MULTIFUNCTION IIoT EDGE DEVICES



SENECA

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APPLICATION SCHEMES 10



SENECA Industrial IoT Edge devices are versatile units with advanced functions for gateway, data logging, alarm management, Wi-Fi routing, logic functions, cybersecurity, and softPLC IEC 61131-3 (also with IEC 61850 / 60870 protocols). The modules offer client/server connectivity solutions for the creation of systems with varying complexity and simultaneous access points to the plant or single machine. Integrated into the LET'S platform, the gateways can support Point-To-Point connections for remote assistance or Single LAN for remote control. By using IIoT protocols like MQTT and OPC-UA, they perfectly integrate data analysis, supervision, and enterprise management systems, ERP and MES. Applications range from M2M/IoT communications to remote maintenance, network integration, protocol conversion, and integration with Cloud platforms and services across most industrial sectors.

OPERATION AND CONNECTIVITY

	GATEWAY				GATEWAY + SOFTPLC			GATEWAY+SOFTPLC+ ENERGY PROTECTION			GATEWAY+PLC+HMI		
	R-PASS-0-4-0	R-PASS-W-4-0	Z-PASS1-RT	Z-PASS2-RT-4G	R-PASS-0-4-S	R-PASS-W-4-S	Z-PASS2-RT-4G-S	R-PASS-0-4-E	R-PASS-W-4-E	Z-PASS2-RT-4G-E	SSD-0	SSD-S-L-V-I	SSD-E-L-V-I
GATEWAY FEATURES													
ModBUS / Ethernet Serial Gateway	x	x	x	x	x	x	x	x	x	x	x	x	x
Shared memory gateway - Gateway with Tag	x	x	x	x	x	x	x	x	x	x	x	x	x
Transparent Gateway / Serial Device Server	x	x	x	x	x	x	x	x	x	x	x	x	x
IIoT / Edge / MQTT Gateway	x	x	x	x	x	x	x	x	x	x	-	x	x
ROUTING													
Router LAN	x	x	x	x	x	x	x	x	x	x	x	x	x
4G Router	Optional	Optional	-	x	Optional	Optional	x	Optional	Optional	x	-	-	-
Wi-Fi Router / Access Point	-	x	-	-	-	x	-	-	x	-	x	x	x
Advanced Router - Nat 1:1 & Static Router	x	x	x	x	x	x	x	x	x	x	x	x	x
ADVANCED FEATURES													
Datalogger	x	x	x	x	x	x	x	x	x	x	x	x	x
Remote alarm unit	x	x	x	x	x	x	x	x	x	x	x	x	x
VPN remote access unit	x	x	x	x	x	x	x	x	x	x	-	x	x
If-Then-Else logical rules	x	x	x	x	x	x	x	x	x	-	-	x	x
SoftPLC IEC 61131	Optional	Optional	Optional	Optional	x	x	x	x	x	x	-	x	x
Energy Controller IEC 60870/61850	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	x	x	-	-	x
HMI													
Remote Display	x	x	x	x	x	x	x	x	x	x	x	x	x
Widgets and Synoptics on HMI	x	x	x	x	x	x	x	x	x	x	x	x	x
7" LCD capacitive touch display	-	-	-	-	-	-	-	-	-	-	x	x	x

BASIC FEATURES

MODBUS GATEWAY

In "Modbus Gateway" mode the Edge devices manage communication between Modbus RTU/ASCII and Ethernet, integrating serial devices into TCP/IP systems. They convert Modbus RTU/ASCII messages to TCP and vice versa, ensuring interoperability in complex industrial environments.

GATEWAY EDGE IIoT

The devices' IIoT features support HTTP POST, MQTT, and OPC UA to connect to IoT/Cloud platforms; read, write, and export process variables to SCADA, MES, and management software; and optimize integration between automation and IT.

SERIAL DEVICE SERVER

The Serial Device Server function allows you to connect serial devices (RS-232/485) to TCP-IP networks, supporting Modbus RTU/TCP-IP. It also ensures remote communication, centralized management, and interoperability in integrated industrial systems.

SERIAL SNIFFER

The serial sniffer function allows one or more Edge devices to be inserted in machines and installations with Modbus RTU RS-485 protocol, operating in passive mode with read-only tags, without altering existing communications in the system.

MULTIFUNCTION IIoT EDGE DEVICES

ROUTING

Wi-Fi router

In models that support it, a 2.4 GHz 802.11 b/g/n Wi-Fi module is integrated with router or redundant-network mode. The device can operate as a Station, connecting to an existing access point, or as an Access Point, allowing other devices to connect, for maximum flexibility.

