KEY FUNCTIONS

DATA ACQUISITION



- Data acquisition from sensors, actuators, counters, analyzers, thresholds
- Distributed I/O system
- Range of modules with density from 5 to 24 points
- 3-way galvanic isolation
- ModBUS RTU ModBUS TCP-IP, CANopen protocols
- Self-diagnosis and safety status
- Hot swapping

ALARM MANAGEMENT



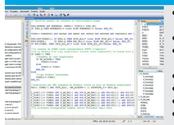
- Real-time warning in case of failure
- Event-based actions towards actuators
- Alarms transmission sent to maintenance operators via sms
- Receiving and sending commands via text message, email or app
- Analysis and check of alarms, events and plant status

MULTISTANDARD COMMUNICATION



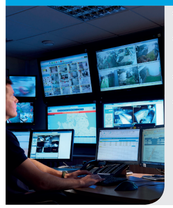
- 2G / 3G + / 4G / GNSS / GPS modem / router
- Fast Ethernet, serial, USB ports
- P2P, P2MP connections
- “Always ON” and “ON Demand” connection management
- ModBUS RTU, TCP-IP, ASCII support
- Data log transfer via ftp, smtp (email), hourly threshold

PROGRAMMING AND SOFTWARE LIBRARIES



- Control logic based on SoftPLC Straton IEC 61131
- Sending email / SMS
- Archive log creation and visualization
- Alarms and signals management
- Actuators automatic management
- Working hours counting
- Counters and totalizers management
- Calculation of flow rates

OPC /SCADA OPEN PLATFORMS



- Scada open platform with OPC UA / OPC DA technology
- Integration between field and supervision with ModBUS RTU or TCP / IP protocol
- Visualization integrated environment “Web Factory”
- Real-time communication Front End time between field and Scada

IOT / VPN PLATFORMS



- Controllers integrated into remote access platform “LET’S” VPN and SSL technologies support
- Centralized supervision
- Predictive maintenance and diagnostics
- Remote assistance
- Remote software update
- Access to data and installations in “Single LAN” or P2P connection mode

PUMPS AND BOOSTER PRESSURIZATION CONTROL



- Sending commands via SMS
- Calculation of the flow rate
- Configuration through 7 “HMI touchscreen
- Adjustment, start-up, shutdown and acceleration
- Water hammer suppression
- Lifetime extension of the pumps
- Pressures, levels, flows regulation

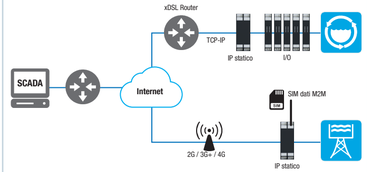
ENERGY MANAGEMENT



- RTUs for transmission and distribution electrical power systems
- IEC protocol 61850 availabilty for communication between intelligent electronic devices at electrical substations
- IEC 60870-101/104 availability for sending basic telecontrol messages between a central telecontrol station and telecontrol outstations

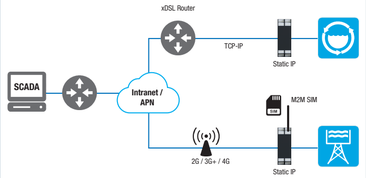
ARCHITECTURES

WEB-BASED REMOTE MONITORING AND TELEMETRY



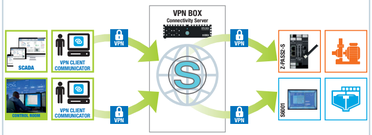
Remote control via Internet offers remote visualization services, alarm reporting, remote management plants, supervision, data collection and analysis, exploiting Internet, 2G / 3G+ / 4G standard and DDNS technology.

INTRANET / APN-BASED TELEMETRY



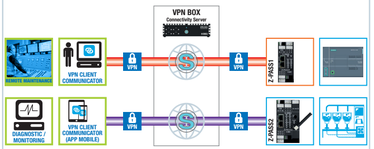
The remote control systems via intranet / APN are based on an intranet with private APN (Access Point Name) systems (static IP addresses on devices SIM).

TELECONTROL ALWAYS ON CONNECTION



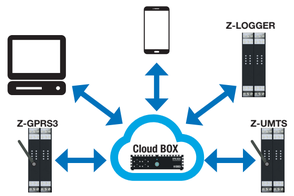
In Telecontrol / Single LAN mode (Always ON connection) VPN BOX works like a network server which is assigned a static public IP. Communication is simultaneous and always active between all remote sites and the server, as well with the different subnets that are part of the overall system.

