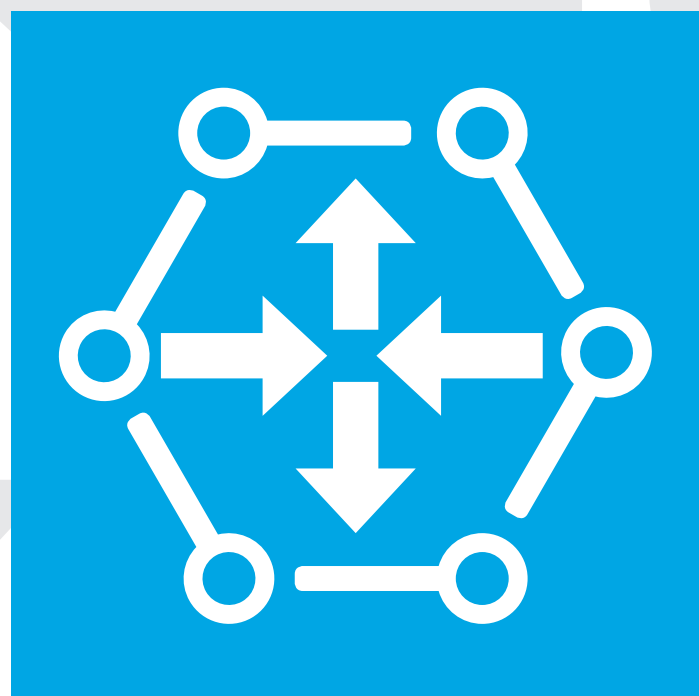


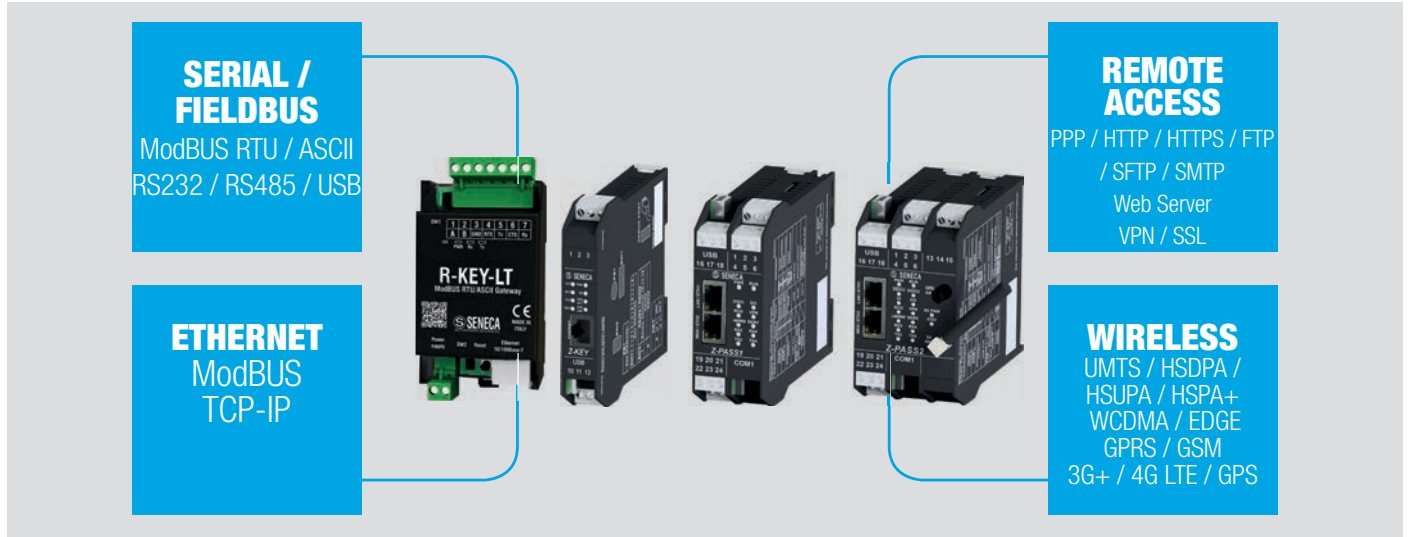
 
100% Made & Designed in Italy

IoT Gateways



IoT GATEWAYS - OVERVIEW

SENECA's IoT gateways connect new and legacy systems and enable a secure and uninterrupted data flow between peripheral devices and centralized servers. Gateways establish two-way communication between the field and supervision, as well to offer processing and data storage capabilities to provide services with secure VPN connections and to manage in real-time devices in the field. The new SENECA range of industrial routers / gateways includes devices in able to extend networks and allow process data exchange between different levels of the IT architecture and industrial communication network.

