



PREDICTIVE MAINTENANCE & CONDITION MONITORING

Programmable in the language of your employees

sysWORXX CTR-700 – powerful and versatile industrial controller
to connect automation with IT

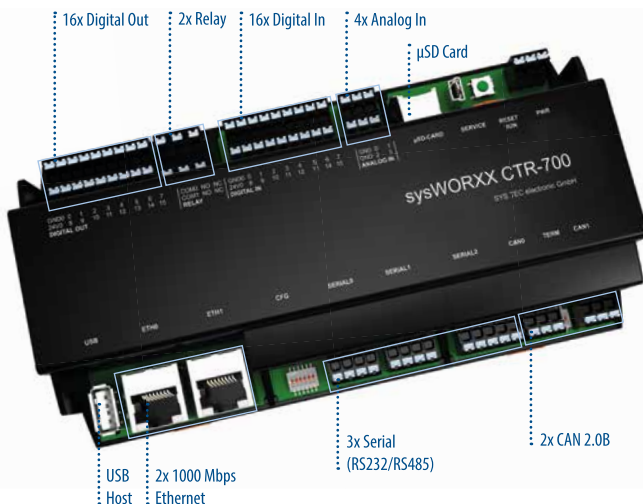
TECHNICAL FACTS

FEATURES

- Mountable on DIN rail
- NXP i.MX7 / Dual Cortex-A7
- 1024 MB RAM, 8GB eMMC
- Interfaces: digital & analog I/Os, TCP/IP, MQTT, Modbus, CANopen, USB, µSD
- Programmable in IEC 61131-3 and IoT languages

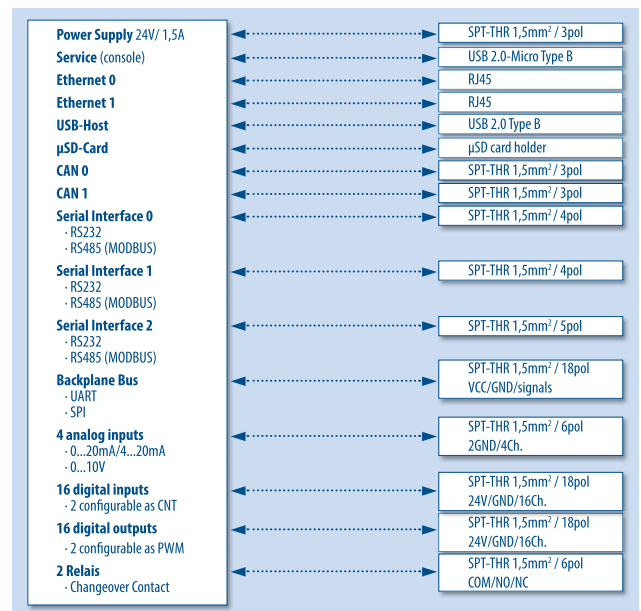
INTERFACES

via digital & analog I/Os



BLOCK DIAGRAM

sysWORXX CTR-700



PROGRAMMING

via IEC 61131-3 & IoT languages

SYSTEM SOFTWARE

Operating System	Linux / Debian
PLC Runtime	OpenPCS – IEC 61131-3
Wiring Editor	Node-RED
Further Programming Languages	C#, C/C++

COMMUNICATION PROTOCOLS

IoT Data Protocols	OPC UA, MQTT
Fieldbus Protocols	CANopen, CAN Layer 2, Modbus & more
Mesh Network	Wirepas via Extension Module

VISUALISATION

Standard for PLC	SpiderControl / IniNet (commercial license)
Alternative Visualisation	Node-RED (free license)

REMOTE ACCESS

System Services	SSH / Telnet, SFTP / FTP, HTTPD
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Example for Visualisation in Node-RED



USE CASES WITH YOUR ADDED VALUE FOR INDUSTRY 4.0

SMART CONTROL – Your digital automation 4.0



ADVANTAGES

- Open programmable system in the following languages:
 - OpenPCS – IEC 61131-3
 - Node-RED
 - Java
 - Python
 - C#
 - C / C++
- Acquisition, consolidation and evaluation of diverse data points from systems to be monitored
- Data transfer to the cloud via MQTT

ADDED VALUE

- Elimination of costly, external service providers for programming
- Process optimization through data acquisition
- Cost savings through process optimization
- Live monitoring of relevant data (*condition monitoring*)
- Early detection of possible failures / errors (*predictive maintenance*)

USE CASES WITH YOUR ADDED VALUE FOR INDUSTRY 4.0

SMART ASSET TRACKING – Your digital logistics 4.0



ADVANTAGES

- Connection to mesh networks from different manufacturers
- Visualisation via Node-RED (*online*) & OPC UA (*target*)
- Robust, industrial-grade housing
- Strict separation of Enterprise IT & Shop Floor OT
- Direct connection of standard equipment from mechanical and plant engineering

ADDED VALUE

- Stock-level tracking
- Live monitoring of the flow of goods in production
- Flexibly controllable transportation orders
- Significantly shorter loading and unloading times
- Cost savings through process optimization
- Efficient use of resources (*e.g. transport vehicles*)

