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IIoT EDGE DEVICES



 **SENECA**
www.seneca.it

IloT EDGE DEVICES


SENECA's Industrial IoT Edge computing devices are multipurpose with advanced functionality such as gateway, datalogger, alarm management, Wi-Fi router, logical 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 IloT 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.


MODELS

GATEWAY
EDGE
IloT


SOFTPLC
IEC 61131




Z-PASS1-RT



Z-PASS2-RT-4G




R-PASS-0-4-0




R-PASS-W-4-0


SOFTPLC
IEC 61131
IEC 60870
IEC 61850



Z-PASS2-RT-4G-S




R-PASS-0-4-S




R-PASS-W-4-S

HMI



SSD



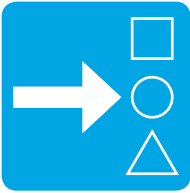
R-COMM

Auxiliary module that interfaces directly with the R-PASS modules, providing modem and mini UPS functionalities.
Available in 2 versions:
R-COMM-0-4GWW
R-COMM-B-4GWW

OPERATION AND CONNECTIVITY

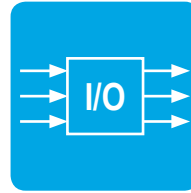
	GATEWAY				GATEWAY + SOFTPLC			GATEWAY+SOFTPLC+ ENERGY PROTECTION			GATEWAY+HMI
	R-PASS-0-4-0	R-PASS-W-4-0	Z-PASS1-RT	Z-PASS2-RT-4G	R-PASS-0-4-S	R-PASS-W-4-S	Z-PASS2-RT-4G-S	R-PASS-0-4-E	R-PASS-W-4-E	Z-PASS2-RT-4G-E	SSD
GATEWAY FEATURES											
ModBUS / Ethernet Serial Gateway	X	X	X	X	X	X	X	X	X	X	X
Shared memory gateway - Gateway with Tag	X	X	X	X	X	X	X	X	X	X	X
Transparent Gateway / Serial Device Server	X	X	X	X	-	-	-	-	-	-	X
IloT / Edge / MQTT Gateway	X	X	X	X	X	X	X	X	X	X	Dashboard
ROUTING											
Router LAN	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
Advanced Router - Nat 1:1 & Static Router	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
Remote alarm unit	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	Dashboard
If-Then-Else logical rules	X	X	X	X	-	-	-	-	-	-	Dashboard
SoftPLC IEC 61131	-	-	-	-	X	X	X	X	X	X	-
Energy Controller IEC 60870/61850	-	-	-	-	-	-	-	X	X	X	-
HMI											
Widgets and Synoptics on HMI	X	X	X	X	X	X	X	X	X	X	X
Remote Display	X	X	X	X	X	X	X	X	X	X	X
7" LCD capacitive touch display	-	-	-	-	-	-	-	-	-	-	X

HIGHLIGHTS



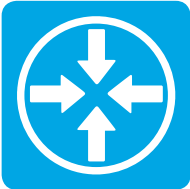
Multifunctional devices

Z-PASS1 and Z-PASS2 are multifunction IoT devices: Modbus Gateway for data acquisition of up to 2000 tags (shared memory mode) with data logging and the ability to process data (If Then Else Logic); Transparent Gateways for extending serial communications via Ethernet/3G+/4G/VPN networks; Routers with Firewall, DynDNS, DHCP Server; Remote Assistance Units.



Integrated I/O

The integrated I/O expands input/output capabilities for general use. For diagnostic, security, and monitoring functions, the devices integrate DI/DO channels, which can be individually configured as digital inputs or outputs. The gateways also feature analog I/O for exchanging data with the field.