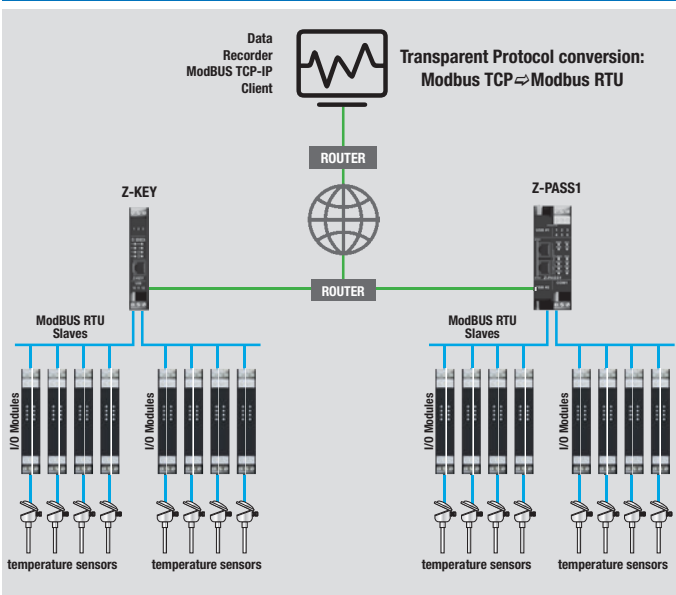


HIGHLIGHTS

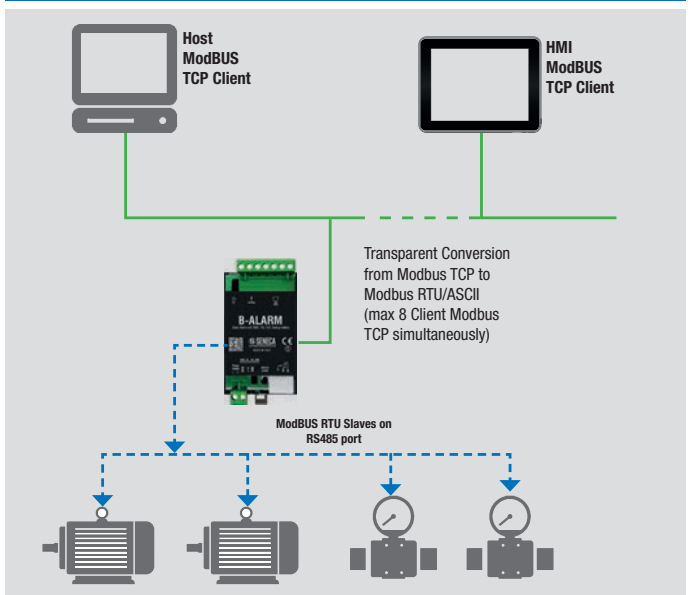
<p>MULTI-FUNCTION INDUSTRIAL GATEWAYS</p>	<p>IT / SECURITY CONNECTIVITY MODBUS TCP-IP, FTP, SFTP, HTTP, HTTPS, OPENVPN, SSL</p>	<p>SERIAL / FIELDBUS SUPPORT MODBUS RTU MODBUS ASCII</p>	<p>FULL WEB SERVER SETUP</p>
<p>EXCEL TAG MANAGEMENT / LOOK UP TABLE</p>	<p>SERIAL EXTENSION OVER ETHERNET SOLUTION</p>	<p>ADVANCED DIAGNOSTIC AND SERIAL TRAFFIC MONITORING</p>	<p>CLOUD BOX INTEGRATION</p>
<p>VPN PLATFORM / P2P / SINGLE LAN INTEGRATION</p>	<p>SOFTWARE TOOLKIT</p>	<p>BUILT-IN I/O</p>	<p>3G+ WORLDWIDE / 4G LTE (GPS/GNSS) BUILT-IN MODEM</p>