REMOTE ASSISTANCE ON DEMAND CONNECTION



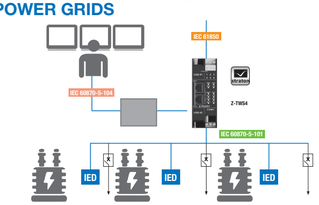
In Remote Assistance / Point-To-Point mode (ON Demand connection) VPN BOX works as a concentrator and it provides a point-to-point communication between PCs (or device mobile) and machine / plant. It also requires the assignment of a static and public IP or possibly a DynDNS address.

IOT / CLOUD MONITORING



SENECA Cloud - IoT solution allows data centralization, remote connections management, multi-user custom supervision pages editing.

MONITORING AND TELECONTROL OF POWER GRIDS



SENECA controllers for Energy Management applications can work as IEC 61850 Servers, ModBUS-RTU - ModBUS TCP conversion systems, devices enabling the creation of VPNs and point-to-point tunnels.

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RTU_1804_EN - April 2018

100% Made & Designed in Italy

RTU and Telemetry Solutions

SENECA
www.seneca.it

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

OVERVIEW

SENECA telemetry and remote monitoring equipments are a perfect combination between telecontrol and automation world. RTUs range includes solutions for small systems, all-in-one solution with I/O, control logic and communication on-board, equipment for special applications (unattended sites, pumping stations, energy management).
Platforms compatibility and the most common technological standards offer the operators the possibility to improve efficiency and the quality of investments in their applications. SENECA RTUs can be combined with SENECA hardware (I/O modules, HMI, communication interfaces) and third parties as well as with SENECA LET'S remote assistance platform. They also make available flexible programming tools and software libraries for telecontrol.















RTUS FOR WIDE RANGE OF APPLICATIONS

REAL TIME H24 CONTROL PLANTS

ADVANCED ALARM MANAGEMENT

REDUCING OPERATING COSTS

POWER MONITORING

DATA STORAGE

SCADA / OPC OPEN PLATFORMS COMMUNICATION

EMAIL, SMS, APP NOTIFICATION

STRATON IEC 61131-3 SOFT PLC

VPN / SSL SUPPORT

VPN / IOT LET'S PLATFORM (REMOTE ASSISTANCE / TELECONTROL)

BUILT-IN I/O

THIRD-PARTY AND COMMUNICATION DEVICES INTEGRATION

2G / 3G+ / 4G / GPS / GNSS BUILT-IN MODEM / ROUTER

SERIAL / MODBUS / ETHERNET INTERFACES

VERTICAL APPLICATIONS (I.E. PUMP CONTROLLER, LOW POWER)

RTUs and Telemetry Solutions - A full range of peripheral units and remote controllers for utilities, energy and infrastructures

		IEC 61131 STRATON CONTROL UNITS		REMOTE ALARM UNITS AND DATALOGGERS		DATALOGGERS WITH TELEMETRY FUNCTIONS			RTU IEC 61131 - STRATON FOR TELECONTROL APPLICATIONS			RTU LOW POWER	PUMP CONTROLLER
		Z-TWS11	Z-TWS4	B-ALARM	MYALARM2	Z-LOGGER3	Z-GPRS3	Z-UMTS	Z-MINI-RTU	Z-PASS2-S	S6001-RTU	RTU-LP-ST	S6001-PC
													