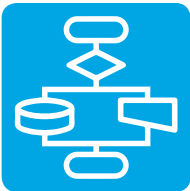
High connectivity

Equipped with Fast Ethernet ports, serial ports, and USB, the Edge gateways support ModBUS RTU / TCP-IP, FTP/FTPs, HTTP/HTTPS, OpenVPN, SSL/TLS, and Wi-Fi protocols. The Z-PASS2 models with 4G/LTE, SIM, and integrated GPS/GNSS function as 4G routers, capable of instantly sharing connections. Thanks to the external R-COMM modem, the R-PASS models provide 4G functionality, GPS receiver, and UPS battery.



Multilevel Cybersecurity

In IoT gateways, cybersecurity is of fundamental importance. Particularly ensuring security at the Edge level reduces the attack surface and is guaranteed by mechanical blocking of remote access, LAN/WAN separation, two-factor authentication, advanced access management, data encryption, OpenVPN protocols, HTTPS Server, TLS certificates for HTTPS, penetration testing compliant with OASWAP, NITS 800 115, Risk Analysis, IEC 62443.



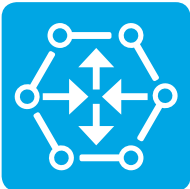
Integrated If-Then-Else Logic

The Edge IoT gateways allow the implementation of logic rules that involve integrated or external I/O (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.



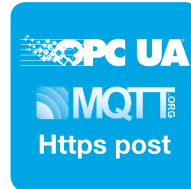
Data logging function

In Modbus Gateway functionality with Shared Memory, the Edge IoT gateways can also activate the "Data Logger" mode, capable of handling up to 1000 log files / 100,000 samples. The tag values, associated with up to 4 groups with different sampling and transfer periods, are stored in log files. File transfer can be performed via USB stick, FTP server, email, HTTP post, MQTT.



NAT 1:1 and Advanced Routing

The NAT 1:1 and Static Router functionalities enable direct communication between the corporate WAN and automation LAN (which by default are independent and do not communicate with each other). They also allow the redirection of outgoing traffic from a device to a particular host or subnet.



IIoT Protocols

The IIoT gateways operate as OPC UA Servers and can be used in automation and data management applications with OPC UA clients from other manufacturers. They also support the MQTT protocol (Message Queue Telemetry Transport), ideal for real-time data transmission and M2M connections, and HTTP post communication for sending log samples and events, as well as advanced data logger and server settings management.



Remote Assistance Support

The Edge IIoT gateways also function as Client devices for the remote access platform to machines and plants "LET'S". Through the VPN BOX 2 Server, it is possible to implement Point-to-Point and On-Demand (P2P) connections to the field or create virtual networks, for "Always ON" connections for supervision, management, and monitoring of remote plants (Single LAN).



Easy Cloud Support

The Edge IIoT gateways can connect machines, plants, and thousands of field I/Os, ensuring compatibility with the most widespread IoT Cloud platforms via MQTT(s) and HTTP(s) protocols, simplifying configuration procedures with some of them.



Wi-Fi (option)


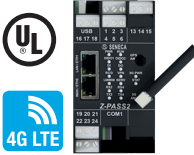


The gateways equipped with a 2.4 GHz 802.11 b/g/n Wi-Fi module ensure router or redundant network unit functionalities. It is also possible to select the Station mode (connection to an existing Wi-Fi access point) or Access Point mode (which other devices can connect to).



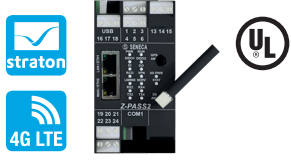
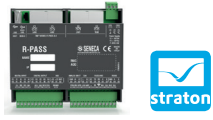
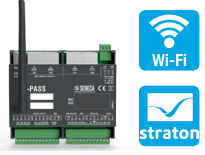
SoftPLC IEC 61131-3 (option)

The gateways that include the Straton IEC 61131-3 softPLC platform combine PLC tasks with web server, data logger, remote control, remote assistance, and energy management functionalities (in compliance with IEC 60870-101/104, IEC 61850 protocols). The devices can be used with different architectures and configurations depending on the system complexity and hardware requirements.