IoT GATEWAYS - APPLICATION EXAMPLES

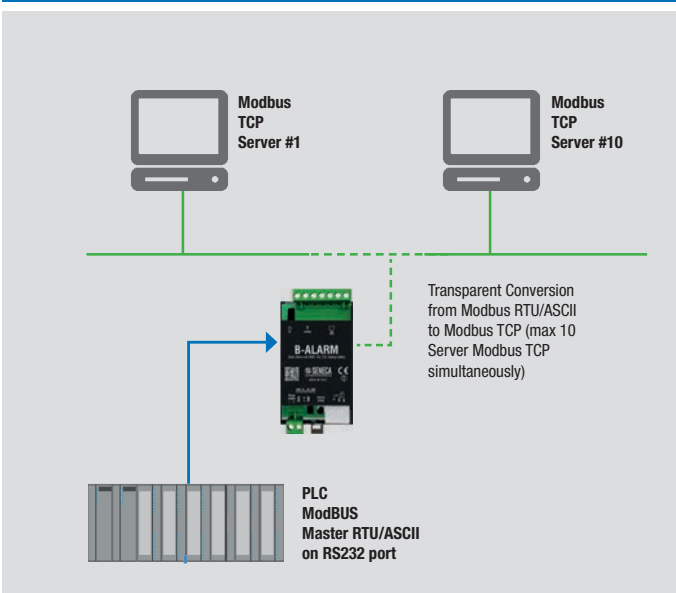
MODBUS GATEWAY - ETHERNET TO SERIAL



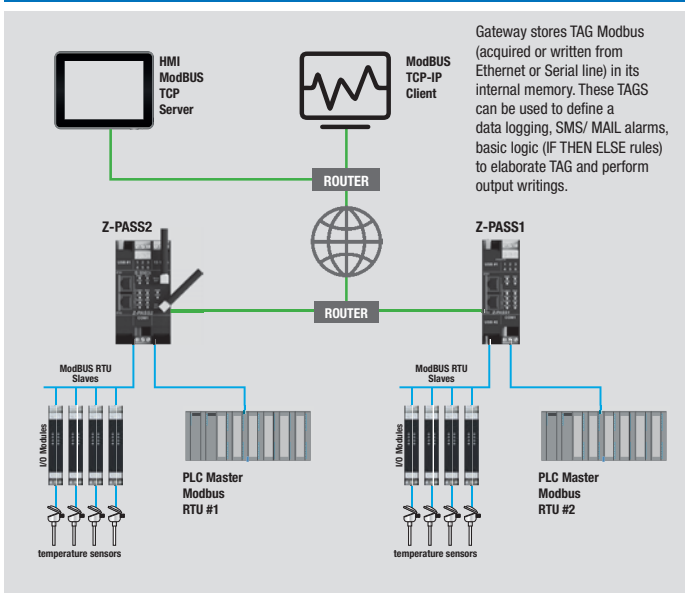
MODBUS GATEWAY - ETHERNET TO SERIAL



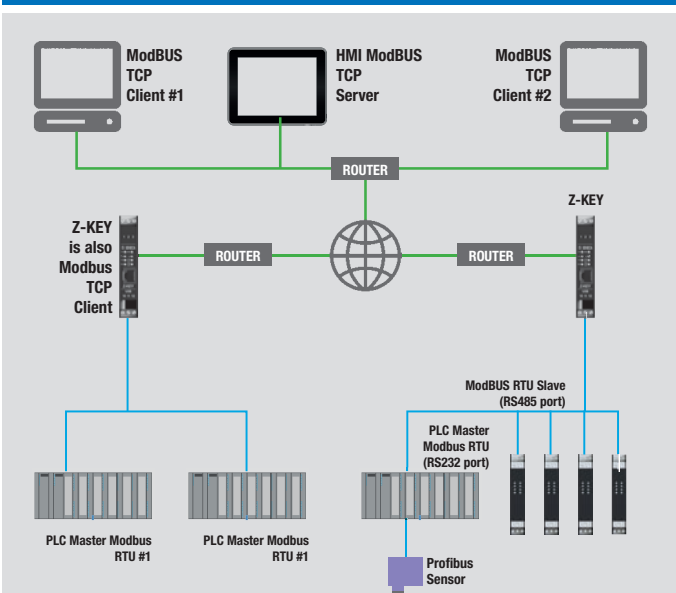
MODBUS GATEWAY - SERIAL TO ETHERNET



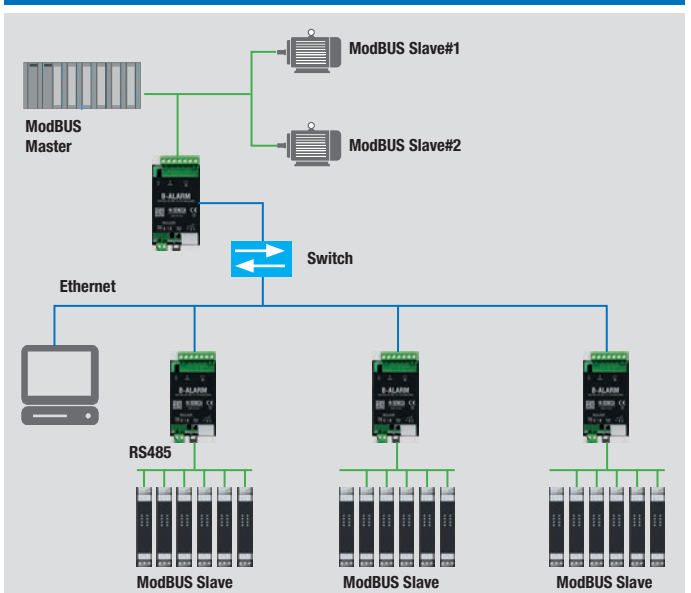
MODBUS GATEWAY - SHARED MEMORY



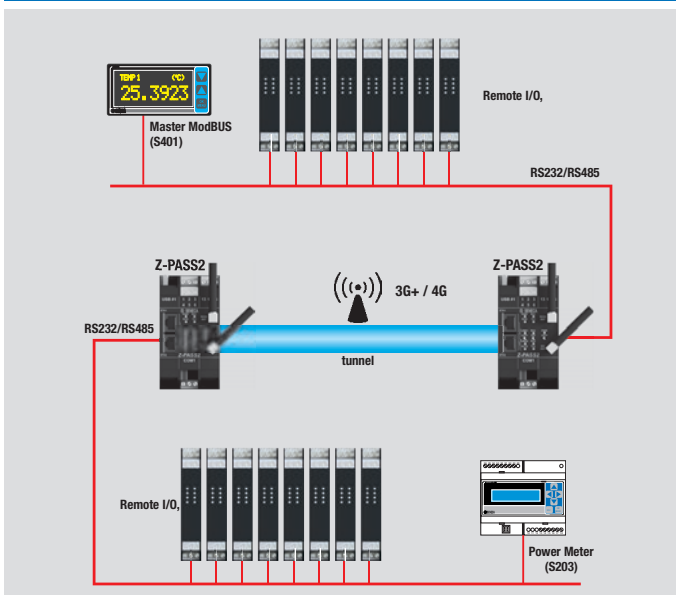
MODBUS GATEWAY - SHARED MEMORY



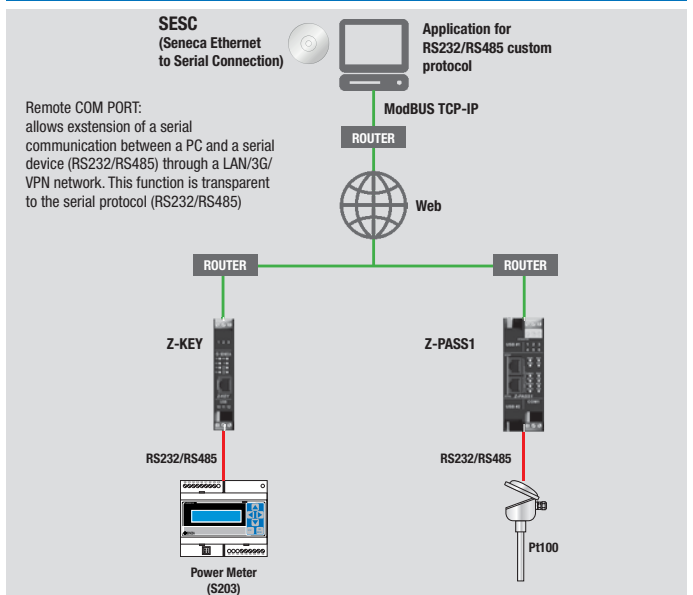
EXTENDED SERIAL OVER ETHERNET



SERIAL TUNNEL POINT-TO-POINT



SERIAL DEVICE SERVER - VIRTUAL COM









IOT Gateway - Selection Guide

KEY FEATURES	R-KEY	Z-KEY	Z-PASS1	Z-PASS2	
Interfaces	Built-in I/O	-	-	4 digital	6 digital
	Fast Ethernet ports	1	1	2	2
	Serial ports	1	2	3	3
	USB ports	-	1	1	1
	Modem 3G+/4G + GPS	-	-	-	1
Protocols	ModBUS TCP-IP	x	x	x	x
	ModBUS RTU	x	x	x	x
	ModBUS ASCII	x	x	x	-
	FTP/SFTP Server	-	-	x	x
	HTTP/HTTPS Server	-	-	x	x
