sysWORXX: Your expert advantages at a glance

Yocto Linux for industrial environments

- support of long maintenance cycles, reproduceable and safe
- complete control over updates and security patches
- ndependence from upstream changes (in contrast to Debian)
- user-based rights management, can also be used without root access
- secure over-the-air updates thanks to RAUC
- optimised for industrial applications in the field of embedded systems

Cyber Resilience Act (CRA) ready

- minimisation of the attack surface through complete system control
- prerequisite for certifiability (TÜV, VSD, ...)

Serial console for network-independent commissioning

- simple connection via USB
- serial console can also be used without a valid IP address
- misconfiguration of the ETH interface does not lead to loss of loss of access to the device

On board RTC

- valid system time at boot time
- self-sufficient system time independent of an Internet connection

ETH: 2x 1000 Mbits/s

- 2 separate interfaces, each with its own MAC address for use in separate networks
- suitable for industrial gigabit networks

Free choice of boot medium

SD card

- simple backup before configuration or software changes
- safe testing of configuration configuration settings and software components

eMMC

- robust, durable mass storage for 24/7 continuous operation
- no mechanical contact problems

- Bring-up script for easy transfer of SD card images to the eMMC

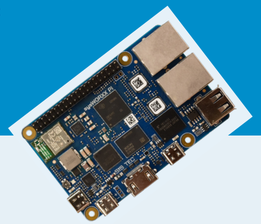
SOFTWARE SCOPE OF DELIVERY

	Basic scope of delivery	Option
Linux OS	✓	
C/C++	✓	
C# (.NET Core)	✓	
Java (OpenJDK)	✓	
Python	✓	
Node-RED	✓	
Docker	✓	
CODESYS (IEC-61131)	✓	Licence dependent on programme resources used
CANopen (independent of CODESYS)		
Source Code CANopen Device	-	SO-877
Source Code CANopen Manager	-	SO-1063
OPC-UA (independent of CODESYS)	-	3rd-Party
Meshnet Software	-	3rd-Party
qBee Device Management	-	3rd-Party
MQTT	[✓] (integrated in CODESYS and Node-RED)	Open source libraries freely available
Modbus (independent of CODESYS)	-	Open source libraries freely available

Looking for an individual solution?

Efficient, reliable and versatile:
The **sysWORXX ECUcore-AM62x** is the powerful centrepiece of our CTR control units. Do you need something unique? We develop and manufacture your specific, customised electronic solution based on our sysWORXX ECUcore-AM62x.
Learn more:

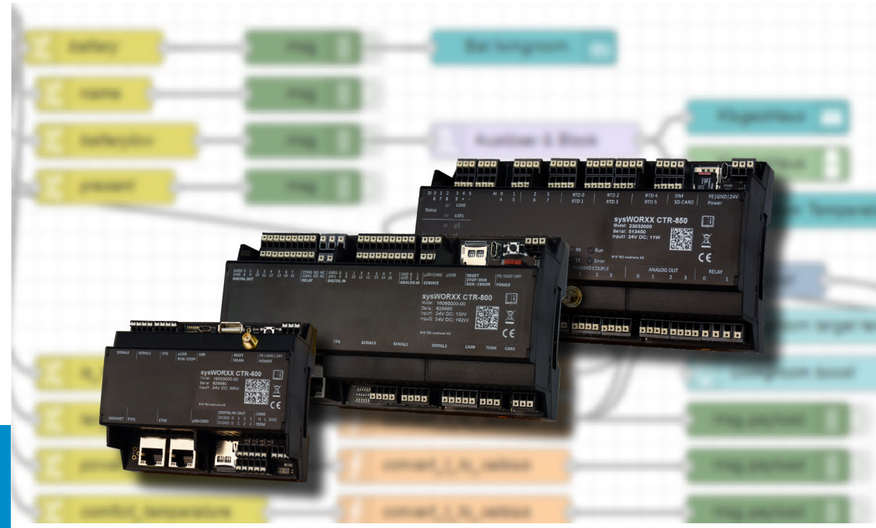
Ready, Set, Code: The **sysWORXX Pi-AM62x**, a single board computer (SBC), is the powerful solution for your upstream software development. It offers you the opportunity to test the interaction between hardware and software and to validate the planned system concept in advance.
Learn more:



We are there for you – contact us!
Our friendly staff will be happy to help :

sales@systec-electronic.com | 03765 - 38600 - 2110 | www.systec-electronic.com

SYS TEC ELECTRONIC



OUR PRODUCT PORTFOLIO FOR SMART AUTOMATION

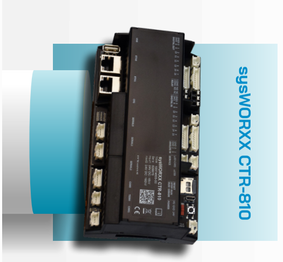
We connect worlds with our controller family:
From sensor to cloud, machine to machine and machine to human. Set no limits to your automation and discover our solutions...

sysWORXX CTR-850

SMART COMPACT CONTROL FOR CONDITION MONITORING

- freely programmable Linux compact controller for automation and digitization
- specific inputs/outputs for use in the field of condition monitoring
- expandable with sysWORXX SSM-100 for structure-borne sound analysis
- location-independent Internet connection via integrated LTE modem
- easy application development in the low-code environment Node-RED
- programmable as a PLC in IEC 61131-3 in the CODESYS programming environment
- support for common high-level programming languages from C/C++ to Java and Python

More details?
https://www.systec-electronic.com/en/products/industrial-internet-of-things/sysworxx-ctr-850

