

Processors

High Performance Embedded Pro

Main features

- ✓ Designed for edge computing, analysis and datalogging applications
- ✓ 512 MB DDR3 RAM memory and 8 GB eMMC flash memory
- ✓ RS-232/485, Ethernet & Wi-Fi
- ✓ Embedded Linux Yocto O.S.

Technical features

| Category | Parameters | Value |
|----------------------------|---|--|
| Mechanical characteristics | Dimensions (Width x High x Length) | 35 x 88,5 x 48 mm (2 DIN rail modules) |
| Control unit | Processor | ARM A7 800 MHz |
| | RAM memory | 512 MB |
| | Flash memory | 8 GB eMMC |
| | Wi-Fi | 802.11 b/g/n (2.4 GHz) |

High Performance Embedded

Main features

- ✓ Designed for local monitoring and cloud management applications
- ✓ 512 MB DDR3 RAM memory and 512 MB NAND flash memory
- ✓ RS-232/485, Ethernet & Wi-Fi
- ✓ Embedded Linux Yocto O.S.

Technical features

| Category | Parameters | Value |
|----------------------------|---|--|
| Mechanical characteristics | Dimensions (Width x High x Length) | 35 x 88,5 x 48 mm (2 DIN rail modules) |
| Control unit | Processor | ARM A7 700 MHz |
| | RAM memory | 256 MB |
| | Flash memory | 512 MB NAND |
| | Wi-Fi | 802.11 b/g/n (2.4 GHz) |

Low cost embedded CPU

Main features

- ✓ Designed for data capturing, reception and sending
- ✓ 8 MB SRAM and 448 KB ROM memory
- ✓ 16 MB SPI Flash memory
- ✓ Integrated 2.4 GHz Wi-Fi

Technical features

| Category | Parameters | Value |
|----------------------------|---|--|
| Mechanical characteristics | Dimensions (Width x High x Length) | 35 x 88,5 x 48 mm (2 DIN rail modules) |
| Control unit | Processor | ESP32 Dual-core 32-bit |
| | ROM memory | 448 KB |
| | SRAM memory | 8 MB |
| | SPI Flash memory | 16 MB |
| | Wi-Fi | 802.11 b/g/n (2.4 GHz) |

Power supply

230 Vac Power supply

Main features

- ✓ Versatile, universal and robust
- ✓ Reset button configurable via software
- ✓ Multi-voltage and multi-frequency switching regulator
- ✓ Up to 10 modules connected to the same power supply

Technical features

| Category | Parameters | Value |
|----------------------------|------------------------------------|---|
| Power supply | Power | 85...264 Vac / 120...370 Vdc |
| | Frequency | 47...63 Hz |
| | Consumption | 10,5 VA / 6,5 W |
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| User interface | Button | Reset button |

12/24 Vdc Power supply

Main features

- ✓ Ideal for machinery applications
- ✓ Reset button configurable via software
- ✓ 12 & 24 Vdc power supply
- ✓ Up to 10 modules connected to the same power supply

Technical features

| Category | Parameters | Value |
|----------------------------|------------------------------------|---|
| Power supply | Power | 9...36 Vdc |
| | Consumption | 0,5...20 W |
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| User interface | Button | Reset button |

Battery

Supercapacitor

Main features

- ✓ Ideal to avoid a power supply failure of your monitoring
- ✓ Alarms sending in case of failure of the electrical supply
- ✓ Average battery life of 2 minutes
- ✓ Perfect to monitor critical applications

Technical features

| Category | Parameters | Value |
|----------------------------|---|--|
| Mechanical characteristics | Dimensions (Width x High x Length) | 35 x 88,5 x 48 mm (2 DIN rail modules) |
| Supercapacitor | Average lifetime | 2 minutes |

Communications

RS-232, RS-485 & Ethernet

Main features

- ✓ Simultaneous communication via RS-232 and RS-485
- ✓ Baudrate configurable from 9600 to 115200 bps
- ✓ 10/100 Mbps Ethernet port
- ✓ Galvanically isolated communications

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Serial interface | Type | RS-232/485 |
| | Baudrate | 9600 ... 115200 bps |
| Network interface | Type | Ethernet |
| | Working speed | 10/100 Mbps |

RS-232, RS-485 & GPRS

Main features

- ✓ Simultaneous communication via RS-232 and RS-485
- ✓ Baudrate configurable from 9600 to 115200 bps
- ✓ Quad band GSM/GPRS
- ✓ Connector for SMA external antenna

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Serial interface | Type | RS-232/485 |
| | Baudrate | 9600 ... 115200 bps |
| Radio interface | Type | Quad-band GSM/GPRS |
| | Frequency bands | 850 / 900 / 1800 / 1900 MHz |
| | Antenna | External |
| | Connector | SMA |

GPRS (for High Performance Embedded)

Main features

- ✓ Quad band GSM/GPRS
- ✓ 850 / 900 / 1800 / 1900 MHz
- ✓ Connector for SMA external antenna
- ✓ Low cost CPU for edge computing applications (optional)

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Radio interface | Type | Quad-band GSM/GPRS |
| | Frequency bands | 850 / 900 / 1800 / 1900 MHz |
| | Antenna | External |
| | Connector | SMA |

Metering & Control

Three-phase energy meter

Main features

- ✓ Active and reactive energy, power, voltage, current, frequency and cos phi
- ✓ 4 quadrant measure including single and three phase parameters
- ✓ Precision of class 1 active and class 2 reactive
- ✓ Indirect measurement through current transformers. Split and closed core.