	SSL	-	-	x	x
	OpenVPN	-	-	x	x
	HTTP POST (Cloud BOX)	-	Soon Available	x	x
Connectivity	Nr Max Modbus TCP-IP Client	8	8	32	32
	Nr Max Modbus TCP-IP Server	10	10	10	10
	Nr Max variables / Tag Client	-	500	2000	2000
	Nr Max VPN Client	-	-	Point-To-Point: 1; Single LAN: 496 subnet	Point-To-Point: 1; Single LAN: 496 subnet
Settings	DIP switch	x	x	-	-
	Web server	x	x	x	x
	SMS commands	-	-	x	x
Operating Mode	Modbus Gateway	From Modbus TCP-IP to Modbus RTU/ASCII From Modbus RTU/ASCII to Modbus TCP-IP	From Modbus TCP-IP to Modbus RTU/(ASCII*) From Modbus RTU/ASCII to Modbus TCP-IP*	From Modbus TCP-IP to Modbus RTU	From Modbus TCP-IP to Modbus RTU
	Modbus Gateway shared memory	-	From Modbus TCP-IP (Server) to Modbus RTU (Slave/Master) Modbus TCP Client Advanced diagnostic	From Modbus TCP-IP (Server) to Modbus RTU (Slave/Master) Modbus TCP Client Advanced diagnostic Datalogger Alarm management IF THEN ELSE logic	From Modbus TCP-IP to Modbus RTU (Slave) From Modbus TCP-IP to Modbus TCP-IP (Master) Modbus TCP Client Datalogger Alarm management IF THEN ELSE logic
	Transparent Gateway	-	Serial Device Server / Remote Virtual COM (with Seneca Windows drivers)	Serial Device Server / Remote Virtual COM (with Seneca Windows drivers) Serial tunnelling P2P over TCP/UDP, Serial tunnelling P2MP over UDP	Serial Device Server / Remote Virtual COM (with Seneca Windows drivers) Serial tunnelling P2P over TCP/UDP, Serial tunnelling P2MP over UDP
	Traffic monitoring	Yes by web server	Yes by web server	-	-
	3G+ (4G)/ Ethernet Router + DynDNS	-	-	Yes	Yes
	Client OpenVPN standard	-	-	Yes	Yes
	Client VPN BOX	-	-	Yes	Yes
	Layer 2 support (VPN)	-	-	Yes (only Point-To-Point)	Yes (only Point-To-Point)
	LAN / WAN or Switch Ethernet mode	-	-	Yes	Yes
	APN automatic identification	-	-	Yes	Yes
CLOUD BOX support	-	Yes	Yes	Yes	