IIoT EDGE DEVICES


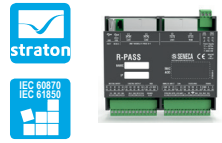

	Z-PASS1-RT	Z-PASS2-RT-4G	R-PASS-0-4-0	R-PASS-W-4-0
				
	IIoT Edge Gateway, integrated I/O	IIoT Edge Gateway / 4G Router, GPS, integrated I/O	Compact multifunction IIoT Gateway with 4 Ethernet ports	Compact multifunction IIoT Gateway, Wi-Fi, 4 Ethernet ports
GENERAL DATA				
Power Supply	11..40 Vdc		10..40 Vdc; 19..28 Vac	
Max Consumption	6 W	6 W	8 W	8 W
Battery / UPS	-	-	With additional R-COMM module	
Max isolation	1.5 kVdc			
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 class	IP20			
Connections	Removable terminal block, 3.5 mm pitch, 1.5 mm ² cable section			
	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)		#24 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		
CAN Port	#1 CAN port (terminals)			
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/FTP 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)		User / Password	
Permission Management	Supervisor / Users / Groups		Supervisor	
Encryption algorithm (data encryption)	OpenVPN AES-256bit-CBC + Auth SHA256 bit or user-selectable		OpenVPN BF-CBC + Auth SHA1	
Security Protocols	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS, TLS 1.2 or higher		OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS	
SSL/TLS Certificates	Automated TLS certificate management for HTTPS		-	-
Cybersecurity certificates (penetration test)	Yes, OWASP, NIST 800-115, Risk Analysis, IEC62443		-	-
SETTINGS				
Programming	WEB SERVER		Web Server, EASY SETUP 2	
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			
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	6 W	8 W	
Battery / UPS	-	With additional R-COMM module	
Max isolation		1.5 kVdc	
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 class		IP20	
Connections	IDC10 power/bus connector	Removable terminal block, 3.5 mm pitch, 1.5 mm ² cable section	
Flash Memory (data)		-	
RAM		≥4 GB	
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)	#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	
USB Ports	#1 RS485 port, max baud rate 115kbps via IDC10 connector for bus and terminals #1 USB host port on side type A connector	- #1 USB host port on side type A connector #1 micro USB port for debugging #1 CAN port (terminals)	
CAN Port		Optional (R-COMM)	
Modem	Multiband M2M/IoT, 4G / LTE World Wide		
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/FTP's Client, FTP/sFTP Server, HTTP/HTTPS server, SMTTPs 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			
LAN / WAN separation		Yes	
Authentication	Two-factor authentication (Google Authenticator)	User / Password	
Permission Management	Supervisor / Users / Groups	Supervisor	
Encryption algorithm (data encryption)	OpenVPN AES-256bit-CBC + Auth SHA256 bit or user-selectable	OpenVPN BF-CBC + Auth SHA1	
Fixed TCP-IP ports for remote assistance	Yes	Yes	Yes
Security Protocols	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS, TLS 1.1,2 or higher	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS	
SSL/TLS Certificates	Automated TLS certificate management for HTTPS	-	-
Cybersecurity certificates (penetration test)	Yes, OWASP, NIST 800-115, Risk Analysis, IEC62443	-	-
SECURITY			
Programming	WEB SERVER	Web Server, EASY SETUP 2	
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		2048 kB	
ORDER CODES	Z-PASS2-RT-4G-S	R-PASS-0-4-S	R-PASS-W-4-S

