

Z-TWS4-RT

IIoT Edge Controller

Highlights

- **StratON IEC 61131-3 SoftPLCbased controller**
- **Nr.2 Fast Ethernet10/100Tx ports on RJ45 front**
- **Nr.1 switchable serial port RS232/RS485**
- **Nr.2 RS485 serial ports**
- **Nr.1 USB host port**
- **Nr.6 digital I/O channels, 2 analog inputs**
- **Supported protocols: ModBUS TCP Server, ModBUS RTU Master/Slave, FTP/SFTP Server, HTTP/HTTPS Server, OpenVPN, SSL, MQTT,OPC UA, http post, SNMP**
- **Energy Protocols support: IEC60870-101, IEC 60870-104, IEC61850 (optional)**
- **Cybersecurity certificate (penetration testing): OWASP, NIST800-115, Risk Analysis, IEC62443**

Z-TWS4-RT is a high-performance multifunction controller enabling PLC functions with datalogging, routing and remote access by external modem. It is in fact based on softPLC StratON IEC 61131-3. Equipped with 2 Fast Ethernet ports (manageable inSwitch and LAN/WAN mode), 3 serial ports and 1 USB host 2.0 port, Z-TWS4 supports ModBUS TCP Server, ModBUS RTUMaster/Slave, FTP/SFTP Server, HTTP/HTTPS Server, OpenVPN, SSL protocols,as well as IoT protocols (MQTT, OPC UA, http post) and optional Energy Management options (IEC 60870-101, IEC 60870-104, IEC 61850).
The controller has 6 configurable general-purpose digital channels and 2 analog inputs. The device is configurable by Z-NET4, web server and programmable in IEC 61131-3 environment. It also has at his disposal 4 GB Flash memory, 512 MB RAM and Micro SD slot for up to 32GB. Integrated into the LET'S remote access and telecontrol platform, Z-TWS4-RT can support Point-To-Point or Single LAN Telecontrol. The device complies with the most severe standards of information security starting from compliance to penetration test conducted according to OWASP, NIST 800-115, Risk Analysis and IEC 62443.

OPC UA · MQTT · straton · LET'S VPN CONNECTIVITY SOLUTIONS · Penetration Test passed

