

Models: [Unipi Neuron](#)

PLEASE RETAIN THIS DOCUMENT FOR FUTURE REFERENCE

CAUTION

The unit can be powered only by a power source in compliance with the unit's specifications. Using unsuitable power supply can result in damage to the unit or connected devices. Unplug all power supplies and voltage sources before any manipulation with the unit – danger of electrical injury or component damage!

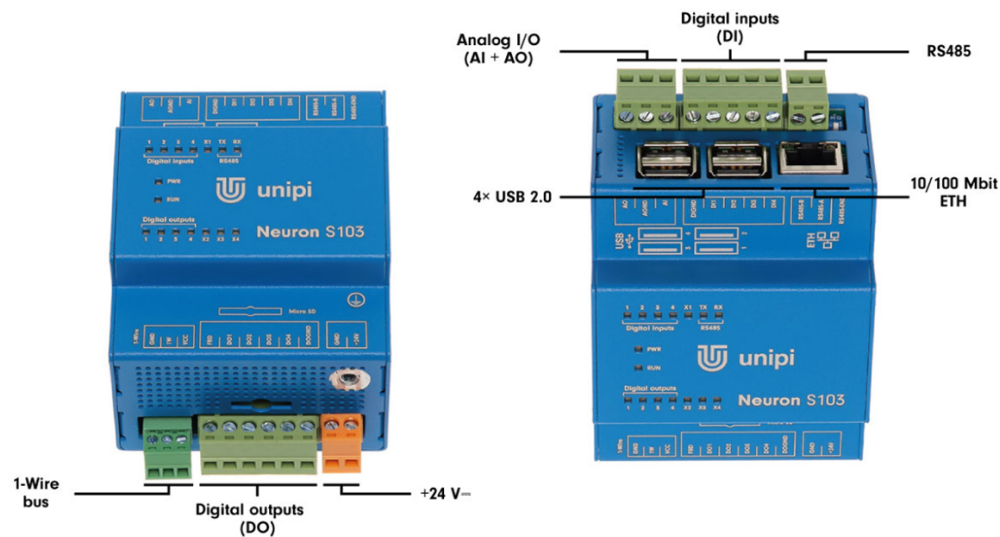
Do not use the controller in potentially explosive atmospheres! The controller can be installed only by trained personnel with sufficient qualification. The unit can be installed only in a suitable environment following the product's technical specifications (interior with suitable temperature and humidity, switchboards protected against water intrusion, etc.).

All connected peripherals should comply with all standards and regulations relevant to the country and the intended use.

Working conditions

Power supply (SELV)		+24 V 	Ingress protection (IEC 529)	IP20
Power consumption		Max. 12-20 W (see the unit's datasheet)	Working and storage temperature	Working: 0 °C ... +55 °C Storage: -25 °C ... +70 °C
Power supply pole reversal protection		Yes	Installation	On a 35 mm DIN rail in a distribution box (holder included)
GSM*	GSM850	UL f: 824–849 MHz	DL f: 869–894 MHz	radiofrequency power (max.) 33 dBm ± 2dB
	EGSM900	UL f: 880–915 MHz	DL f: 925–960 MHz	radiofrequency power (max.) 33 dBm ± 2dB
	DCS 1800	UL f: 1710–1785 MHz	DL f: 1805–1880 MHz	radiofrequency power (max.) 30 dBm ± 2dB
	PCS 1900	UL f: 1850–1910 MHz	DL f: 1930–1990 MHz	radiofrequency power (max.) 30 dBm ± 2dB

* Only G model/s.



The number and position of I/O can vary for a particular unit (see [Unipi Knowledge Base](#) for details).

First steps

Software

Unipi Neuron is based on a Raspberry Pi with OS Linux (Debian) support, which runs from a microSD card. Unipi provides several OS images for download that differ with pre-installed applications (e.g. Mervis OS, Base OS). After downloading, the OS image is installed on the microSD card.

Base OS: The default image. Contains all necessary files for the unit to operate.

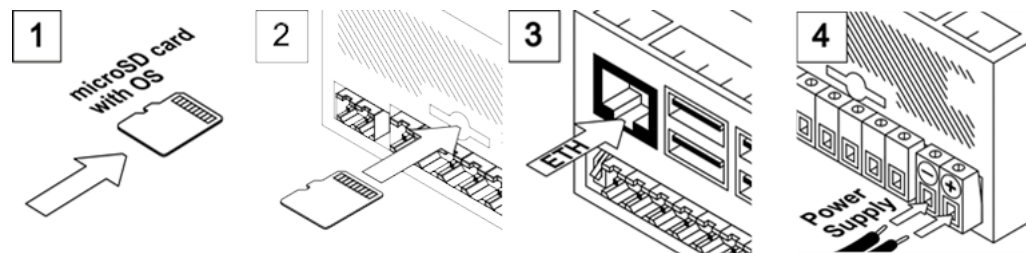
Mervis OS: Contains officially supported application solutions for technology management and monitoring, including optional online cloud services.

Alternative pre-assembled images:

You can find the current offer of pre-assembled images at <https://kb.unipi.technology>.

First start of the unit

- Download the image of your choice and upload it to a microSD card using a suitable tool. If necessary, setup password for SSH according to the steps in <https://kb.unipi.technology/passwords>.
- Insert a microSD card with flash OS image into controllers memory card slot.
- Connect the Neuron unit to the local network using Ethernet cable.
- Connect a power supply that meets the requirements listed on the product.
 - Base OS** - Upon startup, the unit will automatically attempt to obtain an IP address from the DHCP server. If the attempt is unsuccessful the unit will use a random IP address from a range of 169.254.0.0/16. An mDNS record is simultaneously published into the network, making the unit available under a unique name. E.g: Neuron S103 with serial number 1262512345, would be accessible at "http://s103-sn1262512345.local". The serial number can be found on the unit's product label. The default login information for SSH access is username: "unipi", password must be set according to the steps in <https://kb.unipi.technology/passwords> (step 1.).
 - Mervis OS** - SSH is disabled by default. Mervis IDE must be used for connection to the unit.
- You can start programming!



CAUTION

Handle the microSD card ONLY when the controller is disconnected from the power supply!

Pay close attention when choosing a microSD card for your Unipi Neuron unit. The lifespan of microSD cards available on the market varies considerably depending on the technology used. In terms of durability, we recommend using microSD cards of the SLC type. Help with choosing the right microSD card technology for your application is available in the Knowledge Base (<https://kb.unipi.technology>). Supported microSD cards can also be found in the Unipi e-shop.

Software

MERVIS

Official software platform for programming Unipi units according to the IEC 61131-3 standard. Powerful, professional and a user-friendly tool. Detailed installation manual, tutorials and sample projects are available at <https://kb.unipi.technology/>.

APIs

Thanks to the software openness of Unipi products, users have a wide choice of programming options for Unipi units (sysfs, Modbus TCP, web protocols and more). For further information visit <https://kb.unipi.technology/>.

Hereby, Unipi Technology s.r.o. declares that the radio equipment type S103-G is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://kb.unipi.technology/doc/>

WEEE Directive Statement for the European Union
Unipi Neuron cannot be disposed of as household waste. Different rules for handling electric waste may apply in other jurisdictions.



Compliance Information
Unipi Neuron complies with the requirements of EMC, LVD, RED and RoHS directives relevant for European Union states.