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 35 x 88,5 x 48 mm (2 DIN rail module) |
| Measurement circuit | Current inputs | Indirect |
| | Metering capacity | 1 Three-phase / 3 Single-phase circuits |
| | Current transformer | In / 1 A |
| | Voltage and current wire section | 2,5 mm ² |
| Precision class | Precision | Class 1 active and class 2 reactive |

Double three-phase energy meter

Main features

- ✓ Active and reactive energy, power, voltage, current, frequency and cos phi
- ✓ 4 quadrant measure including single and three phase parameters
- ✓ Precision of class 1 active and class 2 reactive measuring two three-phase or six single-phase circuits
- ✓ Indirect measurement through current transformers. Split and closed core.

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 35 x 88,5 x 48 mm (2 DIN rail module) |
| Signal relays | Current inputs | Indirect |
| | Metering capacity | 2 Three-phase / 6 Single-phase circuits |
| | Current transformer | In / 1 A |
| | Voltage and current wire section | 2,5 mm ² |
| Precision class | Precision | Class 1 active and class 2 reactive |

5 Digital inputs and 2 Power relays

Main features

- ✓ Configurable as dry contact (w/o internal tension) or wet contact (with internal tension)
- ✓ Inputs activation via external 0-24 VDC signal or internal ± 12 VDC power supply (for PNP or NPN sensors)
- ✓ Working modes: input, pulse counter and pulse width time counter. Pulse capturing up to 1 ms
- ✓ Maximum activation current of the relays of 6A

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Digital inputs | Type, number and voltage | 5 digital inputs 0-24 Vdc |
| | Minimum voltage and current | 0 Vdc / 160 μ A |
| | Maximum voltage and current | 30 Vdc / 12 mA |
| | Input sensitivity | 0-7 Vdc : 0; 8-30 Vdc : 1 |
| | Minimum pulse duration | 1 ms |
| | Counters | Counters of 32 bits / Max. frequency 250 Hz |
| Relay outputs | Type | NO |
| | Max. operating parameters | 6A, 250VAC, $\cos=1$, 70°C |

10 Digital inputs

Main features

- ✓ Configurable as dry contact (w/o internal tension) or wet contact (with internal tension)
- ✓ Inputs activation via external 0-24 VDC signal or internal ± 12 VDC power supply (for PNP or NPN sensors)
- ✓ Working modes: input, pulse counter and pulse width time counter. Pulse capturing up to 1 ms
- ✓ Pulse capturing up to 1 ms

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Digital inputs | Type, number and voltage | 10 digital inputs 0-24 Vdc |
| | Minimum voltage and current | 0 Vdc / 160 μ A |
| | Maximum voltage and current | 30 Vdc / 12 mA |
| | Input sensitivity | 0-7 Vdc : 0; 8-30 Vdc : 1 |
| | Minimum pulse duration | 1 ms |
| | Counters | 10 counters of 32 bits / Freq. max 250 Hz |

7 Analogue inputs and 2 Power relays

Main features

- ✓ Analogue inputs with 4096 points of resolution
- ✓ Configurable as 0...10 V / 0...20 mA or 4...20 mA
- ✓ Maximum activation current of the relays of 6A
- ✓ Combine actuation with monitoring in the same module

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Analogue inputs | Number, type and range | 6 analogue inputs 0...10 V / 0...20 mA or 4...20 mA |
| | Transducer resolution | 12 bits (4096 points) |
| Relay outputs | Type | NO |
| | Max. operating parameters | 6 A, 250 Vac, cos=1, 70°C |

12 Analogue inputs

Main features

- ✓ Analogue inputs with 4096 points of resolution
- ✓ Configurable as 0...10 V / 0...20 mA or 4...20 mA
- ✓ Ideal for applications of humidity, level and pressure monitoring
- ✓ Maximum accuracy with resolution of 4096 points

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Analogue inputs | Number, type and range | 6 analogue inputs 0...10 V / 0...20 mA or 4...20 mA |
| | Transducer resolution | 12 bits (4096 points) |

8 Signal relays NO/NC

Main features

- ✓ Signal relays configurable as NO or NC
- ✓ Activation/deactivation time configurable
- ✓ Activation current up to 2 A
- ✓ Relays real time status on leds

Technical features

| Category | Parameters | Value |
|----------------------------|---|---|
| Mechanical characteristics | Dimensions (Width x High x Length) | 17,5 x 88,5 x 48 mm (1 DIN rail module) |
| Signal relays | Number | 8 signal relays |
| | Type | NO or NC configured on demand |
| | Max. operating voltage | 50 Vac/Vdc |
| | Max. activation current | 2 A, 60 W, cos=1 |
| | Min. signal duration | 10 ms |