

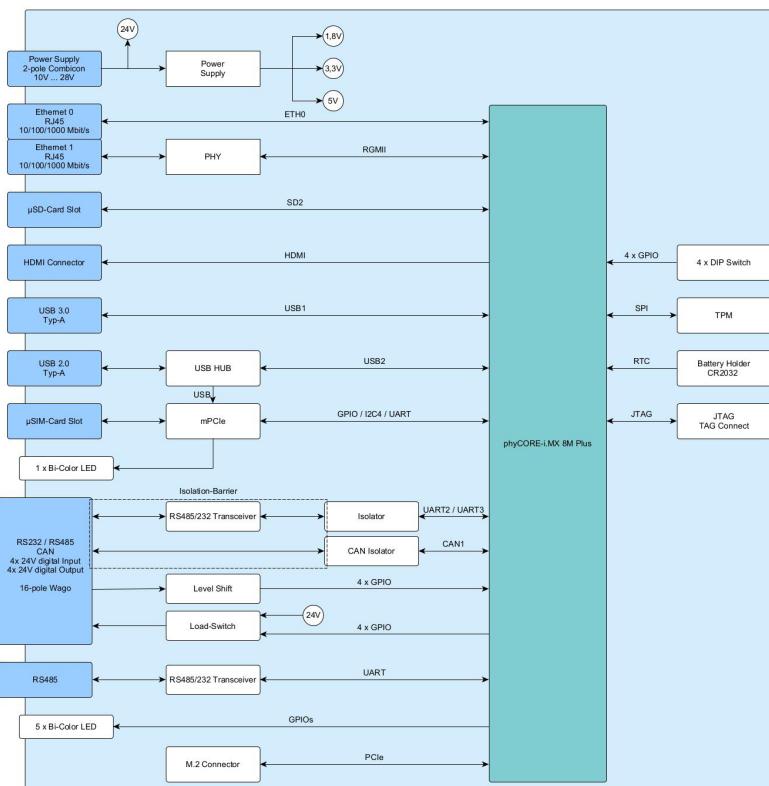
# phyCONTROL-Nova

## 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 pre-processing 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

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



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