NAT 1:1 – STATIC ROUTER

NAT 1:1 and Static Router functions enable direct communication between the corporate WAN and the automation LAN (by default independent and non-communicating). They also allow outbound traffic redirection from a device to a particular host or subnet.

LAN ROUTER

Edge devices with a LAN router expand the corporate network, integrating serial applications, extending communication via LAN/VPN, and ensuring transparent TCP connections with RS-232/RS-485. They also support UDP/TCP P2P or PMP tunnels to connect network devices via LAN/WAN/VPN.

4G ROUTER / MODEM GPS

Edge devices with a 4G modem router (integrated or external) act as advanced 4G/LTE routers, supporting LTE-FDD, LTE-TDD, WCDMA, and GSM bands. They also integrate GPS/GLONASS/BeiDou/Galileo/QZSS with 2.5 m accuracy (CEP50) for remote-control and geolocation applications.

ADVANCED FUNCTIONS

DATALOGGER

Edge devices ensure acquisition, visualization, and data export with integrated I/O and data logger. They handle up to 900,000 samples and 2,000 tags, exportable in CSV and IIoT protocols, processable with Excel or PC software for advanced analysis.

REMOTE ALARM

Remote alarm management includes sending commands with multilingual Unicode support, direct user commands, activation of contacts in case of anomalies, notifications via email and IIoT protocols, and signals for threshold exceedance or state change.

VPN MODULE

Edge devices operate as clients of the remote “LET’S” platform. With the VPN BOX 2 server it supports Point-to-Point (P2P) or “Always ON” connections, enabling supervision, management, and continuous monitoring of remote installations on a single virtual LAN.

If-Then-Else MICROCONTROLLER

Edge IoT gateways allow implementation of logic rules involving integrated or external I/Os (acquired or written in shared memory). The configurable control logic (e.g., continuous or event-based writings, alarm sending, data processing, etc.) supports up to 2000 rules.

VOICE-ALARM SENDING

The “voice alarm sending” function enables the device to send audio notifications via phone calls in case of alarm. You can configure custom audio files (.wav) with PCM 8 kHz encoding, played up to 5 times. Alarms can be acknowledged with DTMF tones.

ADVANCED SCRIPTS

Edge devices offer a web server with if-then-else rules programmable via Python, PHP, Bash, and binary scripts. They support files up to 100 KB, with .sh, .php, .py, .bin extensions. Scripts can be executed synchronously (OFF) or asynchronously (ON).

SECURITY

ADVANCED SECURITY AND VPN

Devices offer a high level of security thanks to OpenVPN support with advanced X.509 certificate management. The user can configure every parameter to ensure data protection, secure authentication, and encrypted communications, ensuring maximum reliability of connections.

PENETRATION TEST

Devices offer a high level of security thanks to OpenVPN support with advanced X.509 certificate management. The user can configure every parameter to ensure data protection, secure authentication, and encrypted communications, ensuring maximum reliability of connections.

IIoT

HTTP POST

In the IIoT context, the HTTP POST protocol—based on REST architecture—uses JSON-formatted data to send logs and alarms and to manage data loggers and server configurations (tags, updates, FTP), enabling advanced and efficient communication between devices and systems.

OPC UA

OPC UA is a cross-platform standard based on the Client/Server model. SSD acts as an OPC UA Server, integrable with third-party OPC UA clients for automation and data management, ensuring compliance with major security protocols such as SSL/TLS and X.509 certificates.

CLOUD SUPPORT

Edge devices connect machines, plants, and decentralized I/O to cloud platforms via HTTP/MQTT. “Easy Cloud” technology ensures two-way connectivity with major clouds, including Cumulocity, ADM 4.0, and Onsystem, thanks to preconfigured MQTT-based templates.

OpenVPN

Edge devices support the OpenVPN software and technology used to create secure point-to-point encrypted tunnels. They also allow hosts to authenticate each other using shared private keys, digital certificates, or user/password credentials.

MQTT

Edge devices support IoT with the MQTT/MQTTS protocol, ideal for real-time data transmissions and M2M connections. MQTT client configuration is performed via Web Server. For secure connections (SSL/TLS) digital certificates can be used, ensuring reliability and protection.

WEB SERVER

For advanced configuration and operation needs—especially in terms of connectivity and control logic—Edge devices integrate a Web Server that ensures complete remote configurability of the device from a specific IP address.