USE CASES WITH YOUR ADDED VALUE FOR INDUSTRY 4.0

SMART ENERGY – Your digital energy management 4.0



ADVANTAGES

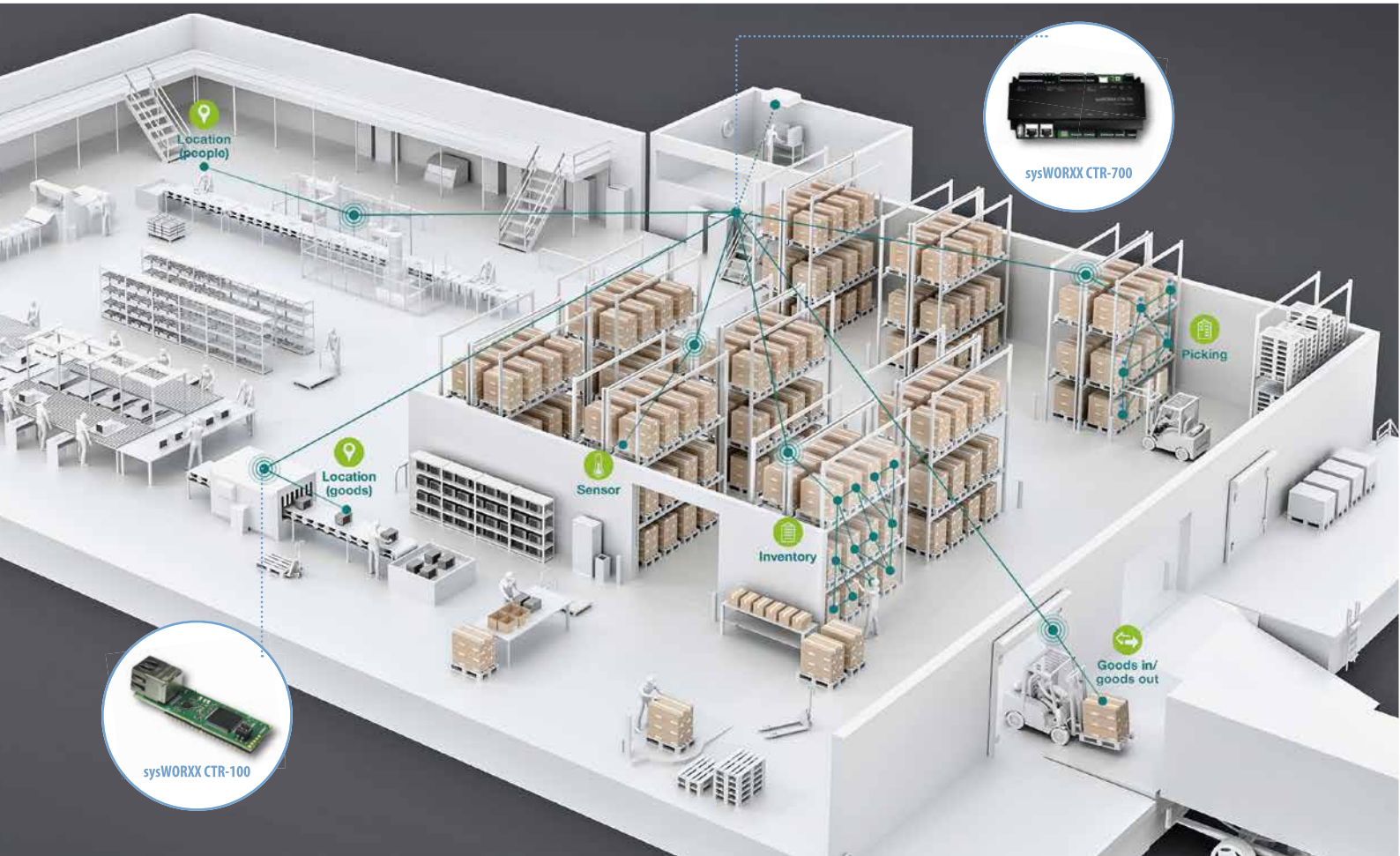
- Compact industrial control with gateway function
- Several bus systems
- SD card slot
- Narrowband functionality from 2018
- Suitable for DIN rail mounting and installation in the control cabinet

ADDED VALUE

- Generation of relevant data on the energy consumption of individual plants and machines:
 - Acquisition
 - Visualisation
 - Optimization
- Energy flow control through data acquisition
- Intelligent energy transfer and distribution: smart grid
- Implementation of smart metering
- Implementation of smart home

YOUR COMPLETE PACKAGE FOR INDUSTRY 4.0

Combination of sysWORXX CTR-100 and CTR-700



ADVANTAGES

- Both controllers are matched to hardware and software
- Professional and innovative products with over 27 years of experience

ADDED VALUE

- Monitoring, control and evaluation of complex industrial systems
- Energy-saving system due to mesh net functionality
- Easy integration and support with SYS TEC electronic
- Cost and time savings due to installation and commissioning by just one service provider – SYS TEC electronic

COMPARISON

between sysWORXX CTR-100 and -700

	sysWORXX CTR-100	sysWORXX CTR-700
CPU	STM32F767	i.MX7 dual Core
I/Os	Controller	Industrial
Programming	PLC	PLC, Linux, Node-RED
Visualisation	–	Via Node-RED
Location	Near sensor & actuator	Near machine & operator
COMING SOON		
wireless	BT-Mesh net (Add-on)	Narrowband, Mesh net