* soon available

IoT GATEWAYS - TECHNICAL DATA

	R-KEY	Z-KEY	Z-PASS1	Z-PASS2
			 	 
	1-Port ModBUS RTU/ASCII Industrial Gateway	2-Port ModBUS RTU Industrial Gateway / Serial Device Server	3- Port VPN Industrial Gateway - Serial Device Server 1DI, 2DO, 1DI/DO	3-Port VPN Industrial Gateway - Serial Device Server, 2DI, 2DO, 2DI/DO, worldwide 3G+ (4G)/ Ethernet Modem/Router, GPS
GENERAL DATA				
Power Supply	10..40 Vdc; 19..28 Vac	10..40 Vdc; 19..28 Vac	11..40 Vdc; 19..28 Vac	19..40 Vdc; 19..28 Vac
Power Consumption	1 W	2 W @ 24 Vac (typical)	Typical 3 W @ 24Vac, Max 4 W	Typical 4 W @ 24Vac, Max 6 W
Max isolation	1,5 kVac	1,5 kVac	1,5 kVac	1,5 kVac
Protection degree	IP20	IP20	IP20	IP20
Flash memory (data)	-	-	1 GB	1 GB
RAM	-	-	64 MB	64 MB
Micro SD card	-	Max 32 GB	Max 32 GB	Max 32 GB
Built-in I/O	-	-	Nr.1 DI for VPN enabling, Nr.1 DO for VPN running, Nr.1 DO for general use, Nr.1 DI/DO free setting	Nr.1 DI for VPN enabling, Nr.1 DO for VPN running, Nr.1 DI for general use, Nr.1 DO for general use, Nr.2 DI/DO free setting
Operating temperature	-20..+70°C	-20 °C..+50 °C	-20 °C..+65 °C	-20 °C..+65 °C
Dimension (wxhxd)	32 x 53 x 90 mm	17,5 x 100 x 112 mm	100 x 35 x 112 mm	100 x 52,5 x 112 mm
Weight	80 g	170 g	220 g	280 g
Case	PC/ABS UL94-V0 self-extinguish RAL 7035 grey color	PA6 glass fiber reinforced , black color	PA6 glass fiber reinforced , black color	PA6 glass fiber reinforced , black color
Mounting	35 mm DIN rail IEC EN 60715 or wall mount	35 mm DIN rail IEC EN 60715	35 mm DIN rail IEC EN 60715	35 mm DIN rail IEC EN 60715
COMMUNICATION				
Ethernet (ETH1, ETH2)	Nr.1 Fast Ethernet 10/100 Tx port, RJ45 front	Nr.1 Fast Ethernet 10/100 Tx port, RJ45 connectors Up to 8 TCP-IP Clients	Nr.2 Fast Ethernet 10/100Tx ports on RJ45 connectors	Nr.2 Fast Ethernet 10/100Tx ports on RJ45 connectors
Serial (COM1, COM2, COM4)	Nr.1 RS232/RS485 switchable serial port, max baud rate 115kbps on terminal	Nr.1 RS232/RS485 switchable serial port, max baud rate 115kbps on terminal Nr.1 RS485 port, max baud rate 115kbps on IDC10 connector and terminals	Nr.1 RS232/RS485 switchable serial port, max baud rate 115kbps on terminal Nr.1 RS485 port, max baud rate 115kbps on IDC10 connector and terminals Nr.1 RS485 port, max baud rate max 115kbps on terminals	Nr.1 RS232/RS485 switchable serial port, max baud rate 115kbps on terminal Nr.1 RS485 port, max baud rate 115kbps on IDC10 connector and terminals Nr.1 RS485 port, max baud rate max 115kbps on terminals