HARDWARE & PLC

IEC 61131-3 CONTROLLER

Edge device versions with Straton IEC 61131-3 softPLC implement customized control logic. They adapt to different architectures, meet the needs of complex systems, optimize processes, and meet specific hardware requirements.

ENERGY CONTROLLER

“Energy” versions of Edge devices support IEC 60870-101/104 and IEC 61850 for power automation. They ensure interoperability, remote control, and smart-grid management, adapting to complex scenarios with advanced control and scalable solutions.

PLC MODES

Devices offer three operating modes configurable to user needs. The “None” mode disables the PLC, allowing use as a multifunction gateway. The “Legacy” mode ensures backward compatibility with ZNET-4 and previous firmware. The “Shared” mode enables an advanced PLC with integrated gateway functions.

INTEGRATED I/O

IIoT Edge gateways integrate analog and/or digital channels, configurable DI/DO with PNP inputs and internal power. These I/Os provide flexibility for remote monitoring and control of industrial devices, facilitating automation and integration with third-party systems.

CERTIFICATIONS

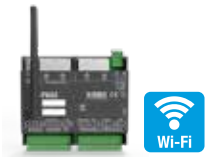
UL CERTIFICATION

Having passed very stringent tests for potential fire, electric-shock, and mechanical-fault risks, many IIoT Edge devices carry international UL (Underwriters Laboratories) certification. The standard meets the most comprehensive requirements for the North American market.

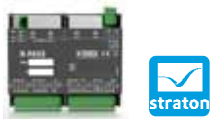
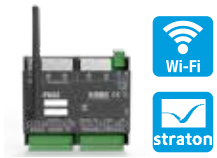
Certified Device

A “Certified Device Cumulocity” is a device compatible with the Cumulocity IoT platform and certified for seamless integration. It ensures connectivity, interoperability, and security, facilitating monitoring and remote management of industrial assets, sensors, and machines.

MULTIFUNCTION IIoT EDGE GATEWAY

	Z-PASS1-RT	Z-PASS2-RT-4G	R-PASS-0-4-0	R-PASS-W-4-0
				
	IIoT Edge Gateway, integrated I/O	**IIoT Edge Gateway / 4G Router, GPS, integrated I/O**	**Compact multifunction IIoT Gateway with 4 Ethernet ports**	**Compact multifunction IIoT Gateway, Wi-Fi, 4 Ethernet ports**
GENERAL DATA				
Power Supply	11..40 Vdc		10..40 Vdc; 19..28 Vac	
Max Consumption	6 W	11 W	8 W	8 W
Battery / UPS	-	-	With additional R-COMM module	
Max isolation	1.5 kVac			
LED status indicators	Power, Run; I/O Status; VPN Status; VPN Connection; RX/TX serial communication; Ethernet Link/Traffic	Power, Run; I/O Status; VPN Status; VPN Connection; RX/TX serial communication; Ethernet Link/Traffic; 4G/LTE Level; Registered Modem; Data Connection; GPS; Battery; Modem Power	Power; Log; Status; Serial Communication; Ethernet Communication; VPN Connection; I/O Status	Power; Log; Status; Serial Communication; Ethernet Communication; VPN Connection; Wi-Fi Communication I/O Status
