

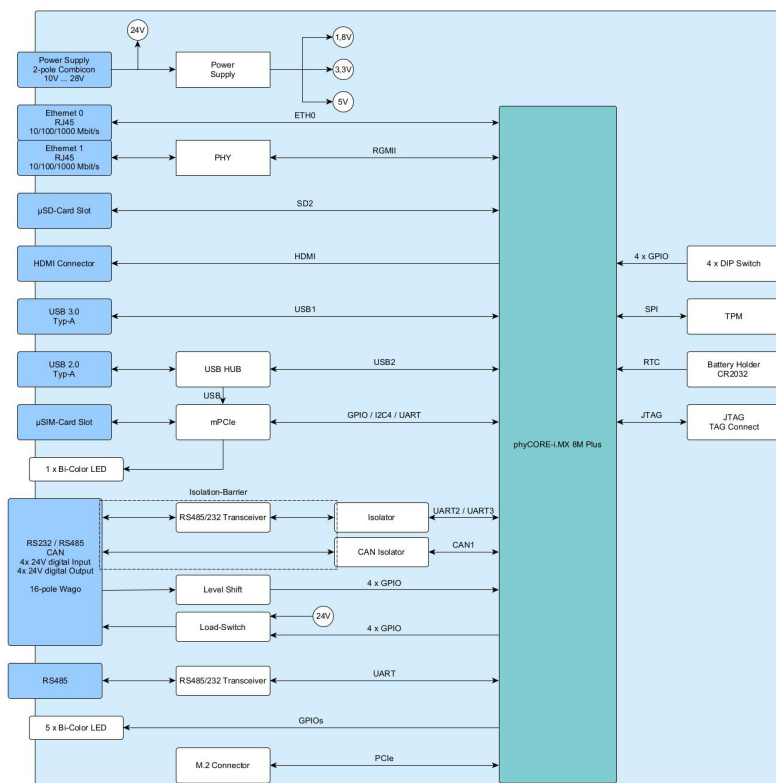
# phyCONTROL-Nova

## Industry-PC - Open Scalable IPC/Gateway Platform

The industrial PC has been developed for use as an Arm-based industrial control computer, and its high flexibility in industrial environments is impressive. In addition to its primary function as a control computer, the system can also be used as a powerful IoT edge gateway.

It facilitates the reliable acquisition and preprocessing of machine data, as well as direct access to field devices and PLC controllers. Common interfaces and industrial protocols such as Modbus RTU, Modbus TCP, OPC UA, and MQTT are supported to ensure seamless integration into existing automation environments.

The compact industrial PC's versatility makes it an ideal solution for a wide range of industrial applications. The product's powerful hardware and open software architecture allows processes to be controlled, data to be collected, analysed, visualised and securely transferred to the cloud. This provides greater transparency, efficiency and future-proofing in industrial production.



### Highlights

- OEM-compatible industrial PC based on Arm
- Open Linux system with integrated open source software
- AI-compatible via NPU and Hailo-8 chip
- Ready for CRA & RED

### Additional Highlights

- High-performance NXP i.MX 8M Plus processor with 4x Arm® Cortex®-A53 @1.6 GHz
- Extensive communication interfaces including HDMI display interface
- Fanless design and a wide operating temperature range up to 70 °C
- Robust metal housing measuring 140 x 108 x 38 mm for mounting on DIN rail
- Extensive support for software frameworks such as Node-RED, 4DIAC, Thingsboard.io
- Custom modifications and branding options at attractive prices

## Technical Data

Features / Name

phyCONTROL-Nova

Product	Module
Processor	NXP i.MX 8M Plus Quad
Architecture	4x Arm Cortex-A53 / 1x Arm Cortex-M7
Bit width	64-bit
Frequency	up to 1.8 GHz (A53) + 800 MHz (M7)
AI / ML	Neural Processing Unit with 2.3 TOPS
Crypto	RDC, CAAM, PKHA, RSA, EEC, RTIC, DRM, RSA, AES, 3DES, DES, RNG
HW security	Secure boot, TrustZone, SNVS, SRTC, SJC
Security	TPM Chip
MEMORY	
SPI NOR flash	64 MB
eMMC	32 GB up to 64 GB eMMC 5.1
LPDDR4 RAM	4 GB up to 8 GB (32-bit)
EEPROM	4 kB
SD Card	1x Micro SD-Slot
INTERFACES	
Ethernet	2x 1 Gbit/s (1x TSN capable)
USB	1x USB 3.0 / 1x USB 2.0 OTG
Serial	1x RS232 or 1x RS485 (isolated) 1x RS485 (not isolated)
CAN	1x CAN (isolated)
DIO	4x DIN (EN61131-2 Typ3 / Max Vin = 30V) 4x DOUT (Vout = Vcc, Iout = 600mA)
Display	HDMI
Wireless	Mini PCIe Connector (only USB) with SIM Cardholder
Extension	M.2 Connector (Key B)
Status	6x Duo-Color LED
PHYSICAL PROPERTIES	
RTC	RV-3028-C7 ( $\pm 1$ ppm @ 25°C)
RTC Buffering	Battery holder for CR2032
Power supply	Vcc = 24V (10-28V)
Dimensions	140mm, 105mm, 35mm
Housing	Metal housing 140 x 108 x 38 mm
Mounting Type	Top-hat rail mounting according to DIN EN 60715
IP Protection Class	IP20
Storage Temperature	-40°C to +85°C
Operating Temperature	-25°C to +70°C
Cooling	Fanless
Approval	CE
SOFTWARE	
U-Boot	Mainline 2024.01 NXP 2024.04-2.2.0
Linux Kernal	Mainline 6.6.y NXP 6.6.52-2.2.0
Yocto	Scarthgap BSP including: Source, sstate, Binary Package Repository and A/B System Bundles



<https://www.phytec.eu/en/produkte/fertige-geraete-oem/phycontrol-nova/>