Models: Unipi Gate

PLEASE RETAIN THIS DOCUMENT FOR FUTURE REFERENCE

CAUTION

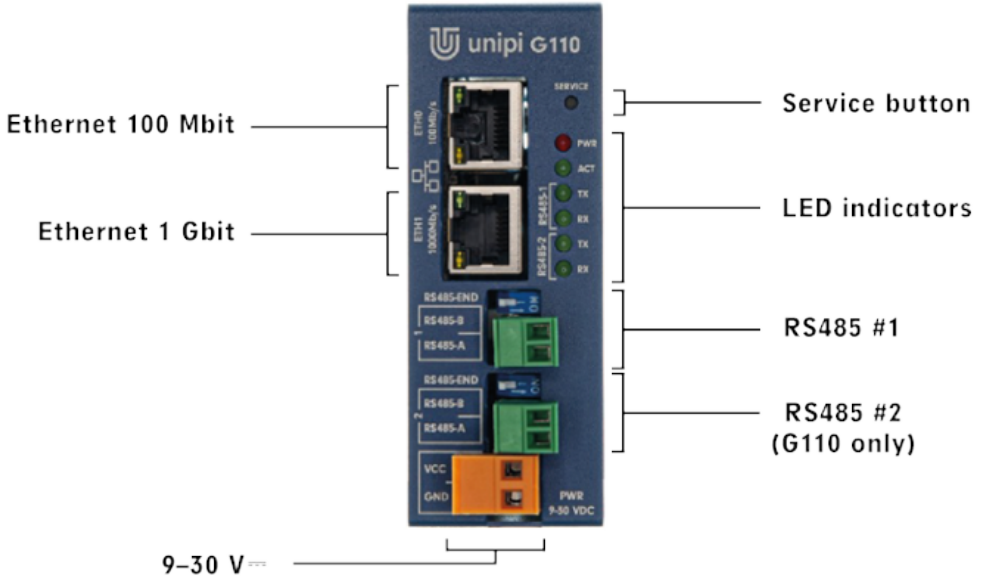
The unit can be powered only by a power source in compliance with the unit's specifications. Using unsuitable power supply can result in damage to the unit or connected devices. Unplug all power supplies and voltage sources before any manipulation with the unit – danger of electrical injury or component 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)	9–30 V ⎓	**Ingress protection (IEC 529)**	IP20
Power consumption	Typ. 3 W Max. 12 W	**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)
Working position	Vertical/Horizontal		Optionally on an electric distribution box mounting panel



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

Compliance information
Unipi Gate complies with the requirements of EMC and RoHS directives relevant for European Union states.

Getting started

Software

Unipi Gate devices require an operating system stored on the onboard memory to run. By default, a Debian GNU/Linux (Base OS) is preinstalled.

Network interfaces

Unipi Gate feature interfaces marked as eth0 (100 Mbit) and eth1 (1 Gbit). By default, the interfaces are configured as network bridge and act as a **two-port switch.** Any of the ports can be used to connect the device into a local network.

CAUTION

Device in default configuration should be connected to local network with only a single cable. In case both interfaces would be connected to a single network, a loop may occur disabling communication in the entire network.

The device is configured to request an IP address automatically from the DHCP server. If the attempt is unsuccessful, the device sets its interface to a random IP address from range 169.254.0.0 – 169.254.255.255. As an mDNS record is published on the network, the device is visible in the network under a unique name. For the G100 model with serial number 1262512345 the name would be "http://g100-sn1262512345.local". The serial number is listed on a sticker found on the device.

LED status indication

The device indicates its status using LEDs:

Label	Function	Meaning	Colour
PWR	On/Off	The device is turned On/Off	Red
ACT	Blinking	Controller status indication	Green

Regular mode

Description of LED behaviour	Meaning	Off	On	Off
ACT is on	Bootloader start (uboot)	3000 ms	1750 ms	-
ACT blinks once	The bootloader is running	250 ms	75 ms	1000 ms
ACT blinks twice	The controller's OS is booting	250 ms	75 ms	-
ACT is continuously on and does regular short blinks	The OS is running, the device is ready for use	50 ms	2000 ms	-

Service mode

Description of LED behaviour	Meaning	Off	On	Off
ACT is on	Bootloader start (uboot)	3000 ms	1750 ms	-
ACT blinks once	The bootloader is running	250 ms	75 ms	1000 ms
ACT blinks twice	The controller's OS is booting	250 ms	75 ms	-
ACT, TX and RX are blinking slowly	The controller is in service mode	600 ms	600 ms	-
ACT, TX and RX are blinking quickly	Indication of flashing the OS or creating its backup	80 ms	80 ms	-

1. Connect the device to a local network using a single network cable.
2. Connect the power supply to the device according to the manufacturer sticker and wait until the device boots up into its regular mode (see LED status indication above).
3. Upon startup the device is accessible on the network via its IP address or unique name:
   a. Only Mervis OS: Welcome page of Mervis is accessible through a web browser at http://<ip-address> or http://<name> (e.g. "http://g100-sn1262512345.local" see above). SSH is disabled for Mervis OS.
   b. For Base OS: SSH access is enabled on port 22 – username is "unipi", password is printed on the unit's product label. **Changing the login credentials is immediately enforced after the first SSH login.** For more detailed info, please visit https://kb.unipi.technology/passwords.

Service mode

Service mode serves for restoration of access to the PLC (change of password or network configuration) and for upload or backup of the operating system. In service mode the device allows access only into the service interface, other functions are disabled.

1. Connect the device to a local network or directly to your PC using a network cable.
2. Press **and hold** the "SERVICE" button on the device's front panel.
3. Connect a power supply to the device.
4. The device will boot into service mode indicated by slow flashing of ACT, TX, and RX LEDs.
5. You may now release the "SERVICE" button.
6. The device will assign itself an IP address of 192.168.200.200, will request an IP address from DHCP server and will be also accessible on both IP addresses.
7. For access to the service interface, use a web browser and enter the IP http://<ip-address>. Next, you will be prompted to enter login credentials: username "unipi", password is printed on the unit's product label.

In service mode, both network interfaces are set to network bridge mode. However, packet forwarding between the interfaces (L2 forwarding) is disabled, preventing the device from working as a switch.