Protection Grade	IP20			
Connections	Pluggable terminal block, pitch 3.5 mm, cable section 1.5 mm^2			
	IDC10 power/bus connector		-	-
Flash Memory (data)	≥4 GB			
RAM	512 MB			
Slot for SD card	Yes, Max 32GB		-	-
I/O Channels	#6 DI/DO configurable, #2 AI (mA,V)		#4 DI, #4 DO, #2 AI (mA, V)	
Operating Temperature	-25..+65°C		-20..+65°C	
Dimensions (WxHxD)	35 x 102.5 x 111 mm	52.5 x 102.5 x 111 mm	106 x 90 x 32 mm	
Weight	Approximately 240 g	Approximately 270 g	170 g	
Enclosure	PA6 glass-fiber reinforced		PC / ABS self-extinguishing material UL94-V0	
Installation	For 35 mm DIN rail IEC EN 60715		On DIN rail EN 60715, wall / panel mounted	
Certifications	CE, UKCA			
COMMUNICATION				
Ethernet Ports (ETH1, ETH2)	#2 Fast Ethernet 10/100Tx ports (RJ45)		No. 4 Fast Ethernet 10/100Tx ports (RJ45)	
Serial ports	#1 RS232 / RS485 port, max baud rate 115kbps			
	#2 RS485 ports, max baud rate 115kbps		#1 RS485 port, max baud rate 115kbps	
USB Ports	#1 USB host port on side type A connector			
	-	#1 micro USB port for debugging		
Modem	-	Multiband M2M/IoT, 4G / LTE World Wide	Optional (R-COMM)	
Sat Receiver.	-	GPS / GLONASS / BeiDou (compass) / Galileo / QZSS	-	-
Wi-Fi	-	-	-	Integrated WiFi 802.11 b/g/n, band 2.4 ÷2.4835GHz, max Output Power: 17dBm (50 mW), security WEP / WPA / WPA2
Serial protocols	ModBUS TCP server, ModBUS RTU master/slave, FTP/SFTP server, HTTP/HTTPS server, SNMP		ModBUS TCP-IP Server/Client, ModBUS RTU Master/Slave, FTP/FTPs Client, FTP/sFTP Server, HTTP/HTTPS server, SMTPs client, Samba	
IoT Protocols	MQTT, MQTTs, OPC UA Server, https, http post			
Connectivity	Max TCP-IP Clients 50, Max ModBUS RTU/ASCII slave nodes 128 per port, Memory area for 2,000 variables (tags)			
SECURITY				
Authentication	Two-factor authentication (Google Authenticator)			
Permission Management	Supervisor / Users / Groups			
Encryption algorithm (data encryption)	AES-256-CBC + Auth SHA-256, or user-selectable			
Security Protocols	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS, TLS 1.2 or higher			
SSL/TLS Certificates	Automated TLS certificate management for HTTPS			
Cybersecurity certificates (penetration test)	Yes. MITRE CWE, OWASP WSTG, OSSTMM, CVSS v3.1, IEC 62443-4-2			
SETTINGS AND ADVANCED FUNCTIONS				
Programming	Web Server			
VPN Management Software	OpenVPN, VPN Client Communicator			
Management tools	SDD (Seneca Discovery Device), SESC (Seneca Ethernet to Serial Connection)			
If Then Else Logic	Yes			
LET'S Support	Yes			
PLC modes "None," "Legacy," "Shared"	Yes			
Voice-alarm sending	Yes			
Script execution for complex algorithms	Yes			
Third-Party Cloud Support (EASY CLOUD)	Yes			
ORDER CODES	Z-PASS1-RT	Z-PASS2-RT-4G	R-PASS-0-4-0	R-PASS-W-4-0