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

IIoT EDGE DEVICES

	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	6 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 class	IP20		
Connections	Removable terminal block, 3.5 mm pitch, 1.5 mm ² cable section		
	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	
GENERAL DATA			
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Serial ports (COM1, COM2, COM4)	#1 RS485 port, max baud rate 115kbps via IDC10 connector for bus and terminals	#1 RS232 / RS485 port on terminals, max baud rate 115kbps	#1 RS485 port, max baud rate 115kbps via terminals
USB Ports	#1 USB host port on side type A connector	#1 USB host port on side type A connector	
CAN Port		#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/FTP 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)	User / Password	
Permission Management	Supervisor / Users / Groups	Supervisor	
Encryption algorithm (data encryption)	OpenVPN AES-256bit-CBC + Auth SHA256 bit or user-selectable	OpenVPN BF-CBC + Auth SHA1	
Security Protocols	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS, TLS 1..2 or higher	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS	
SSL/TLS Certificates	Automated TLS certificate management for HTTPS	-	-
Cybersecurity certificates (penetration test)	Yes, OWASP, NIST 800-115, Risk Analysis, IEC62443	-	-
SECURITY			
Programming	WEB SERVER	Web Server, EASY SETUP 2	
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		2048 kB	
ORDER CODES	Z-PASS2-RT-4G-E	R-PASS-0-4-E	R-PASS-W-4-E

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7" touchscreen HMI with gateway, datalogger, remote assistance, and integrated I/O functions

TECHNICAL DATA

HMI DATA

Screen	7" LCD TFT backlit, scratch-resistant glass
Resolution	800 x 480 pixels
Format	16/9
Brightness	350 cd/m2
Colors	16 M
Touchscreen	Capacitive
Durability	30,000 h (backlight level 5)
Viewing angles	70° / 50° / 70° / 70° (Top, Bottom, Left, Right)
Display Functionality	Standard widget-based display Remote display (on PC and devices with any O.S.) Display on Display (display emulation)

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
Connections	#1 Removable terminal block, 3.5 mm pitch, 10 ways
Protection class	IP64 (front panel with membrane)
Operating temperature	-20 °C..+60 °C
Dimensions (WxHxD)	192 x 127 x 32 mm
Panel cutout dimensions (WxH)	157x102 mm
Weight	Approximately 420 g
Enclosure	ABS, black color
Installation	Via mounting brackets or wall mount

COMMUNICATION

Ethernet Ports	#2 Fast Ethernet 10/100Tx ports on the rear RJ45
Serial Ports	#1 switchable RS232 / 485 serial port, max 115k #1 RS485 port, baud rate max 115kbps
USB Ports	#1 USB OTG port #1 serial USB port for software debugging
WiFi Module	WiFi 802.11 b/g/n, frequency band 2.4 to 2.4835 GHz
Protocols	ModBUS TCP-IP Server/Client, ModBUS RTU Master/Slave, FTP/SFTP Server/Client, HTTP/HTTPS server, OpenVPN, SSL, MQTT, OPC UA, HTTP post
Operating Modes	ModBUS Gateway (Ethernet - Serial, shared memory, transparent gateway, serial tunneling), IoT/Cloud-based gateway, datalogger, alarm management unit, serial sniffer, WiFi router, network redundancy unit, VPN remote assistance/ Remote Control module, microcontroller, LAN/WAN separator

I/O

Configurable DI/DO	#2 digital channels (PNP inputs with internal power)
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PROCESSING & MEMORY

Processor	ARM 800 MHz
Flash Memory (data)	2 / 4 GB
RAM	512 GB
Micro SD card	no

SECURITY

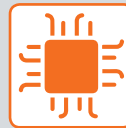
Data Encryption	Blowfish — Blowfish (128bit) in CBC mode
Data Authentication	SHA1 — HMAC using Secure Hash Algorithm (160bit)
Handshake Encryption	TLSv1/SSLv3 RSA-2048 — 2048bit Ephemeral Diffie-Helman (DH)
Service Channel	TLSv1/SSLv3 2048bit certificate
Web server authentication	Yes
Security Protocols	OpenVPN, SSL

SETTINGS & SOFTWARE

DIP Switch	Factory reset
Web server	Yes, status information, setup, alarms, charts, widgets
VPN Management Software	VPN BOX Manager, OpenVPN, VPN Client Communicator
SDD (Seneca Discovery Device)	Yes
SESC (Seneca Ethernet to Serial Connection)	Yes
Firmware update	From web page or USB stick (FAT32)

