45)	10/100 Mbn	o /D IAE)		10/100 Mbps (D 145)
Ethernet interface Serial interface #1	10/100 Mbps (RJ45)  RS485 ModBUS Master, programmable baud rate	10/100 Mbp	. ,	aahla haud rata	10/100 Mbps (RJ45) RS485 ModBUS Master, programmable baud rate
Serial Interface #2	RS485/RS232 on terminal, programmable baud rate		RS485 ModBUS Master, programmable baud rate RS485/RS232 on terminal, programmable baud rate		RS485/RS232 on terminal, programmable baud rate
Switchable RS232/RS		Yes RS232			Yes RS232
JSB interface	Micro USB tipo B HOST (local programming)		B tipo B HOST (local programming)		Micro USB tipo B HOST (local programming)
Protocols	Ftp, Smtp, http, ModBUS TCP, ModBUS RTU, HTTP		Ftp, Smtp, http, ModBUS TCP, ModBUS RTU, HTTP, PPP		Ftp, Smtp, http, ModBUS TCP, ModBUS RTU, HTTP, PP
Modem	no		GSM/GPRS Quad Band 850/900/ 1800/1900 MHz		UMTS/HSPA+ 900/2100MHz (standard) UMTS/HSPA+ 850/1900/2100 MHz (option) GSM/GPRS quad-band 850/900/1800/1900 MHz (standard)
PROCESSING, ME	MORY				(standard)
CPU	ARM 32bit@120MHz, O.S. real-time	ARM 32bit@	120MHz, O.S. real-tir	ne	ARM 32bit@120MHz, O.S. real-time
RAM	256 kB	256 kB	256 kB		256 kB
Flash (program)	1 MB	1 MB	1 MB		1 MB
Flash (serial)	8 MB	8 MB			8 MB
Expandable memory	Micro SD slot up to 32 GB	Micro SD slo			Micro SD slot up to 32 GB
Datalogging	Measurement, alarms, events, logging on Micro SD card (max 32 GB) or onFlash. Synchronous an asynchronous datalogger	d SD card (max	Measurement, alarms, events, logging on Micro SD card (max 32 GB) or onFlash. Synchronous and asynchronous datalogger		Measurement, alarms, events, logging on Micro SD card (max 32 GB) or onFlash. Synchronous and asynchronous datalogger
PROGRAMMING	asynchronous datalogger	asynchronou	3 dataloggoi		asynchionous datalogger
Software platform	SEAL	SEAL	SEAL		SEAL
Neb Server	Yes	Yes	Yes		Yes
OIP-switch	Yes	Yes	Yes		Yes
	Alarm management, commands, events, FTP/MAII	_ GSM/GPRS of	GSM/GPRS data exchange, alarm management, commands, events, FTP/MAIL send, HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem		GSM/GPRS/HSPA+data exchange, alarm
Libraries & Functions	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions	O Log and real channels, thr management and Firmware up webserver ModBUS TCF	events, FTP/MAIL sen- time ModBUS / Ether esholds, controls and t date and remote conf P-IP, ftp e webserver, I	net variables, I/O bit operations guration via ftp and	webserver ModBUS TCP-IP, ftp e webserver, http functions
	send, HTTP Log and real-time ModBUS / Ethernet variables, I/c channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver	O Log and real channels, thr management in m	events, FTP/MAIL sen- time ModBUS / Ether esholds, controls and t date and remote conf P-IP, ftp e webserver, I	net variables, I/O bit operations iguration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver
Advanced functions  ORDER CODES	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block	O Log and real channels, thr management Firmware up webserver ModBUS TCF supported via to signal, Ett counters, eve GPRS (with fi	events, FTP/MAIL sen- time ModBUS / Ether resholds, controls and t date and remote conf P-IP, ftp e webserver, t a Ethernet or modem ns, filters on ModBUS Ethernet and PPP fun hernet alarm commun ents block, Webserver xed IP SIM or private	net variables, I/O bit operations iguration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm no signal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN)
Advanced functions  ORDER CODES  Code	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block  Description	O Log and real channels, thr management Firmware up webserver ModBUS TCF supported via the Math function http also via no signal, Ett counters, eve GPRS (with fi	events, FTP/MAIL sen- time ModBUS / Ether resholds, controls and t date and remote conf P-IP, ftp e webserver, t a Ethernet or modem ns, filters on ModBUS Ethernet and PPP fun hernet alarm commun ents block, Webserver xed IP SIM or private	net variables, I/O bit operations iguration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm os signal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN) and Ethernet
Advanced functions  ORDER CODES  Code  Z-LOGGER3	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block  Description Datalogger, alarm module, web server with built-in IO	O Log and real channels, thr management Firmware up webserver ModBUS TCF supported via the Math function http also via no signal, Ett counters, eve GPRS (with fi	events, FTP/MAIL sen- time ModBUS / Ether resholds, controls and t date and remote conf P-IP, ftp e webserver, t a Ethernet or modem ns, filters on ModBUS Ethernet and PPP fun hernet alarm commun ents block, Webserver xed IP SIM or private	net variables, I/O bit operations iguration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet    Description   Micro SD memory ca	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm osignal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN) and Ethernet
Advanced functions  ORDER CODES  Code  Z-LOGGER3  Z-GPRS3	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block  Description Datalogger, alarm module, web server with built-in IO GSM/GPRS datalogger with built-in IOs, telecontrol functions, v	O Log and real channels, thr management in m	events, FTP/MAIL sen- time ModBUS / Ether tesholds, controls and t date and remote conf date and remote conf each first on ModBUS thereof or modem ns, filters on ModBUS Ethernet and PPP fun hernet alarm commun ents block, Webserver ked IP SIM or private  Code MSD Z-PC-DIN1-35	net variables, I/O bit operations iguration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet  Description  Micro SD memory ca DIN rail bus 1 slot 35	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp an webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm on signal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN) and Ethernet