The technical data and diagrams in this document are indicative and not binding.

	Z-PASS2-RT-4G-S	R-PASS-0-4-S	R-PASS-W-4-S
			
	IIoT Edge Gateway / 4G Router, GPS / SoftPLC Straton	**Compact multifunction IIoT Gateway / SoftPLC Straton, 4 Ethernet ports**	**Compact multifunction IIoT Gateway, Wi-Fi / SoftPLC Straton, 4 Ethernet ports**
GENERAL DATA			
Power Supply	11..40 Vdc	10..40 Vdc; 19..28 Vac	
Max Consumption	11 W	8 W	
Battery / UPS	-	With additional R-COMM module	
Max isolation	1.5 kVac		
LED status indicators	Power, Run; I/O Status; VPN Status; VPN Connection; RX/TX serial communication; Ethernet Link/Traffic; 4G/LTE Level; Registered Modem; Data Connection; GPS; Battery; Modem Power	Power; Log; Status; Serial Communication; Ethernet Communication; VPN Connection; I/O Status	Power; Log; Status; Serial Communication; Ethernet Communication; VPN Connection; Wi-Fi Communication I/O Status
Protection Grade	IP20		
Connections	Pluggable terminal block, pitch 3.5 mm, cable section 1.5 mm²		
	IDC10 power/bus connector	-	-
Flash Memory (data)	≥4 GB		
RAM	512 MB		
Slot for SD card	Yes, Max 32GB		
I/O Channels	#6 DI/DO configurable, #2 AI (mA,V)	#4 DI, #4 DO, #2 AI (mA, V)	
Operating Temperature	-25..+65°C	-20..+65°C	
Dimensions (WxHxD)	52.5 x 102.5 x 111 mm	106 x 90 x 32 mm	
Weight	Approximately 270 g	170 g	
Enclosure	PA6 fiberglass reinforced, black color	PC / ABS self-extinguishing material UL94-V0, black color	
Installation	For 35 mm DIN rail IEC EN 60715	On DIN rail EN 60715, wall / panel mounted	
Certifications	CE, UKCA		
COMMUNICATION			
Ethernet Ports (ETH1, ETH2)	No. 2 Fast Ethernet 10/100Tx ports with front RJ45 connector	#4 Fast Ethernet 10/100Tx ports with front RJ45 connector	
Serial ports (COM1, COM2, COM4)	#1 RS232 / RS485 port on terminals, max baud rate 115kbps		
	#1 RS485 port, max baud rate 115kbps via terminals		
	#1 RS485 port, max baud rate 115kbps via IDC10 connector for bus and terminals	-	-
USB Ports	#1 USB host port on side type A connector	#1 USB host port on side type A connector	
	#1 micro USB port for debugging		
Modem	Multiband M2M/IoT, 4G / LTE World Wide	Optional (R-COMM)	
Sat Receiver.	GPS / GLONASS / BeiDou (compass) / Galileo / QZSS	-	-
Wi-Fi	-	-	Integrated WiFi 802.11 b/g/n, band 2.4 ÷2.4835GHz, max Output Power: 17dBm (50 mW), security WEP / WPA / WPA2
Serial protocols	ModBUS TCP server, ModBUS RTU master/slave, FTP/SFTP server, HTTP/HTTPS server, SNMP	ModBUS TCP-IP Server/Client, ModBUS RTU Master/Slave, FTP/FTPs Client, FTP/sFTP Server, HTTP/HTTPS server, SMTPs client, Samba	
IoT Protocols	MQTT, MQTTs, OPC UA Server, https, http post		
Connectivity	Max TCP-IP Clients 50, Max ModBUS RTU/ASCII slave nodes 128 per port, Memory area for 2,000 variables (tags)		
SECURITY			
Authentication	Two-factor authentication (Google Authenticator)		
Permission Management	Supervisor / Users / Groups		
Encryption algorithm (data encryption)	AES-256-CBC + Auth SHA-256, or user-selectable		
Security Protocols	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS, TLS 1.2 or higher		
SSL/TLS Certificates	Automated TLS certificate management for HTTPS		
Cybersecurity certificates (penetration test)	Yes. MITRE CWE, OWASP WSTG, OSSTMM, CVSS v3.1, IEC 62443-4-2		
SETTINGS AND ADVANCED FUNCTIONS			
Programming	Web Server		
VPN Management Software	OpenVPN, VPN Client Communicator		
Management tools	SDD (Seneca Discovery Device), SESC (Seneca Ethernet to Serial Connection), SMS network and IO management		
If Then Else Logic	Yes		
LET'S Support	Yes		
PLC Programming	IEC 61131-3 (Straton)		
Max # PLC variables/tags	1,000		
PLC program size	2.048kB		
PLC modes "None," "Legacy," "Shared"	Yes		
Voice-alarm sending	Yes		
Script execution for complex algorithms	Yes		
Third-Party Cloud Support (EASY CLOUD)	Yes		
ORDER CODES	Z-PASS2-RT-4G-S	R-PASS-0-4-S	R-PASS-W-4-S

