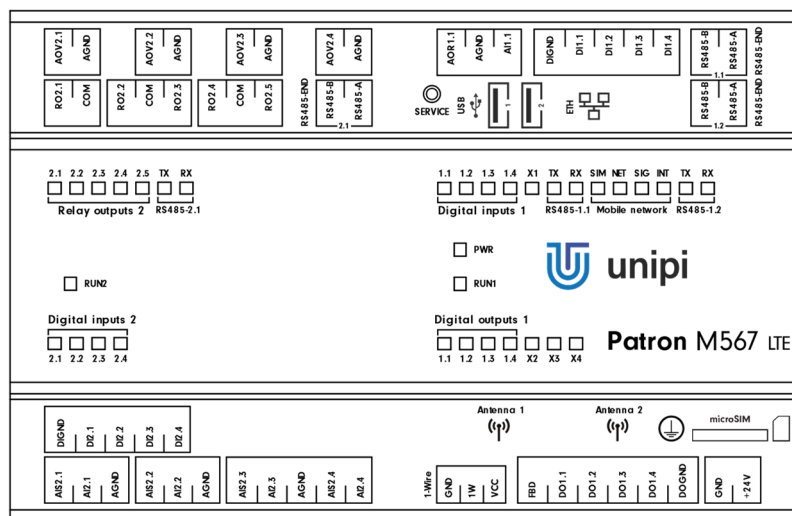


# Unipi Patron M567 LTE

## PRODUCT DESCRIPTION

Unipi Patron M567 LTE is a programmable logic controller (PLC) designed for automation, control, regulation and monitoring. The M567's architecture is focused on a higher number of analog I/Os, but also features a sufficient number of all inputs/outputs available on Unipi products (digital, relay). That makes it suitable for complex projects including measurements and control of analog components. A special feature of the controller is an LTE functionality for a high-speed wireless connection to the internet including sending/receiving SMS messages. The M567 also features three RS485 serial interfaces for connection of extension modules or gateways and a 1-Wire interface for connection of digital temperature or humidity sensors.



## COMPUTING MODULE

i.MX 8M Mini quad-core CPU  
 (Arm® Cortex®-A53, max 1.8 GHz),  
 1 GB LPDDR4 RAM, GB eMMC onboard memory

## FUNCTIONALITY

Automation, IoT and IIoT, remote online monitoring and regulation, HVAC control (heating, ventilation, air conditioning), SCADA, sensorics, smart home control (lighting, doors, locks, irrigation etc.)

## FEATURES

### Inputs/outputs

- 8 × digital input incl. counter
- 4 × digital output
- 5 × relay output
- 5 × analog input
- 5 × analog output

### Software

- Powered by OS Linux
- Mervis – IDE (IEC 61131-3), HMI editor, proxy server, cloud database, SCADA, a wide range of supported protocols,
- Open-source solutions – Node-RED, openHAB, Homebridge, FHEM, PiDome, DomotiGa, Domoticz, Pimatic and many more
- Custom SW implementation – EVOK open API, Modbus TCP interface, SysFS.

### Communication interfaces

- 3 × RS485
- 1 × 1-Wire bus
- 1 × 100 Mbit Ethernet
- 2 × USB 2.0
- 1 × LTE interface

### Other features

- The most powerful compact controller on the market
- Developed and manufactured in the EU
- Durable aluminum chassis (IP20)
- Extended warranty (4 years)
- Special functionality – Direct Switch, MasterWatchdog, user LEDs
- Available in OEM variant, broad extension options – PoE/PoE+, microSD, wireless technologies (LTE, Wi-Fi, Zigbee, ...), Secure boot and more