STANDARDS

Marking / Certifications	CE
Standards	EN 300328, EN 301489-17, EN 301489-1, EN 60368-1, EN 62311



HARDWARE

- Power supply 24Vdc
- Flash Memory 2 / 4 GB
- #2 DI/DO
- Protection degree: IP64 with membrane
- Operating temperature -20..+60 °C



DISPLAY

- Display 7" TFT, 16M colors
- Capacitive multitouch
- Resolution 800x480 pixels
- Standard widget display
- Display on Display
- Remote display



STANDARD COMMUNICATION

- *2 Fast Ethernet ports
- #2 serial ports
- #2 USB ports
- ModBUS RTU
- ModBUS TCP-IP
- Max 32 TCP-IP clients, 2000 tags, 128 slave nodes ModBUS
- Max 244 slave nodes (128 on a single serial without repeater)



CONFIGURATION

- Integrated Web Server
- Widget library
- VPN management software
- Network management software (SDD, SESC)
- DIP switch factory reset
- Firmware update via web or USB pen (Fat32)



IIOT PROTOCOLS

- MQTT
- OPC UA
- http post, https
- FTP / SFTP
- Cloud support
- OpenVPN / SSL



CYBERSECURITY

- Data Encryption: Blowfish — Blowfish (128bit) in CBC mode
- Data Authentication: SHA1 — HMAC using Secure Hash Algorithm (160bit)
- Certification authority provided by VPN BOX
- Handshake Encryption: TLSv1/SSLv3 RSA- 2048 — 2048bit Ephemeral Diffie-Helman (DH)
- Service Channel: TLSv1/SSLv3 2048bit certificate

ORDER CODES

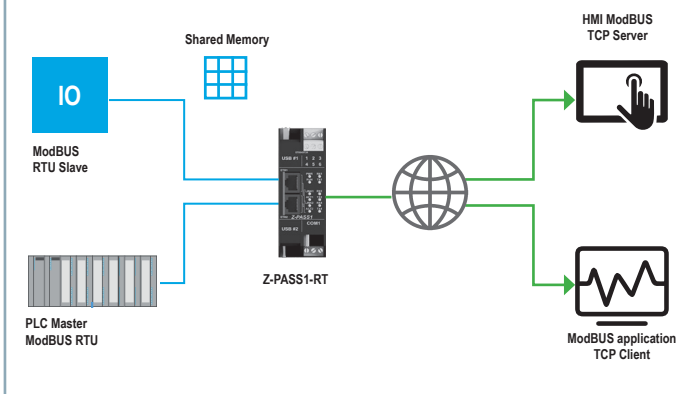
Code	Description
HMI MULTIFUNCTION	
SSD-0-0-0-0	Advanced HMI touchscreen with integrated I/O
SSD-0-L-0-0	Advanced HMI touchscreen with logic and I/O
SSD-0-0-V-0	Advanced HMI touchscreen with VPN and I/O
SSD-0-0-0-I	Advanced HMI touchscreen with IIoT and I/O
SSD-0-L-V-0	Advanced HMI touchscreen with logic, VPN, and I/O
SSD-0-L-0-I	Advanced HMI touchscreen with IIoT, logic, and I/O
SSD-0-0-V-I	Advanced HMI touchscreen with IIoT, VPN, and I/O
SSD-0-L-V-I	Advanced HMI touchscreen with IIoT, logic, VPN, and I/O
UPGRADE	
SSD-UPG-L	SSD - Upgrade "logic" functions
SSD-UPG-V	SSD - Upgrade "VPN" functions
SSD-UPG-I	SSD - Upgrade "IIoT" functions
SSD-UPG-L-V	SSD - Upgrade "logic" and "VPN" functions
SSD-UPG-L-I	SSD - Upgrade "logic" and "IIoT" functions
SSD-UPG-V-I	SSD - Upgrade "VPN" and "IIoT" functions
SSD-UPG-L-V-I	SSD - Upgrade "logic," "VPN," and "IIoT" functions
VPN SERVER	
VPN BOX	Codes and features available at www.seneca.it/linee-di-prodotto/comunicazione-industriale-e-telecontrollo/lets-connectivity-solutions/modulo-server-di-connettivita/vpn-box
IOT/CLOUD SOLUTION	
CLOUD BOX	Codes and features available at www.seneca.it/linee-di-prodotto/comunicazione-industriale-e-telecontrollo/soluzioni-iiot-scada-cloud/cloud-box
SOFTWARE TOOL	
SDD	SENECA Discovery Device, IP scanner
SESC	SENECA Ethernet to Serial Connection
ACCESSORIES	
CE-RJ45-RJ45-R	Straight Ethernet cable (RJ45 / RJ45)
CU-A-MICRO-OTG	Micro USB OTG to USB Type A female adapter cable
MSD	Micro SD memory card with adapter