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MULTIFUNCTION IIoT EDGE GATEWAY + PLC + ENERGY PROTOCOLS

	Z-PASS2-RT-4G-E	R-PASS-0-4-E	R-PASS-W-4-E
			
	IIoT Edge Gateway / 4G Router, GPS, SoftPLC Straton with energy protection	**Compact multifunction IIoT Gateway / SoftPLC Straton with energy protection, 4 Ethernet ports**	**Compact multifunction IIoT Gateway / SoftPLC Straton with Energy, Wi-Fi, 4 Ethernet ports**
GENERAL DATA			
Power Supply	11..40 Vdc	10..40 Vdc; 19..28 Vac	
Max Consumption	11 W	8 W	
Battery / UPS	-	With additional R-COMM module	
Max isolation	1.5 kVac	1.5 kVac	1.5 kVac
LED status indicators	Power, Run; I/O Status; VPN Status; VPN Connection; RX/TX serial communication; Ethernet Link/Traffic; 4G/LTE Level; Registered Modem; Data Connection; GPS; Battery; Modem Power	Power; Log; Status; Serial Communication; Ethernet Communication; VPN Connection; I/O Status	Power; Log; Status; Serial Communication; Ethernet Communication; VPN Connection; Wi-Fi Communication I/O Status
Protection Grade	IP20		
Connections	Pluggable terminal block, pitch 3.5 mm, cable section 1.5 mm^2		
	IDC10 power/bus connector	-	
Flash Memory (data)	≥4 GB		
RAM	512 MB		
Slot for SD card	Yes, Max 32GB	-	
I/O Channels	#6 DI/DO configurable, #2 AI (mA,V)	#4 DI, #4 DO, #2 AI (mA, V)	
Operating Temperature	-25..+65°C	-20..+65°C	
Dimensions (WxHxD)	52.5 x 102.5 x 111 mm	106 x 90 x 32 mm	
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USB Ports	#1 USB host port on side type A connector	#1 USB host port on side type A connector	
	#1 micro USB port for debugging		
Modem	Multiband M2M/IoT, 4G / LTE World Wide	Optional (R-COMM)	
Sat Receiver.	GPS / GLONASS / BeiDou (compass) / Galileo / QZSS	-	-
Wi-Fi	-	-	Integrated WiFi 802.11 b/g/n, band 2.4 ÷2.4835GHz, max Output Power: 17dBm (50 mW), security WEP / WPA / WPA2
Serial protocols	ModBUS TCP server, ModBUS RTU master/slave, FTP/SFTP server, HTTP/HTTPS server, SNMP	ModBUS TCP-IP Server/Client, ModBUS RTU Master/Slave, FTP/FTPs Client, FTP/sFTP Server, HTTP/HTTPS server, SMTPs client, Samba	
IoT Protocols	MQTT, MQTTs, OPC UA Server, https, http post		
Energy Protocols	IEC60870-101 Master / Slave IEC60870-104 Client / Server IEC61850 Client/Server		
Connectivity	Max TCP-IP Clients 50, Max ModBUS RTU/ASCII slave nodes 128 per port, Memory area for 2,000 variables (tags)		
SECURITY			
Authentication	Two-factor authentication (Google Authenticator)		
Permission Management	Supervisor / Users / Groups		
Encryption algorithm (data encryption)	AES-256-CBC + Auth SHA-256, or user-selectable		
Security Protocols	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS, TLS 1.2 or higher		
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Management tools	SDD (Seneca Discovery Device), SESC (Seneca Ethernet to Serial Connection), SMS network and IO management		
If Then Else Logic	Yes		
LET'S Support	Yes		
PLC Programming	IEC 61131-3 (Straton)		
Max # PLC variables/tags	1,000		
PLC program size	2.048kB		
PLC modes "None," "Legacy," "Shared"	Yes		
Voice-alarm sending	Yes		
Script execution for complex algorithms	Yes		
Third-Party Cloud Support (EASY CLOUD)	Yes		
ORDER CODES	Z-PASS2-RT-4G-E	R-PASS-0-4-E	R-PASS-W-4-E

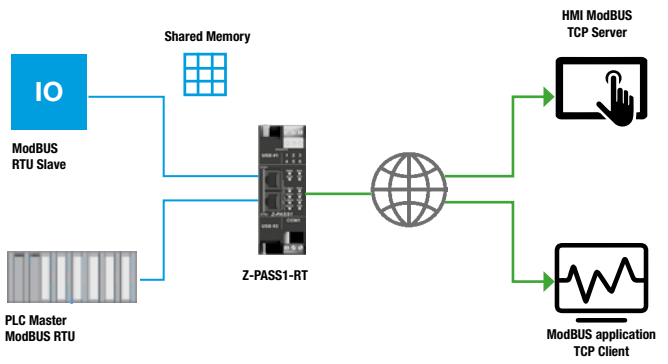
The technical data and diagrams in this document are indicative and not binding.