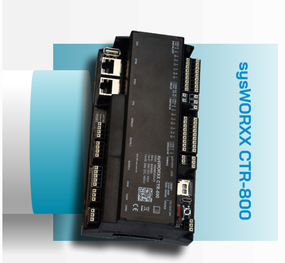


sysWORXX CTR-810

COMPACT CONTROL FOR EFFICIENT PREFABRICATION

- freely programmable Linux compact controller for automation and digitization
- fully compatible with the sysWORXX CTR-800
- the removable connectors allow an efficient pre-assembly of the connecting cables (cable harness) as well as an easy and fast device exchange in the field
- basic technology for your development
- brand labeling possible
- programmable as a PLC in IEC 61131-3 in the CODESYS programming environment
- easy application development in the low-code environment Node-RED
- support for common high-level programming languages from C/C++ to Java and Python

More details?
https://www.systec-electronic.com/en/products/industrial-internet-of-things/sysworxx-ctr-810



sysWORXX CTR-800

SMART COMPACT CONTROL FOR ALL REQUIREMENTS

- freely programmable Linux compact controller for automation and digitalisation
- versatile digital and analogue inputs/outputs
- usable as a field bus gateway, edge controller and compact controller
- easy application development in the low-code environment Node-RED
- programmable as a PLC in IEC 61131-3 in the CODESYS programming environment
- support for common high-level programming languages from C/C++ to Java and Python
- basic technology for your development
- brand labeling possible

More details?
https://www.systec-electronic.com/en/products/industrial-internet-of-things/sysworxx-ctr-800

sysWORXX CTR-600

THE SMART GATEWAY SOLUTION

- freely programmable Linux gateway
- usable as field bus gateway, edge controller and compact controller
- easy application development in the low-code environment Node-RED
- programmable as a PLC in IEC 61131-3 in the CODESYS programming environment
- support of common high-level programming languages from C/C++ to Java and Python
- low cost control (e.g. for reading smart meters via Modbus)
- Meshnet router and Meshnet SinkNode
- support of Nordic-SDK (nRF5)
- base technology for your development
- brand labeling possible

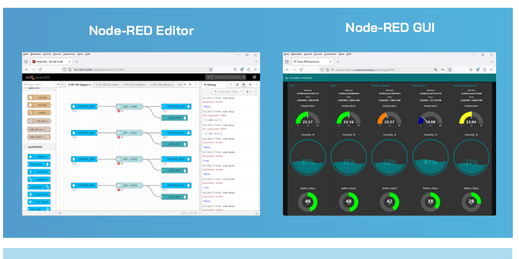
More details?
https://www.systec-electronic.com/en/products/industrial-internet-of-things/sysworxx-ctr-600

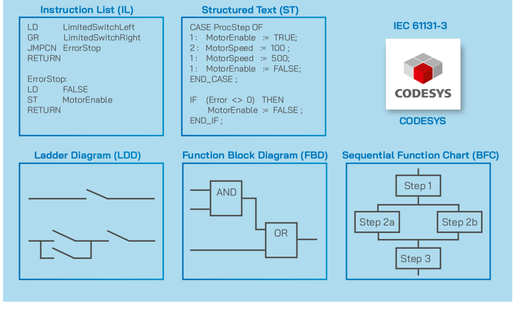
PRODUCT OVERVIEW

	CTR-600	CTR-800	CTR-810	CTR-850
SoM core	TI Sitara AM623 Dual Core (2x Cortex ®A53 @ 1,4 GHz), 1024 MiB RAM, 8 GiB eMMC			
Customer-specific adjusments	Single Core/ Quad Core, RAM up to 8 GB, up to 64 GB eMMc			
Power supply	24V DC	24V DC	24V DC	24V DC
Case	6 TE	9 TE	9 TE	9 TE
Backplane connection for expansion module	No	Yes	Yes	No
Ethernet	2 x 1.000 Mbps	2 x 1.000 Mbps	2 x 1.000 Mbps	2 x 1.000 Mbps
WLAN	Integrated with external antenna	Optionally: via USB stick	Optionally: via USB stick	Optionally: via USB stick
USB 2.0 Host	1	1	1	1
CAN interfaces	1 x CAN 2.0B	2 x CAN 2.0B	2 x CAN 2.0B	-
Serial interfaces (configurable RS-232, RS485/Modbus)	2	3	3	1
Meshnet	Optionally: Integrated with external antenna	Optionally: via RFG-2.4	Optionally: via RFG-2.4	-
LTE modem	-	-	-	Integrated with external antenna
Digital Input (24V DC)	4	16	16	10
Digital Output (24V DC, 0,5A)	4	16	16	-
Analogue Input (configurable 0..10V DC, 0..20 mA DC)	-	4	4	8
Analogue Output (configurable 0..10V DC, 0..20 mA DC)	-	-	-	2/2
Temperature sensor				
PT 100	-	-	-	6
Thermocouple (type K)	-	-	-	4
Relay Output (max. 220VDC, 60W / 250VAC, 62.5VA)	-	2	2	2
Operating system	Yocto Linux, Armbian			
Supported software	C/C++, Rust, C# (.NET Core), Java (OpenJDK), Python, Node-RED, CODESYS (IEC-61131)			

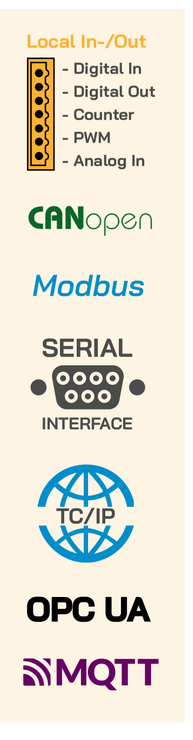
SOFTWARE ECOSYSTEM

From code-based to graphic: maximum individuality.





Smartly connected.



Deploy flexibly - isolated and portable.