USB	-	Nr.1 microUSB port on side connector	Nr.1 USB host port on side connector type A	Nr.1 USB host port on side connector type A
Modem 3G+ / GPSS / GNSS *	-	-	-	3G+ Model Global GNSS: 30 Channels: 16 GPS channels and 14 GLONASS channels
Modem 4G / GPSS / GNSS *	-	-	-	4G/LTE Model (Europe, Africa, Middle East, Korea, Thailand, India) GNSS: GPS/GLONASS/BeiDou/Galileo/QZSS Up to 55 Channels Yes: GPS & GLONASS
GPS	-	-	-	Yes: GPS & GLONASS
Protocols	ModBUS TCP-IP, ModBUS RTU, Modbus ASCII	ModBUS TCP-IP, ModBUS RTU, Modbus ASCII **	ModBUS TCP, ModBUS RTU, FTP/SFTP Server, HTTP/HTTPS Server, OpenVPN, SSL	ModBUS TCP, ModBUS RTU, FTP/SFTP Server, HTTP/HTTPS Server, OpenVPN, SSL
Nr Max TCP-IP Clients (Server Mode)	8	8	32	32
Nr Max TCP-IP Server (Client Mode)	10	10	10	10
Nr Max Client variables / Tags	-	500	2000	2000
Nr Max VPN Clients	-	-	Point-To-Point: 1; Single LAN: 495	Point-To-Point: 1; Single LAN: 495
SECURITY				
Remote access block	-	-	Mechanical, Interblock digital input	Mechanical, Interblock digital input
LAN/WAN split	-	-	Yes	Yes
Data Encryption (VPN)	-	-	Blowfish (128bit) in CBC mode	Blowfish (128bit) in CBC mode
Service channel	-	-	TLSv1/SSLv3 2048bit certificate	TLSv1/SSLv3 2048bit certificate
Web Server Authentication	Yes	Yes	Yes	Yes
Security protocols	-	-	OpenVPN, SSL	OpenVPN, SSL
SETTINGS AND SOFTWARE				
DIP switch	Yes	Yes	-	-
Web server	Yes	Yes	Yes	Yes
VPN management	-	-	VPN BOX Manager, OpenVPN, VPN Client Communicator (PC software e mobile App)	VPN BOX Manager, OpenVPN, VPN Client Communicator (PC software e mobile App)
Network tools	Yes, SDD (Seneca Discovery Device)	Yes, SDD (Seneca Discovery Device), SESC (Seneca Ethernet to Serial Connection), EASY Z-KEY	Yes, SDD (Seneca Discovery Device), SESC (Seneca Ethernet to Serial Connection)	Yes, SDD (Seneca Discovery Device), SESC (Seneca Ethernet to Serial Connection)
Advanced alarm management	-	-	email / https	email / sms / https
SMS commands	-	-	-	Yes
Advanced diagnostic	-	Yes	Yes	Yes
Datalogging on SD Card	-	-	Yes	Yes
IF THEN ELSE logic	-	-	Yes	Yes
Cloud BOX support (http post)	-	Yes	Yes	Yes
STANDARD				
Approvals	CE	CE	CE	CE
Norms	EN61000-6-4, EN 61000-6-2, EN 61010-1	EN61000-6-4, EN 61000-6-2, EN 61010-1	EN61000-6-4, EN 61000-6-2, EN 61010-1	ETSI EN 301489-7, EN 61000-6-4, EN 61000-6-2, EN 301511, EN 301489-1, EN 301489-7, IEC / EN 60950