	SSD-0-0-0-0	SSD-0-L-V-I	SSD-S-L-V-I	SSD-E-L-V-I
				
	Multifunction HMI, Gateway	**Multifunction HMI / IIoT Gateway**	**Multifunction HMI / IIoT Gateway / IEC 61131-3 Controller**	**Multifunction HMI / IIoT Gateway / IEC 61131-3 Controller with IEC 61850/IEC 60870 protocols**
HMI / DISPLAY DATA				
Screen	7" backlit TFT LCD, scratch-resistant glass, touchscreen			
Resolution	800 x 480 pixels			
Format	16/9			
Colors	16 million			
Display modes	Standard widget-based display / Remote display (on PC and devices with any OS) / Display on Display (R203 Series display emulation)			
Alarm management (Real-Time, History)	Yes			
Total no. of tags	Max 2,000			
Chart management (Real-Time, Historical, Histogram)	Yes			
Synoptics	Max 20			
Widgets	Max 400 (up to No. 40 R203 in daisy chain)			
GENERAL DATA				
Power Supply	24 Vdc/ac +/- 10%			
Consumption	AC: Max. 16 VA, 10 W; DC: Max. 9 W			
Status Indicators	Ethernet Link and Traffic			
Protection Grade	IP64 (front panel with membrane)			
Processor	ARM 800 MHz			
Flash Memory (data)	≥4 GB			
RAM	512 MB			
Configurable DI/DO	#2 digital channels (PNP inputs with internal power)			
Operating temperature	-20 °C..+70 °C			
Dimensions (WxHxD)	192 × 127 × 32 mm			
Panel cutout dimensions (WxH)	157x102 mm			
Weight	Approximately 420 g			
Enclosure	ABS, black color			
Installation	From panel or via mounting brackets or wall support (503 flush-mount boxes)			
Certifications	CE, UKCA			
COMMUNICATION				
Ethernet Ports	#2 Fast Ethernet 10/100Tx ports on the rear RJ45			
Serial Ports	No. 1 RS-232 / switchable 485 serial port, max 115 kbps / No. 1 RS-485 port, max baud rate 115 kbps			
USB Ports	No. 1 USB HOST port / No. 1 USB serial port for debug software			
Wi-Fi	WiFi 802.11 b/g/n, frequency band 2.4 to 2.4835 GHz			
Max # TCP-IP Clients (Server Mode)	50			
Max No. of TCP-IP Servers (Client Mode)	25			
Max No. of Tags	2000			
Max No. of Modbus RTU/ASCII serial nodes	128			
Security	Penetration test, X.509 certificates	TLS 1.2/1.3, penetration test, X.509 certificates		
Basic protocols (Modbus RTU / TCP-IP, FTP/SFTP Server, SSL)	Yes	Yes	Yes	Yes
Advanced protocols (OpenVPN, HTTP/HTTPS Server, HTTP(S) POST, MQTT(S), OPC UA Client/Server)	-	Yes	Yes	Yes
Monitoring and industrial protocols (SNMP v2, S7 Client, M-BUS)	-	-	Yes	Yes
Energy protocols (IEC 61850, IEC 60870)	-	-	-	Yes
OPERATING MODES				
Physical / virtual display	Yes			
Modbus Gateway	From Modbus TCP-IP to Modbus RTU (Slave)			
Serial Device Server	Yes			
Serial Sniffer	Yes			
Wi-Fi router	Yes			
NAT 1:1 and Static Router	Yes			
Datalogger	Yes			
IIoT Edge Gateway	-	Yes		
Remote alarm unit	-	Yes		
VPN module for remote access	-	Yes		
Microcontroller (If-Then-Else logic)	-	Yes		
IEC 61131-3 controller		-	Yes; Straton IDE; cycle time ≥1 ms; programming languages ST, LD, FBD, IL, SFC; function blocks for Modem, VPN, FTP, EMAIL, MeterBUS, S7 Client, watchdog, Linux shell	
Energy Controller (IEC 61131-3 + IEC 61850/60870)		-	-	Yes
SETTINGS & ADVANCED FUNCTIONS				
Web server	Yes, status information, setup, alarms, charts, widgets			
VPN client software	VPN Client Communicator			
Firmware Upgrade	From web page or via USB stick			
Advanced diagnostics	Yes	Yes	Yes	Yes
PLC modes "None," "Legacy," "Shared"	Yes			
Voice-alarm sending	Yes			
Script execution for complex algorithms	Yes			
Third-Party Cloud Support (EASY CLOUD)	Yes			
ORDER CODES	SSD-0-0-0-0	SSD-0-L-V-I	SSD-0-L-V-I	SSD-E-L-V-I

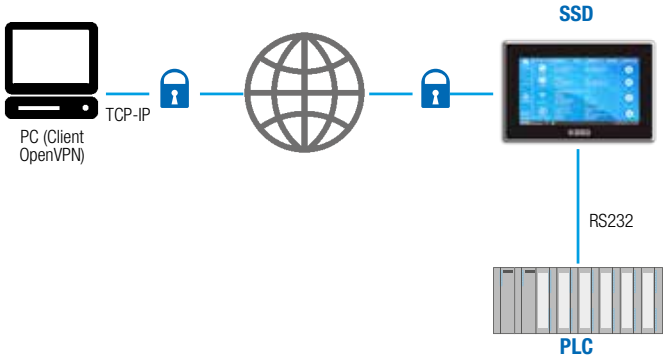
The technical data and diagrams in this document are indicative and not binding.

