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 (indoor space with suitable temperature and humidity, waterproof distribution boxes, 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)
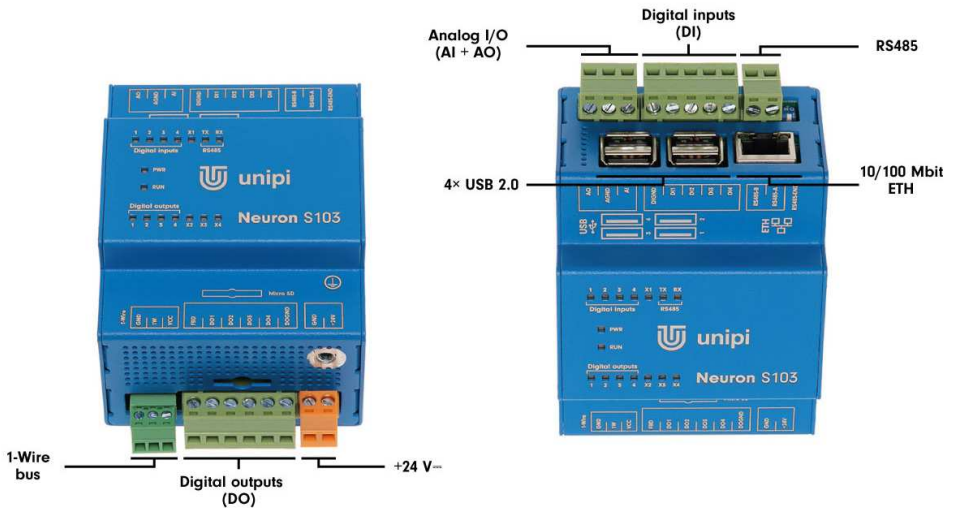
The number and position of inputs and outputs can vary for a particular unit (see **Unipi Knowledge Base** for details).

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

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.

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, Node-RED OS, OpenSource OS). After downloading, the OS image is installed on the microSD card. The default image is Mervis OS containing Mervis RT and all necessary files for the unit to operate. Alternatively, you can use one of the pre-assembled images available on the Knowledge Base (https://kb.unipi.technology).

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


NOTE
SSH access is disabled by default. It can be activated by creating a file named "ssh.txt" (or without the .txt extension) and placing it in the boot partition of the microSD card, or by setting and uploading the configuration in the Mervis IDE. The default login information for SSH access is username: "unipi", password: "unipi.technology". **We strongly recommend changing the login credentials immediately after SSH activation**. For more detailed information, please visit https://kb.unipi.technology.

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

First start of the unit

1. Download the image of your choice and upload it to a microSD card using a suitable tool.
2. Insert a microSD card with flash OS image into controllers memory card slot.
3. Connect the Neuron unit to the local network using Ethernet cable.
4. Connect a power supply that meets the requirements listed on the product.
5. You can start programming!
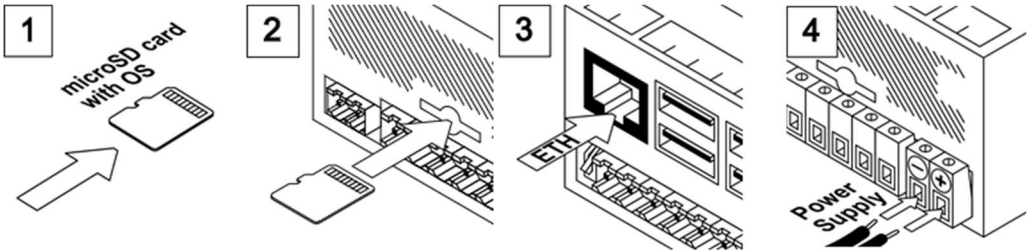
CAUTION
Handle the microSD card ONLY when the controller is disconnected from the power supply!

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/.