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

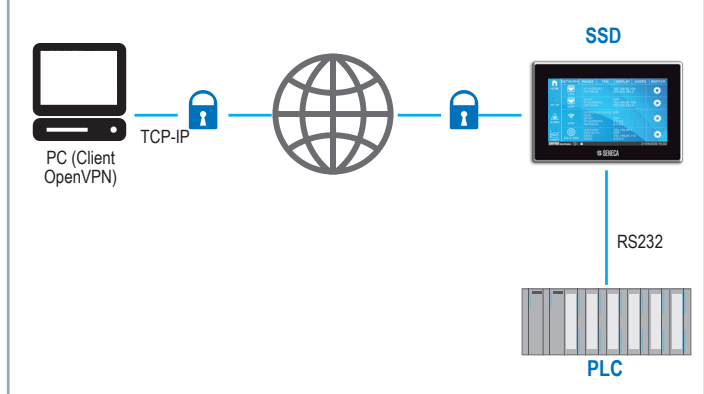
IIoT EDGE DEVICES

APPLICATION DIAGRAMS

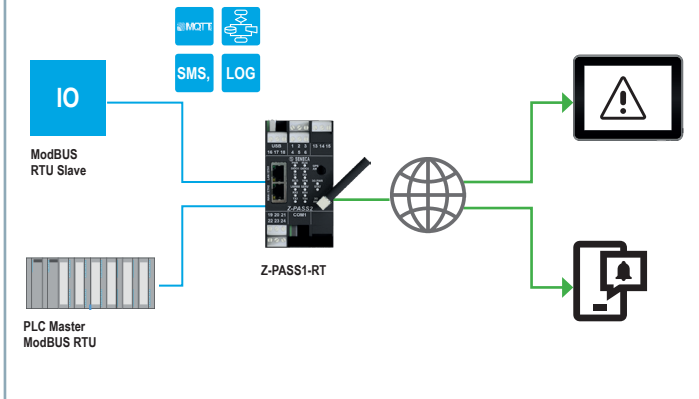
GATEWAY MODBUS SHARED MEMORY



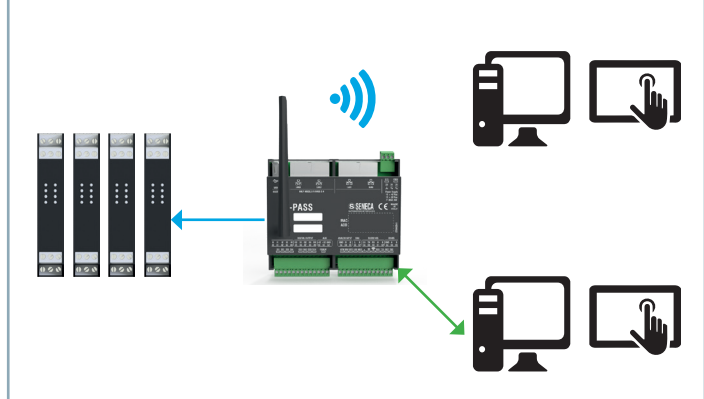
TRANSPARENT GATEWAY



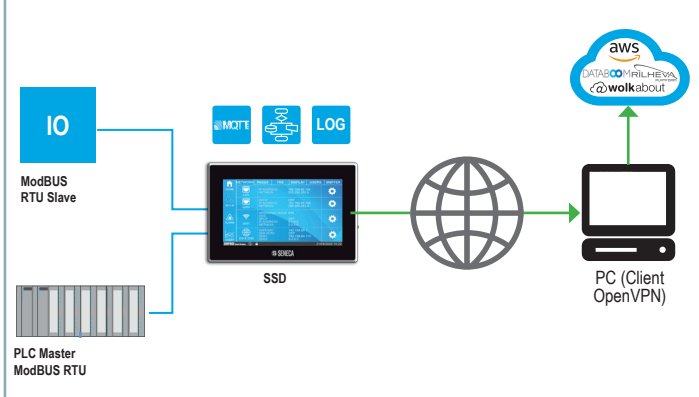