APPLICATION DIAGRAMS

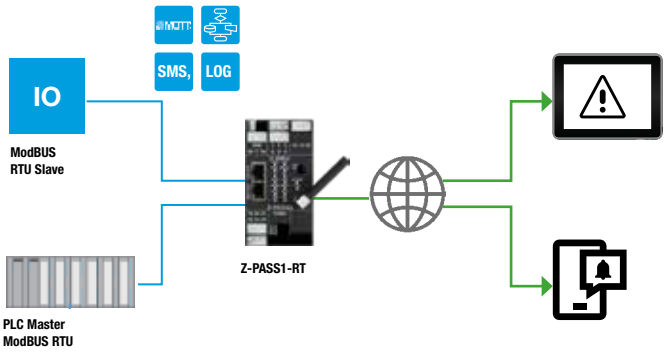
GATEWAY MODBUS SHARED MEMORY



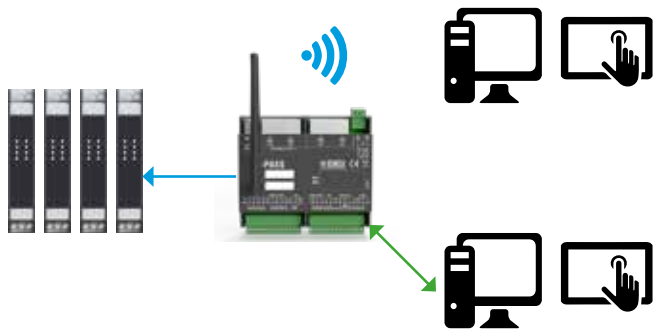
TRANSPARENT GATEWAY



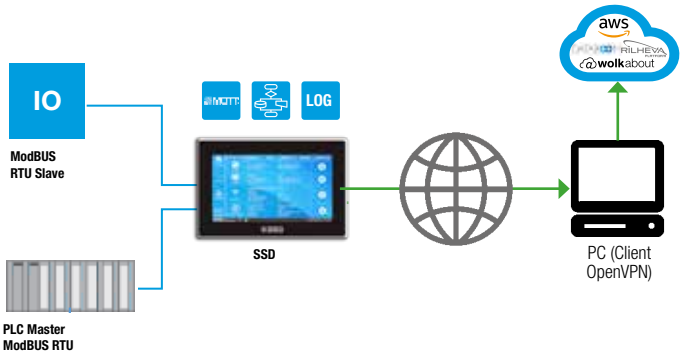
REMOTE ALARM



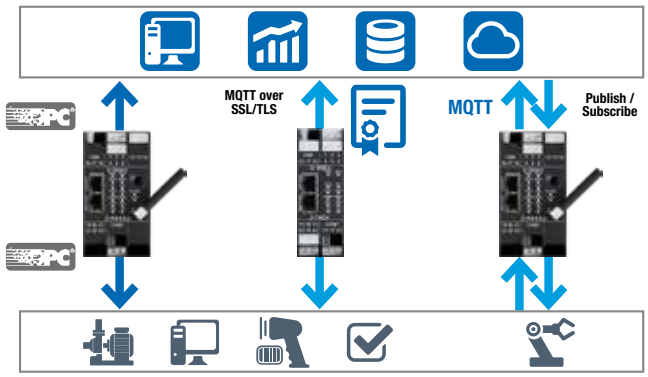
WI-FI Gateway



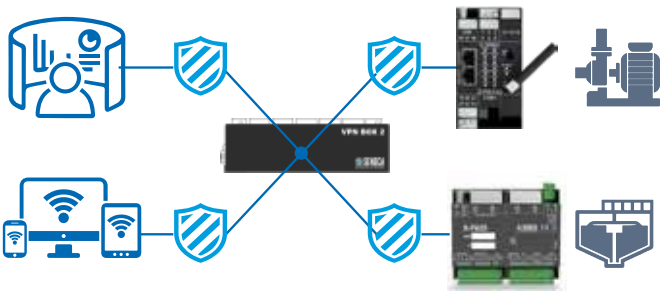
DATALOGGER / CLOUD GATEWAY



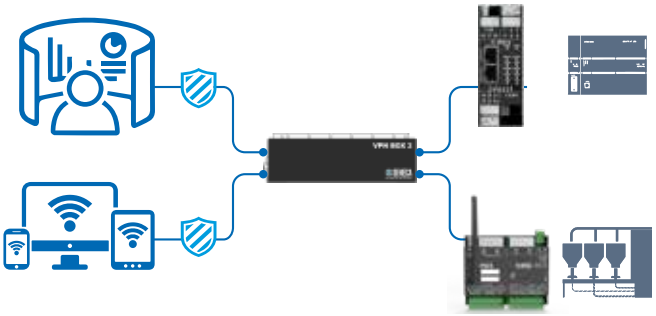
IIOT Connections



Remote Control SINGLE LAN



Remote Assistance POINT-TO-POINT





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