Advanced functions  ORDER CODES  Code Z-LOGGER3 Z-GPRS3 Z-GUMTS A-GSM	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block  Description Datalogger, alarm module, web server with built-in IO GSM/GPRS datalogger with built-in IOs, telecontrol functions, voice also	O Log and real channels, the management Firmware up webserver ModBUS TCF supported via to Signal, Ett counters, eve GPRS (with find some signal). The counters of the management of the manageme	events, FTP/MAIL sen- time ModBUS / Ether resholds, controls and t date and remote conf P-IP, ftp e webserver, t a Ethernet or modem ns, filters on ModBUS Ethernet and PPP fun hernet alarm commun ents block, Webserver xed IP SIM or private	net variables, I/O bit operations iguration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet  Description  Micro SD memory ca DIN rail bus 1 slot 35	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm on signal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN) and Ethernet  "d with adapter mm ad terminal + 1 slot 35 mm
Advanced functions  ORDER CODES  Code Z-LOGGER3 Z-GPRS3 Z-UMTS A-GSM	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block  Description Datalogger, alarm module, web server with built-in IO GSM/GPRS datalogger with built-in IOs, telecontrol functions, via G+ datalogger with built-in IOs, telecontrol functions, vice ale External GSM antenna dual band swing, cable 3,2 m	O Log and real channels, the management Firmware up webserver ModBUS TCF supported via to Signal, Ett counters, eve GPRS (with find find find find find find find find	events, FTP/MAIL sen- time ModBUS / Ether tesholds, controls and to the cesholds of the confection of	net variables, I/O bit operations aguration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet  Description  Micro SD memory ca DIN rail bus 1 slot 35 DIN rail bus system he USB-A - Micro USB-	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm on signal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN) and Ethernet  "d with adapter mm ad terminal + 1 slot 35 mm
Advanced functions  ORDER CODES  Code  Z-LOGGER3  Z-GPRS3	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block  Description Datalogger, alarm module, web server with built-in IO GSM/GPRS datalogger with built-in IOs, telecontrol functions, voice also	O Log and real channels, the management is management in m	events, FTP/MAIL sen- time ModBUS / Ether tesholds, controls and to the cesholds of the confection of	net variables, I/O bit operations duration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet  Description  Micro SD memory ca DIN rail bus 1 slot 35 DIN rail bus system he USB-A - Micro USB- Micro USB OTG — Us	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm on signal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN) and Ethernet  """ d with adapter """ d with adapter """ ad terminal + 1 slot 35 mm ad terminal + 1 slot 35 mm as 5 P cable
Advanced functions  ORDER CODES  Code Z-LOGGER3 Z-GPRS3 Z-UMTS A-GSM A-GSM-DIR-5M	send, HTTP Log and real-time ModBUS / Ethernet variables, I/I channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp webserver ModBUS TCP-IP, ftp e webserver, http functions  Math functions, filters on ModBUS alarms, post/ge http function, blocks counter, events block  Description Datalogger, alarm module, web server with built-in IO GSM/GPRS datalogger with built-in IOs, telecontrol functions, voice ale External GSM antenna dual band swing, cable 3,2 m GSM directive antenna, cable 5 m	D Log and real channels, the managemen Firmware up webserver ModBUS TCF supported via to signal, Ett counters, eve GPRS (with fi	events, FTP/MAIL sen- time ModBUS / Ether esholds, controls and to date and remote confunction of the confun	net variables, I/O bit operations duration via ftp and attp functions alarms, post/get ctions, gsm alarm ication, blocks and Modbus TCP by APN) and Ethernet  Description  Micro SD memory ca DIN rail bus 1 slot 35 DIN rail bus 2 system he USB-A - Micro USB- Micro USB OTG - U: 24V @ 1,5 A single p	HTTP Log and real-time ModBUS / Ethernet variables, I/O channels, thresholds, controls and bit operations management Firmware update and remote configuration via ftp and webserver ModBUS TCP-IP, ftp e webserver, http functions supported via Ethernet or modem Math functions, filters on ModBUS alarms, post/get http also via Ethernet and PPP functions, gsm alarm on signal, Ethernet alarm communication, blocks counters, events block, Webserver and Modbus TCP by GPRS/HSPA+ (with fixed IP SIM or private APN) and Ethernet  d with adapter mm ad terminal + 1 slot 35 mm as 5 P cable SB Type A adapter cable

### **ADVANCED DATALOGGER**

#### **PROGRAMMING**



**SEAL (Seneca Advanced Language)** is a software designed by Seneca that allows through object oriented programming, to manage the controls, automations, alarms, thresholds and reports with possibility of configuration and remote update via SIM or static IP.

#### **DATA VISUALIZATION**

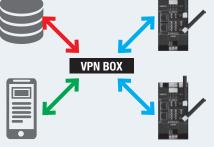
## **WebSERVER**



Real-time visualization analog / digital variabled, counters, totalizers, log files download, firmware update

#### CONNECTIVITY

# **CloudBOX**



CloudBOX is a Server Cloud system — hardware or virtual machine - based on a remote connection service and a webbased micro SCADA. Micro SCADA allows real-time telemetry, RTU commands sending, log files analysis, events and alarms log archiving. CloudBOX supports standard SIM card M2M with xDSL connection even without static IP. Each device connected to CloudBOX sends data and executes commands. CloudBOX save incoming data on a database and is accessible through customizable web pages.

#### **APPLICATION EXAMPLES**