REMOTE ALARM



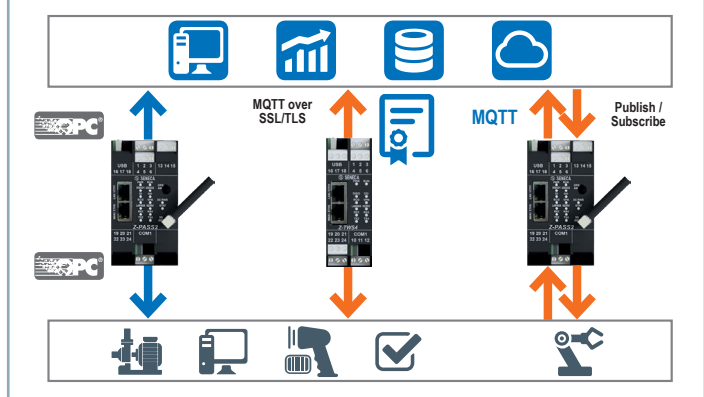
WI-FI Gateway



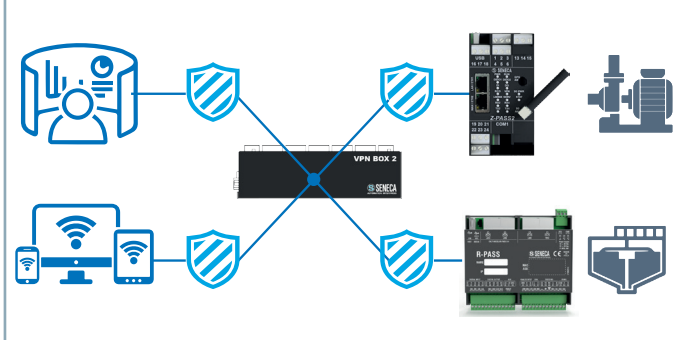
DATALOGGER / CLOUD GATEWAY



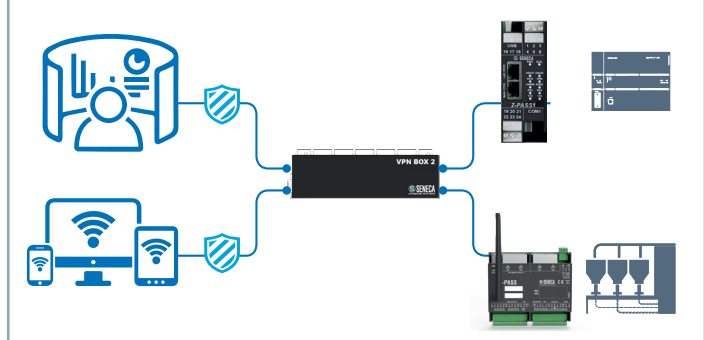
IIOT Connections



Remote Control SINGLE LAN



Remote Assistance POINT-TO-POINT



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