


INFOSCOPE HELLAS
Cloud SaaS | Automation | Web services
82 Vas. Olgas Ave., GR 54643
Thessaloniki, Greece
Τηλ: +30 231500 5906
Email: info@infoscope.gr



Meton Extend

	Model	Meton Extend	
	Description	I/O extension module (Modbus TCP and Modbus RTU)	
	Unique characteristics	<ul style="list-style-type: none"> Converts up to 8 standard industrial signals to Modbus TCP or to Modbus RTU. Supports 0/4...20mA, 0/2...10V, DI (volt free contacts), 1-Wire, Thermistors (NTC/PTC), temperature transmitters MB1. Further signal types (eg. RTD, Thermocouple) available as hardware variants upon request. Further proxy features (eg. wM-Bus, M-Bus) available as firmware variants upon request Up to 2 independent fieldbus interfaces (RS485) for simultaneous support of buses with different communication protocols or serial communication characteristics Ceaseless performance even on interruption of the mains supply thanks to its embedded rechargeable lithium battery (LiPo) Universal inputs (UI) for processing of analog (AI) and digital signals (DI) High resolution in analogue inputs readings thanks to its 12 and 16 bit A/D converters 	
 <p>Meton Extend</p> <p><i>For illustration purposes only. Ordered products may vary from illustration</i></p>	Technical Specifications	CPU	1GHz, dual core ARM, 32bit of Texas Instrument (USA), RAM at 512MB and embedded flash at 4GB (eMMC). Runs on Linux Debian
		Integrated I/O	<p>8x universal inputs (UI)⁽⁵⁾ as</p> <ul style="list-style-type: none"> Analogue inputs (AI) for temperature sensors thermistor type NTC/PTC or digital inputs (DI) for dry contacts Analogue inputs (AI) for temperature transmitters MB1 or digital inputs (DI) for dry contacts⁽¹⁾ Analogue inputs (AI) for generic sensors 0/4...20mA⁽²⁾ or digital inputs (DI) for dry contacts⁽¹⁾ Analogue inputs (AI) for generic sensors 0/2...10V or digital inputs (DI) for dry contacts⁽¹⁾ <p>Upon request, available hardware variants for: a) 2x digital outputs (DO) for relay actuation (occupying 2x UI) b) 1-wire interface (occupying 2x UI), c) up to 2x RTD inputs (in 3-Wire configuration occupying 3x UI for 1x RTD or 5x UI for 2x RTDs) RTDs supported are Pt50/Pt100/Pt1000/Ni100 at meas. range up to -200...+850oC with resolution 0.02oC and coef. 0.00385 for Pt100 acc. to IEC 60751, d) 1x thermocouple input type J/K/N/S/R/B (occupying 2x UI), with internal CJC, at meas. range up to -270...+1370oC for type K c) customized I/O configuration (as combination of Thermistor / MB1 / 4...20mA / 0...10V / DI / DO / 1-wire / RTD / Thermocouple)</p>
		Measuring range of AI	<ul style="list-style-type: none"> -200...+850°C with resol. < 0.02°C and acc. < ±0.05°C for RTD Pt100 3-wire -50...+60°C with resol. < 0.08°C and acc. < ±0.5°C for transm. MB1 (acc. < ±0.12°C at range -25...+25°C) -55...+125°C with resol. < 0.06°C and acc. < ±1°C for transm. 1-wire (acc. < ±0.50°C at range -10...+85°C) -50...+110°C with resol. < 0.2°C and acc. < ±1°C for thermistors NTC 10k at 25°C with beta 3435



