DATA SHEET

sysWORXX CTR-500

The smart gateway solution

The sysWORXX CTR-500 is a freely programmable Linux module for industrial applications. It is used as fieldbus gateway, edge controller and compact controller.

Fast, compact and powerful like its big brother, the CTR-700, it supports easy application development with the low-code environment Node-RED in a very short time.
The CTR-500 can also be programmed as a PLC in IEC 61131-3 using the OpenPCS programming environment.

In addition, the CTR-500 supports common high-level programming languages from C/C++, to Rust, C# (Mono), Java and Python. Using standard protocols such as MQTT, REST and OPC UA, the CTR module is ready for use with all major cloud providers.
We take IT and OT binding to a new level.

Scalable in functionality and interfaces, the sysWORXX CTR-500 is a multi-talent in the smallest of spaces. On the hardware side, the module is prepared as a sink node for wirepas massive pure mesh connectivity.

In addition, the controller can be used as an IoT coupler, e.g. as a translator between different protocols such as MQTT, Modbus and CANopen.

Features & Details

GENERAL	
Size (height, width, depth)	60x108x91mm
Temperature range	0°...55°C
Humidity	10...95% non condensing (VDE 0110)
Protection class	IP 20
Mounting type	Top-hat rail
Supply voltage	24VDC
CORE	
CPU	Dual 1GHz Cortex™-A7 NXP iMX7
Real-time Co-Prozessor	200 MHz Cortex™-M4
RAM	1024 MiB
eMMC	8 GiB
RTC	on-board, with buffer capacitor
Temperature sensors	CPU and IO board
CONNECTIVITY	
WLAN	1 (RP-SMA socket, external antenna)
Meshnet	1 optional (RP-SMA socket, external antenna)
ETH	2 (1Gbps, each with its own MAC address)
CAN	1 (CAN 2.0B)
SIO	2 (software configurable: RS-232, RS-485)
USB Host	1 (USB 2.0)
SD Card	1 (Micro-SD)
Linux Console	Serial (via USB)
SOFTWARE	
Basic installation	Linux (Debian), I/O driver, Node-RED incl. sysWORXX nodes for on-board IOs
Additional licenses	IEC 61131-3 Runtime: OpenPCS (incl. CAN, CANopen, Modbus TCP/RTU, MQTT)
Optional	Third party software: Download via Debian OS repositories
	qBee Agent for Device Management via Cloud
I/O INTERFACES	
Digital inputs	4 (24VDC, galvanically isolated)
A/B Encoder	1 (as alternative function for DI2/DI3)
Highspeed Counter	1 (Up/Down, as alternative function for DI2/DI3)
Digital outputs	4 (24VDC/0.5 A)
PWM	2 (as alternative function for DO2/DO3)
USER INTERFACES	
Switch	Run/Stop switch, Reset button, DIP switch
Status LEDs	Power CPU, Power Periphery, Run, Error, status of inputs and outputs
Maintenance access	SSH/SFTP via Ethernet, Linux console via serial/USB