Main features	Power Supply	11..40 Vdc / 19..28 Vac	11..40 Vdc / 19..28 Vac	10..30 Vdc, Li-On rechargeable battery, 100 minutes lifetime	6..15 Vdc, Li-On rechargeable battery, 8/16 hours lifetime	11..40 Vdc / 19..28 Vac, NiMh rechargeable battery, 60 minutes lifetime	11..40 Vdc / 19..28 Vac, NiMh rechargeable battery, 60 minutes lifetime	19..40 Vdc / 19..28 Vac, NiMh rechargeable battery, 60 minutes lifetime	11..40 Vdc / 19..28 Vac	11..40 Vdc / 19..28 Vac	24 Vac/dc	8..30 Vdc, Li-On recharegeable battery, max 2 years lifetime	24 Vac/dc
	Built-In I/O	2AI	1DI, 2DO, 1 DI/DO		4DI, 2AI, 2DO (opz.)	4DI, 2AI, 2DO	4DI, 2AI, 2DO	4DI, 2AI, 2DO	4DI, 2DO, 2AI	2DI, 2DO, 2DI/DO	15DI+2DI, 8DO, 4AI, 2AO	4DI, 2AI, 2DO	15DI+2DI, 8DO, 4AI, 2AO
	Programming System	Straton, Z-NET4	Straton, Z-NET4	EASY SETUP	EASY MYALARM2	SEAL	SEAL	SEAL	Straton, Z-NET4	Straton, Z-NET4	Straton, Z-NET4	EASY RTU-LP	HMI
	Flash	8 MB	1 GB	-	512 kB+2MB (log)	8 MB	8 MB	8 MB	8 MB	1 GB	1 GB	2 MB	1 GB
	RAM	256 kB	64 MB	-	128 kB	256 kB	256 kB	256 kB	256 kB	64 MB	64 MB	.	64 MB
	Micro SD Card	Up to 32 GB	Up to 32 GB	-	Up to 32 GB	Up to 32 GB	Up to 32 GB	Up to 32 GB	Up to 32 GB	Up to 32 GB	Up to 32 GB	Up to 32 GB	Up to 32 GB
	Program size	248 kB	4 MB	-	-	-	-	-	248 kB	4 MB	4 MB	-	-
	PLC variables memory	38 kB	4 MB	-	-	-	-	-	38 kB	4 MB	4 MB	-	-
	Variables	Up to 200 I/O	Up to 1.000 I/O	5	8	Up to 100 I/O	Up to 100 I/O	Up to a 100 I/O	Up to 200 I/O	Up to 1.000 I/O	Up to 1.000 I/O	8	Up to 1.000 I/O
	Software libraries	-	Log data, status email/ sms, comands, alarms sending	-	-	Log data, status email/sms, comands, alarms sending	Log data, status email/sms, comands, alarms sending	Log data, status email/sms, comands, alarms sending	-	Log data, status email/sms, comands, alarms sending	Log data, status email/sms, comands, alarms sending	Log data, status email/sms, comands, alarms sending	-
	Datalogging	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Data visualizaztion	-	Web Factory	-	Log Factory	Log Factory, Cloud BOX	Log Factory, Cloud BOX	Log Factory, Cloud BOX	-	Web Factory	Web Factory		-
	Third party integration	Yes	Yes	-	.	Yes	Yes	Yes	Yes	Yes	Yes	-	-
Connectivity	Modem / Router	External (via Ethernet)	External (via Ethernet)	2G	2G	Esterno	2G	3G+	Si 2G (no router)	3G+ / 4G / GPS / GNSS	3G+	2G	3G+
	Ethernet ports	1	2			1	1	1	1	2	1	-	1
	Serial ports	2	3			2	2	2	2	3	3	1	3
	USB ports	1	1	1	1	1	1	1	1	1	1	-	2
	Fieldbus	ModBUS RTU/TCP	ModBUS RTU/TCP			ModBUS RTU/TCP	ModBUS RTU/TCP	ModBUS RTU/TCP	ModBUS RTU/TCP	ModBUS RTU/TCP	ModBUS RTU/TCP	ModBUS RTU	ModBUS RTU/TCP(Slave)
	IT protocols	http, ftp client, smtp client, Modbus tcp server, Modbus tcp client	http, ftp client, ftp server, smtp client, Modbus tcp client, Modbus tcp server	SMS	SMS, Ftp/Smtp Client, Smtps con SSL	Ftp, Smtp, http rest, MQTT	Ftp, Smtp, http rest, MQTT	Ftp, Smtp, http rest, MQTT	http, ftp client, smtp client, Modbus tcp server, Modbus tcp client, ppp	http, ftp client, ftp server, smtp client, ppp, Modbus tcp client, Modbus tcp server	http, ftp client, ftp server, smtp client, ppp, Modbus tcp client, Modbus tcp server	Ftp client, SMS	http, ftp, smtp, ppp
	Energy protocols	-	IEC 60870-101/104, IEC 61850 (opz.)	-	-	-	-	-	-	IEC 60870-101/104, IEC 61850 (option)	IEC 60870-101/104, IEC 61850 (option)	-	-
	VPN support	-	Yes, OpenVPN	-	-	-	-	-	-	Yes, OpenVPN	Yes, OpenVPN	-	Yes, OpenVPN
	APN support	-	-		-	-	-	-	Yes	Yes	Yes		Yes
	Cloud support					Yes	Yes	Yes					
Applications	Advanced Automation		x							x	x		
	Distributed Automation	x	x			x	x	x	x	x	x		
	On-board machine		x							x			
	Pumps and pressurization boost control												x
	Home automation / Security			x	x	x	x	x	x				
	Energy Management		x			x	x	x		x	x		
	Infrastructures and Transports		x			x	x	x		x	x		
	Laboratories / Test / DAQ	x				x	x	x					
	Small automations	x			x	x	x	x				x	
	Process (Utilities, Energy, Oil&Gas)	x	x						x	x	x		
	Remote Alarm Management			x	x		x	x				x	
	Telecontrol / Remote Assistance (LET'S)		x							x	x		x

For order codes, accessories, software and details please visit https://www.seneca.it/en/linee-di-prodotto/comunicazione-industriale-e-telecontrollo/