*alternatively, ** soon available

IoT GATEWAY - CONFIGURATION TOOLS



WEB SERVER

- Device and network full configuration
- Firmware update
- Configuration saving
- Access through authentication
- Web Server custom pages saved on SD card



SESC (SENECA ETHERNET TO SERIAL CONNECTION)

- Manager interface
- Serial connection over Ethernet address assignment
- Remote Virtual COM driver



SDD (SENECA DISCOVERY DEVICE)

- Automatic scan of each connected device
- Device network parameters configuration and modification



EXCEL TEMPLATES

- ModBUS RTU /TCP tag variables configuration
- Uploading configuration files on web server



VPN TOOL

- P2P / Single LAN connections
- Client authentication
- OpenVPN standard connections by PC or mobile device



CLOUD BOX (WEB APPLICATION)

- HMI with HTML5 and CSS3 technologies
- Synoptic pages
- Historical Data / Log Files
- Trends/ Data export
- Events / Alarms



ORDER CODES	
Code	Description
Router / Gateway	
R-KEY-LT	1-Port ModBUS RTU/ASCII Industrial Gateway
Z-KEY-0	2-Port ModBUS RTU Industrial Gateway / Serial Device Server
Z-PASS1-IO	3- Port VPN Industrial Gateway - Serial Device Server 1DI, 2DO, 1DI/DO
Z-PASS2-IO	3-Port VPN Industrial Gateway - Serial Device Server, 2DI, 2DO, 2DI/DO, worldwide 3G+/Ethernet Modem/Router, GPS
Z-PASS2-IO-4G-EU	3-Port VPN Industrial Gateway - Serial Device Server, 2DI, 2DO, 2DI/DO, worldwide 4G EU/Ethernet Modem/Router, GPS
SERVER VPN	
CLOUD BOX	Micro Scada / Industrial IoT Box
CLOUD BOX VM-D	Virtual Server for data acquisition from SeAL RTU, up to 1 demo device
CLOUD BOX VM-1K	Virtual Server license for data acquisition from SeAL RTU, up to 1.000 tags
CLOUD BOX VM-5K	Virtual Server license for data acquisition from SeAL RTU, up to 5.000 tags
CLOUD BOX VM-10K	Virtual Server license for data acquisition from SeAL RTU, up to 10.000 tags
CLOUD BOX VM-UP1	Virtual Server license upgrade for data acquisition from 1.000 to 5.000 tags
CLOUD BOX VM-UP2	Virtual Server license upgrade for data acquisition from 5.000 to 10.000 tags
CLOUD BOX VM-UP3	Virtual Server license upgrade for data acquisition from 1.000 to 10.000 tags
VPN BOX	
VPN BOX VM	LET'S - VPN Server for Point-to-Point / Single LAN connections
VPN BOX-D	LET'S - VPN Server Virtual Machine for Point-to-Point / Single LAN connections
VPN BOX VM-D	LET'S - VPN BOX Point-to-Point service, 30 day free trial up to 2 devices
VPN BOX MANAGER	LET'S - VPN Server Virtual Machine for Point-to-Point / Single LAN connections up to 2 devices
VPN CC	LET'S - VPN Client Communicator, remote access software
VPN CC MOBILE	VPN Client Communicator - iOS and Android app

ORDER CODES	
Code	Description
Software tools	
EASY Z-KEY	Configuration tool for Z-KEY IP address
SDD	SENECA Discovery Device, IP scanner for Z-KEY, Z-PASS1, Z-PASS2
SESC	SENECA Ethernet to Serial Connection tool for Z-KEY, Z-PASS1, Z-PASS2
TEMP-TAG-Z-PASS	Excel template for Z-PASS-1/2/2S tags (gateway mode)
TEMP-TAG-Z-KEY	Excel template for Z-KEY tags (gateway mode)
TEMP-WEB-Z-KEY	Web page template for Z-KEY
Accessories	
A-GSM	Dual band swing GSM external antenna, cable 3,2 m, SMA
A-GSM-QUAD-N	4G/WiFi omnidirectional antenna, FME, L=3mt
A-GPS-SMA	GPS antenna with SMA connector
CS-TIP-MEF-PH	Serial communication cable (tips/4-ways connector)
CS-DB9M-MEF-PH	Serial communication cable (DB9M / MEF 10-12) 3 wires, 1,5 mt
CE-RJ45-RJ45-R	Straight-thru Ethernet cable (RJ45-RJ45)
MSD	Micro SD memory card with adapter
Z-PC-DIN1-35	DIN rail bus system 1 slot 35 mm
Z-PC-DIN4-35	DIN rail bus system 4 slot 35 mm
Z-PC-DINAL1-35	DIN rail bus system head terminal + 1 slot 35 mm
Z-PC-DINAL2-52.5	DIN rail bus system head terminal + 2 slots 52.5 mm



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