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## Communication

Ethernet	1 × 100 Mbit Ethernet
Serial/bus channels	3 × RS485, 1 × 1-Wire
RS485 1.1, 2.1 transmission speed	134 baud ... 115 200 baud
RS485 1.2 transmission speed	50 baud ... 3 Mbaud
RS485 galvanic isolation	Yes
RS485 biasing resistors	Yes, 560 Ω
RS485 terminating resistor	Builtin attachable, 120 Ω
1-Wire galvanic isolation	Yes
1-Wire output voltage Vcc	5 V
1-Wire max. current Vcc	50 mA
1-Wire connector	3 × pole, max. 1.5 mm <sup>2</sup>
USB	2 × USB 2.0
LTE modem type	Quectel EG912Y-EU
LTE category	CAT1 (10 Mbit / 5 Mbit)
LTE-FDD bands	B1/B3/B7/B8/B20/B28
LTE-TDD	B38/B40
GSM	GSM900, DCS1800
GPRS/EDGE class	12
SIM card type	microSIM
LTE antenna connector	SMA

## Digital inputs

No. of inputs × groups	4 × 2
Common connector	DIGND
Galvanic isolation	Yes
Functions of inputs	Counter (incl. memory), signalization, Direct Switch
Max. frequency of counter input signal	10 kHz
Input voltage of log. 0	Max. 3 V <sup>==</sup>
Input voltage of log. 1	Min. 7 V <sup>==</sup>
Max. input voltage	35 V <sup>==</sup>
Input resistance	6 200 Ω
Delay 0→1/1→0	20 μs / 60 μs

## Digital outputs

No. of outputs × groups	4 × 1
Common connector	DOGND
Galvanic isolation	No
Type of output	NPN transistor (open collector)
Optional functions	PWM
Switchable voltage	5–50 V <sup>==</sup>
Switchable current continual/pulse	750 mA / 1 A
Max. total current DO 1.1–1.4	1 A
PWM max. frequency	200 kHz
PWM max. resolution	16 bits

## Relay outputs

No. of outputs × groups	1 × 1, 2 × 2
Galvanic isolation	Yes
Type of contact	Normally open (SPST)
Switchable voltage	250 V <sup>~</sup> / 30 V <sup>==</sup>
Switchable current	5 A
Short time overvoltage	5 A
Current via common conn.	10 A
Time to switch on/off	10 ms
Mechanical lifetime	5 000 000 cycles
Electrical lifetime	100 000 cycles
Protection against shortage	No
Inductive load protection	Not included
Isolation voltage	4 000 V <sup>~</sup>

## Analog inputs

No. of inputs × groups	1 × 1	4 × 1
Common connector	AGND	AGND
Available functions	0–10 V 0–20 mA	0–10 V / 0–2.5 V 0–20 mA 0–1960 Ω 0–100 kΩ
Galvanic isolation	No	Yes
Resolution	12 bits	16 bits – U, I 24 bits – R
Conversion speed	10 μs	60 μs – U, I 400 ms – R
Input resistance	66 kΩ – U 100 Ω – I	44 kΩ – U 100 Ω – I
Resistance measurement method	–	2/3wire

## Analog outputs

No. of outputs × groups	1 × 1	4 × 1
Common connector	AGND	AGND
Available functions	AO 0–10 V / 0–20mA Resistance measurement: 0–2 kΩ (Pt/Ni1000)	0–10 V
Galvanic isolation	No	Yes
Max. voltage/current	10 V / 20 mA	10 V / 25 mA
Resolution	12 bits	12 bits
Conversion speed	1 ms	300 μs
Resistance measurement method	2wire	–

## Power supply

Rated voltage - SELV	24 V DC
Power consumption	Typ. 10 W Max. 19.5 W
Reverse polarity protection	Yes

## Installation and operating conditions

Operating conditions	0 °C ... +55 °C, relative humidity 10 % ... 95 %, without aggressive substances, condensing vapour and fog
Storing conditions	-25 °C ... +70 °C, relative humidity 10 % ... 95 %, without aggressive substances, condensing vapour and fog
Degree of protection IP (IEC 529)	IP 20
Operation position	Horizontal
Installation	On 35mm DIN rail into distribution box (holder included)
Connection	Pluggable terminal blocks
Wire gauge	Max. 2.5 mm <sup>2</sup>

## Dimensions and weight

Dimensions	140 × 90 × 60 mm
Weight	373 g

## Directive compliance

EMC:	2014/30/EU
RED:	2014/53/EU
RoHS:	2015/863/EU
WEEE:	2012/19/EU