100% Made & Designed in Italy

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Z-TWS4-RT

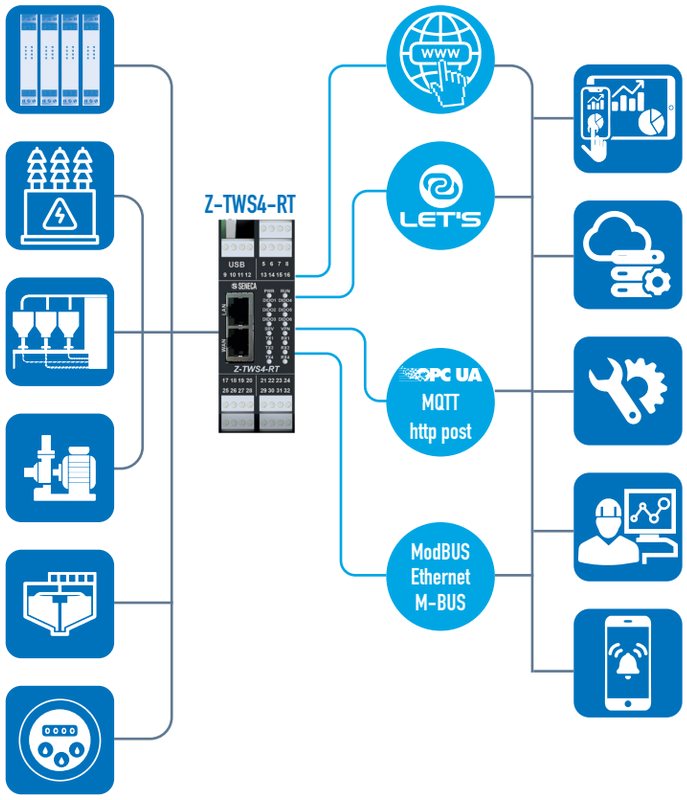


IIoT Edge Controller

TECHNICAL DATA

GENERAL DATA	
Power supply	11..40 Vdc
Power consumption	Max 6 W
Isolation	1,500 Vac
Status indicators (LEDs)	Power supply, Run, I/O status, VPN active, VPN service, RX/TX serial, Ethernet active/connected
Protection degree	IP20
Flash Memory (data)	≥4 GB
RAM	512 MB
Micro SD	Max 32 GB (PUSH-PUSH type micro SD slot)
I/O Channels	Nr. 6 configurable DI/DO and Nr. 2 AI (mA, V)
Operating temperature	-25..+65°C
Dimension (lxhxp)	52.5 x 112 x 100 mm
Weight	240 g
Case	Glass-filled black PA6 plastic
Mounting	For 35 mm rail IEC EN 60715
Approvals	CE, UKCA
COMMUNICATION	
Ethernet ports (ETH1, ETH2)	No.2 Fast Ethernet (1LAN/1WAN), 10/100Tx on front RJ45
Serial ports (COM1, COM2, COM4)	No. 1 RS232 / RS485 (on terminals) No. 1 RS485 (on terminals or IDC10) No. 1 RS485 (on terminals) Baud rate from 200 to 115kbps
USB ports	No. 1 USB host type A side connector ; No. 1 Micro USB (debug)
CAN port	No. 1 CAN port on terminals
Industrial / IT protocols	ModBUS TCP server, ModBUS RTU master/ slave, FTP/SFTP server, M-BUS, HTTP/HTTPS server, SNMP SAMBA
IoT protocols	MQTT, OPC UA, http post
Energy protocols	IEC 60870-101, IEC 60870-104, IEC 61850
Operting mode	SoftPLC, Energy Controller, Datalogger, Gateway, LAN Router, VPN remote service/telecontrol unit (with external modem)
SECURITY	
Remote access blocking	Mechanical, digital input
LAN/WAN Separation	Yes
Authentication	2-factor (Google Authenticator)
Permission management	Supervisor / Users / Groups
Encryption algorithm (data encryption)	OpenVPN AES-256bit-CBC + Auth SHA256 bit or user selectable
Fixed TCP-IP ports for remote assistance	Yes
Security protocols	OpenVPN, SSL, HTTPS Server, MQTT over SSL/TLS, TLS 1..2 or higher
SSL/TLS certificates	Automated management of TLS certificates for HTTPS
Cybersecurity certificate (penetration testing)	Yes, OWASP, NIST 800-115, Risk Analysis, IEC62443
SETTINGS AND SOFTPLC	
Configuration environment	Z-NET4, Web Server
PLC programming	IEC 61131-3 (Straton)
Max nr. of variables/tags	1000
Program size	2048 kB
Diagnostics	Web Server
Data logging and visualization	Data Recorder, Trend Viewer, Web Factory
VPN management software	Open VPN, VPN Client Communicator
Management tool	SDD, SESC
LET'S remote access support	Yes

CONNECTIVITY



ORDER CODES

Code	Description
CONTROLLERS	
Z-TWS4-RT-S	IEC 61131 IIoT Edge IIoT controller, built-in I/O, workbench Straton
Z-TWS4-RT-E	IEC 61131 IIoT Edge IIoT controller, built-in I/O, energy protocols
VPN SERVERS	
VPN-BOX-2	PC Box - VPN Server for simulteneous and low latency Poin-To-Point / Single LAN connections
VPN-BOX-2-VM	VPN-BOX-2 Virtual Machine
VPN-CC-2	VPN Client Communicator, remote access software VPN-BOX-2
SOFTWARE TOOLS	
SDD	SENECA Discovery Device
SESC	SENECA Ethernet to Serial Connection
STRATON-870-850	IEC 60870-5-101/104 Master / Slave + IEC 61850 Client / Server activation license
STRATON-870M	IEC 60870-5-101/104 Master activation license
STRATON-870S	IEC 60870-5-101/104 Slave activation license
STRATON-870S-850	IEC 60870-5-101/104 Slave+IEC 61850 Client/Server activation license
STRATON-D-	USB Straton dongle
STRATON-IDE256	Straton environment 256 tags with USB activation key
STRATON-IDE512	Straton 512 tag environment with USB activation key
STRATON-IDEUN	Straton IDE unlimited tag - IEC 61131 development environment
ACCESSORIES	
CS-TIP-MEF-PH	Serial communication cable (Tips / 4-way female connector)
CS-DB9M-MEF-PH	Serial communication cable (DB9M connector / 4-way female connector)
CE-RJ45-RJ45-R	Straight ethernet cable (RJ45 / RJ45)
MSD	Micro SD memory card with adapter
Z-PC-DIN1-35	DIN rail quick mounting bracket 1 slot 35 mm pitch
Z-PC-DIN4-35	DIN rail quick mounting bracket 4 slots 35mm pitch
Z-PC-DINAL1-35	Support for quick mounting on DIN rail head + 1 slot 35 mm pitch
Z-PC-DINAL2-52.5	Support for quick mounting DIN rail - head +2 slots p=52.5mm

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