	<ul style="list-style-type: none"> -270...+1370°C with resol. < 0.05°C and acc. < ±0.5°C for thermocouple type K 0...21mA with resol. < 0.03mA and acc. < ±0.1% for transm. 4...20mA 0...11V with resol. < 0.03V and acc. < ±0.1% for transm. 0...10V <p>Unless otherwise noted, stated accuracy a) refers to meas. range -25...+25°C b) is valid after factory default multiple point offset removal applied internally at Meton (functionalization) c) refers to Meton analog inputs when connected with sensors of cable length up to 3m and pre-defined factory accuracy within specific meas. range d) does not take into account offsets introduced by cable extension of sensors</p>
Communication interfaces	<p>1x RS485 1x Ethernet (base 10/100Mbps)</p> <p>Upon request, available hardware variants for: a) additional RS485 interface, b) com. and bus power optical isolation on the additional RS485 interface c) RS232 interface (occupying 2x UI) d) EU standardized acc. to EN 13757-4, wireless receiver wM-Bus, 868MHz, modes T1 OMS and C1⁽⁷⁾</p>
Supported communication protocols	<p>Modbus RTU (slave) and Modbus TCP (slave) simultaneously. Upon request, available firmware variants for: a) M-Bus / Modbus proxy b) wM-Bus / Modbus proxy on modes T1 OMS and C1⁽⁷⁾ c) simultaneous operation as mirror Modbus RTU or ASCII slave (on the additional RS485 port)</p>
Real time clock	<p>Embedded RTC module with lithium battery (Li2MnO2) for real time clock support up to 4 years from the mains power supply interruption. Time synchronization over the network (NTP) is also supported</p>
Power supply	<p>Main: 6...36VDC on the supply terminals, screw type, 2.5mm² Aux: 5VDC on female DC jack connector, type A acc. to IEC 60130-10</p>
Consumption	<p>Typical: 2.3W, Max: 6W (charging)</p>
Backup power supply (UPS)	<p>Embedded rechargeable lithium battery (LiPo) for UPS time up to 4⁽⁴⁾ hours from the mains power supply interruption. Sophisticated battery management system featuring battery temperature and fuel monitoring. Ensures ceaseless performance for the embedded I/O types Thermistor / DI / MB1 / RTD / Thermocouple / mA⁽²⁾ / V⁽²⁾ / 1-Wire and flags available on power supply changes and battery replacement need</p>
Temperature range	<p>-20...+70oC Upon request, available hardware variants for: -40...+85°C</p>
Ingress protection	<p>IP40 acc. to IEC 60529</p>
Weight	<p>175g</p>
Dimensions	<p>73x100x35 mm</p>
Mounting	<p>Wall or DIN rail mount</p>
Accessories	<p>Included: a) switching power supply⁽³⁾, 230VAC/5VDC, 2A, with male DC jack connector, type A acc. to IEC 60130-10 b) Patch cable, UTP Cat5e, RJ45, 2m</p>
<p>Remarks: (1) Needs external resistor mounted in series (2) Up to 4 transmitters of type mA, 2-wire, loop powered, can be supplied by the internal UPS DC supply of Meton (12, 15 or 24VDC depending on Meton hardware variant with sourcing capacity of 1W max, available at V_s terminal) or by external DC power supply available on the main supply terminals (6...36VDC depending on the sensor's supply requirements) (3) Alternatively and upon request: with DIN rail switching power supply, 230VAC/5VDC, 15W, compact type (length 1x DIN module), with input/output isolation and converter from connector male DC jack type A acc. to IEC 60130-10 to terminals 2mm²</p>	

(4) UPS time has been calculated on the basis of standard hardware variant with no I/O and RS485 terminals unconnected. UPS time is affected by a) type and count of sensors connected on the I/O and RS485 terminals b) hardware variants utilizing additional modules (eg. 2G cellular modem) c) type and count of sensors, transmitters and devices being supplied by the V_s terminal

(5) All UIs are protected from short circuits and electrostatic discharge up to 16kV (ESD rating: class 3B). All UIs are equipped with analog LPF for rejecting 50/60Hz EM noise. RTD and thermocouple noise rejection is further enhanced by embedded on IC, digital filter, resulting in -3dB bandwidth of 14.8Hz. All UIs are further digitally filtered by Meton (configurable -3dB cutoff frequency and response time)

(6) The fieldbus interfaces (RS485), are protected from voltage surges, reverse polarity and electrostatic discharge acc. to IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge)

(7) Upon request available hardware variants for other frequencies (433MHz, 169MHz) and firmware variants for other wM-Bus modes (S1, S2, T2, N1, N2)