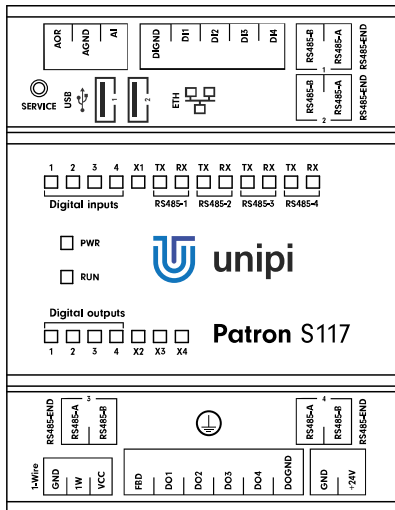


# Unipi Patron S117

## PRODUCT DESCRIPTION

Unipi Patron S117 is a programmable logic controller (PLC) and gateway designed for automation, control, regulation and monitoring. The S117 is a compact model with a universal architecture combining digital and analog I/Os suitable for simple installations. The S117 has a special feature of four RS485 serial interfaces, making the controller suitable for integration into extensive serial buses or as an aggregator for various serial protocols. The controller also features 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, 8 GB eMMC onboard memory

## FEATURES

### Inputs/outputs

- 4 × digital input incl. counter
- 4 × digital output
- 1 × analog input
- 1 × 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

## 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.)

### Communication interfaces

- 4 × RS485
- 1 × 1-Wire bus
- 1 × 100 Mbit Ethernet
- 2 × USB 2.0

### Other features

- The most powerful compact controller on the market
- Developed and manufactured in the EU
- Durable aluminium 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

# Unipi Patron S117

## Communication

<b>Ethernet</b>	1 × 100 Mbit Ethernet
<b>Serial/bus channels</b>	4 × RS485, 1 × 1-Wire
<b>RS485 1 transmission speed</b>	134 baud .. 115 200 baud
<b>RS485 2, 3, 4 transmission speed</b>	50 baud .. 3 Mbaud
<b>RS485 galvanic isolation</b>	Yes
<b>RS485 biasing resistors</b>	Yes, 560 Ω
<b>RS485 terminating resistor</b>	Builitn attachable, 120 Ω
<b>1-Wire galvanic isolation</b>	Yes
<b>1-Wire output voltage Vcc</b>	5 V
<b>1-Wire max. current Vcc</b>	50 mA
<b>1-Wire connector</b>	3 × pole, max. 1.5 mm <sup>2</sup>
<b>USB</b>	2 × USB 2.0

## Digital inputs

<b>Nr.of inputs × groups</b>	4 × 1
<b>Common connector</b>	DIGND
<b>Galvanic isolation</b>	Yes
<b>Functions of inputs</b>	Counter (incl. memory), signalization, Direct Switch
<b>Max. frequency of counter input signal</b>	10 kHz
<b>Input voltage of log. 0</b>	Max. 3 V DC
<b>Input voltage of log. 1</b>	Min. 7 V DC
<b>Max. input voltage</b>	35 V DC
<b>Input resistance</b>	6 200 Ω
<b>Delay 0-&gt;1/1-&gt;0</b>	20 μs / 60 μs

## Digital outputs

<b>Nr.of outputs × groups</b>	4 × 1
<b>Common connector</b>	DOGND
<b>Galvanic isolation</b>	No
<b>Type of output</b>	NPN transistor (open collector)
<b>Optional functions</b>	PWM
<b>Switchable voltage</b>	5-50 V DC
<b>Switchable current continual/pulse</b>	750 mA / 1 A
<b>Max. total current DO1 – DO4</b>	1 A
<b>PWM max. frequency</b>	200 kHz
<b>PWM max. resolution</b>	16 bits

## Analog inputs

<b>Nr.of inputs × groups</b>	1 × 1
<b>Common connector</b>	AGND
<b>Available functions</b>	0-10 V 0-20 mA
<b>Galvanic isolation</b>	No
<b>Resolution</b>	12 bits
<b>Conversion speed</b>	10 μs
<b>Input resistance</b>	66 kΩ – U 100 Ω – I
<b>Resistance measurement method</b>	–

## Analog outputs

<b>Nr.of outputs × groups</b>	1 × 1
<b>Common connector</b>	AGND
<b>Available functions</b>	AO 0-10 V / 0-20mA Resistance measurement: 0-2 kΩ (Pt/Ni1000)
<b>Galvanic isolation</b>	No
<b>Max. voltage/current</b>	10 V / 20 mA
<b>Resolution</b>	12 bits
<b>Conversion speed</b>	1 ms
<b>Resistance measurement method</b>	2wire

## Power supply

<b>Rated voltage - SELV</b>	24 V DC
<b>Power consumption</b>	Typ. 3 W Max. 12 W
<b>Reverse polarity protection</b>	Yes

## Installation and operating conditions

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

## Dimensions and weight

<b>Dimensions</b>	70 × 90 × 60 mm
<b>Weight</b>	202 g

## Directive compliance

<b>LVD: 2014/35/EU</b>
<b>EMC: 2014/30/EU</b>
<b>RoHS: 2015/863/EU</b>
<b>WEEE: 2012/19/EU</b>

