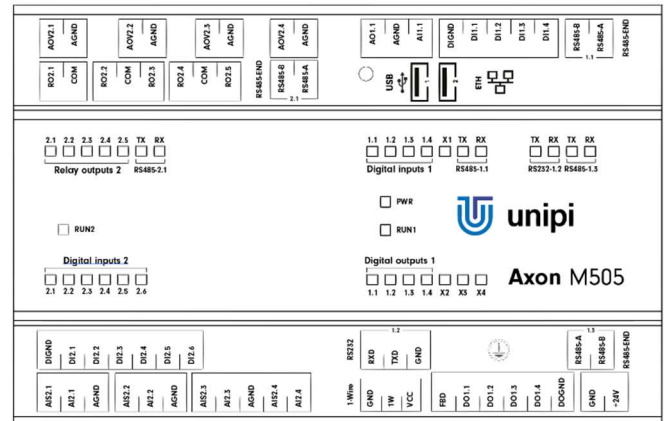


# UniPi Axon M505

Model	DI	DO	RO	AI	AO	Communication	CPU	RAM	eMMC	Other features
M505	10	4	5	5	5	3× RS485 1× RS232 1× 1-Wire bus 1× 1Gbit Ethernet	4× 1.2 GHz	1 GB	8 GB	WiFi Bluetooth

## Basic features

- OS Linux
- Power supply 24 V DC
- Real-time clock (RTC) with backup up to 7 days
- 1Gb Ethernet
- USB for connecting other devices
- RS485 & RS232 serial interfaces for connection of extension or communication modules
- Direct Switch function
  - Rapid input response within the group – tens of  $\mu$ s
  - Available features: identity, negation, toggle
- Watchdog function for monitoring of the control system
- Save and restore settings and fail-safe state of outputs to NVRAM and reload at startup
- 1-Wire bus hardware restart function
- Wide array of software platforms
  - PLC platforms for easy control implementation
    - Mervis
    - REX
  - Opensource platforms for easy implementation of customer solutions
    - SysFS
    - Modbus TCP
    - Moderní HTTP interface (WebSocket, REST, ...)
- User-configurable LEDs
- Ready for wireless technology implementation – Lora, Zigbee, IQRf, Sigfox, EnOcean, GSM, LTE...
- In-built webserver for user application display
- Compact dimensions, easy installation to a DIN rail



### Communication

<b>Ethernet</b>	1× 1Gbit Ethernet
<b>Serial/bus channels</b>	3× RS485, 1x RS232, 1× 1-Wire
<b>Transmission speed RS485 1.1, 2.1</b>	134 baud .. 115 kbaud
<b>Transmission speed RS485 1.3</b>	50 baud .. 3 Mbaud
<b>Galvanic isolation RS485</b>	Yes
<b>Transmission speed RS232</b>	50 baud .. 3 Mbaud
<b>Galvanic isolation RS232</b>	No
<b>Galvanic isolation 1-Wire</b>	Ano

### Digital inputs

<b>Number of inputs × groups</b>	4 × 1, 6 × 1
<b>Common connector</b>	DIGND
<b>Galvanic isolation</b>	Yes
<b>Functions of inputs</b>	Signalization, counter, Direct Switch
<b>Operation range</b>	5 - 30 V DC
<b>Input voltage of log. 0</b>	Max. 3,5 V DC
<b>Input voltage of log. 1</b>	Min. 5 V DC
<b>Input resistance of log. 1</b>	6 200Ω
<b>Delay 0→1/1→0</b>	20 μs / 60 μs

### Digital outputs

<b>Number of outputs × groups</b>	4 × 1
<b>Common connector</b>	DOGND
<b>Galvanic isolation</b>	No
<b>Type of output</b>	Transistor
<b>Additional 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 DO1.1 - DO1.4</b>	1A
<b>Time to switch on/off</b>	Typ. 130 ns / 20ns
<b>Switching speed</b>	Max. 200 kHz/8bit

### Relay outputs

<b>Number of outputs × groups</b>	2 × 2, 1 × 1
<b>Galvanic isolation</b>	Yes
<b>Type of contact</b>	Closing contact
<b>Switchable voltage</b>	250 V AC/30 V DC
<b>Switchable current</b>	5A
<b>Short time overvoltage</b>	5A
<b>Current via common conn.</b>	10A
<b>Time to switch on/off</b>	10ms
<b>Mechanical lifetime</b>	5 000 000
<b>Electrical lifetime</b>	100 000
<b>Protection against shortage</b>	No
<b>Inductive load protection</b>	External
<b>Isolation voltage</b>	4 000 V AC

### Dimensions and weight

<b>Dimensions</b>	140 × 90 × 59 mm
<b>Weight</b>	700 g

### Analog inputs

<b>Nr. of inputs × groups</b>	4 × 1	1 × 1
<b>Common connector</b>	AGND	AGND
<b>Available functions</b>	0 - 10 V 0 - 20 mA 0 - 1960 Ω 0 - 100 kΩ	0 - 10 V 0 - 20 mA
<b>Galvanic isolation</b>	Yes	No
<b>Resolution</b>	24 bits - R 16 bits - U, I	12 bits
<b>Conversion speed</b>	400 ms - R 60μs - U, I	10μs

### Analog outputs

<b>Nr. of out. × groups</b>	4 × 1	1 × 1
<b>Common connector</b>	AGND	AGND
<b>Available functions</b>	0 - 10 V	AO:0 - 10V / 0 - 20mA AI: 0 - 2 kΩ Ni1000, Pt1000
<b>Galvanic isolation</b>	Yes	No
<b>Resolution</b>	12 bits	12 bits
<b>Conversion speed</b>	300 μs	1 ms

### Power supply

<b>Rated voltage - SELV</b>	24 V DC
<b>Voltage tolerance</b>	-15% .. +25% 20,4 .. 30 V DC
<b>Power consumption</b>	Typ.7W Max. 16W
<b>Internal protection</b>	Yes

### Installation and operating conditions

<b>Operating temperature</b>	0 °C .. + 55 °C
<b>Storing temperature</b>	-25 °C .. +70 °C
<b>Dielectrical strength</b>	According to EN 60950
<b>Degree of protection IP</b>	IP20
<b>Operation position</b>	Horizontal
<b>Installation</b>	On 35mm DIN rail into distribution box
<b>Connection</b>	Pluggable terminal blocks
<b>Wire gauge</b>	Max. 2,5 mm <sup>2</sup>

### Standard compliance

ČSN EN 6060730-1
ČSN EN 6095-1 ed. 2
ČSN EN 61000-6-3 ed. 2
ČSN EN 55014-1 ed. 3
ČSN EN 55022 ed. 3
2006/95/EC, 2004/108/ES, 2014/35/EU, 2014/30/EC

