

Comparison table of telemetry and location modules, expanders and converters

MODULE	MT-025 v2 Telemetry Module	MT-058 Telemetry Module	MT-121 Telemetry Controller	MT-151 LED v3 Telemetry Module	MT-151 HMI v3 Telemetry Module
FEATURES					
Technology			CODESYS®		
4G (LTE)	Cat 1	LTE Cat M1 Cat-NB1/NB2	Cat 1	Cat 1	Cat 1
3G	-	-	YES	YES	YES
2G	YES	-	YES	YES	YES
LoRa®	-	-	-	-	-
BLE	-	-	-	-	-
GPS	-	YES ²	-	-	-
Ethernet	-	-	YES	10/100	10/100
SMS	YES	-	YES	YES	YES
Hardware		NOVELTY	NOVELTY		
Dimensions (L x W x H) in mm	70x86x58	151x80x60	105x86x58	157x86x58	157x86x58
Binary inputs	0 – 4 ¹	0 – 5	8 – 16 ¹	16 – 28 ¹	16 – 28 ¹
Binary outputs	4	-	0 – 8 ¹	0 – 12 ¹	0 – 12 ¹
Counter inputs	0 – 4 ¹	0 – 2 ¹	0 – 4 ¹	0 – 4 ¹	0 – 4 ¹
Analog inputs/outputs	2/-	1/-	3/1	6/-	6/-
1-Wire input	1	1	-	-	-
Integrated sensor T/H	-	T/H ext. integr.	T	T	T
Ethernet ports	-	-	1	1	1
Serial ports RS232/422/485/TTL	1 (0/0/1/0) ²	-	1 (1/0/1/0)	2 (2/0/1/0) ²	2 (2/0/1/0) ²
M-bus interface	-	-	-	-	-
Voice channel	-	-	-	-	-
LED indicators/display	YES/-	YES/-	YES	YES/-	YES/YES
Real Time Clock (RTC)	YES	YES	YES	YES	YES
Removable terminal blocks	YES	YES	YES	YES	YES
GSM antenna connector	1xSMA	1 x SMA	1 x SMA	1xSMA	1xSMA
GPS antenna	-	-	-	-	-
SIM cards	SIM/MIM ²	SIM/MIM ²	SIM/MIM ²	2xSIM/MIM ²	2xSIM/MIM ²
Mounting options	DIN rail	surface	DIN rail	DIN rail	DIN rail
Housing material	ABS	ABS/PC UL 94 V0 ²	ABS	ABS	ABS
Supply voltage (V DC)	9,5 – 30	7 – 24	10,8 – 30	10,8 – 30	10,8 – 30
Power supply for external sensors	-	5	-	-	-
Internal battery supply	-	4,5/3xR14 or 3,6/D ²	-	-	-
Rechargeable battery int./ext.	-/-	-	-	-/YES	-/YES
Operating temperature (°C)	-25...+55	-20 ... +60	-20 ... +65	-20...+65	-20...+65
Protection class	IP40	IP68	IP40	IP40	IP40
Functionality		NOVELTY	NOVELTY		
Send/receive SMS	YES	-	-	YES	YES
Send SMS do defined group	YES	-	-	-	-
Configuration by SMS	YES	-	-	-	-
WebGUI	-	-	-	-	-
Data packet sending	YES	YES	YES	YES	YES
Unsolicited messaging	YES	YES	YES	YES	YES
User programming (lines of code limit)	-	-	CODESYS®	5000	5000
Modbus RTU (master/slave)	-	-	YES	YES/YES	YES/YES
Modbus TCP (client/server)	-	-	YES	YES/YES	YES/YES
MQTT client	-	YES ²	-	-	-
Open/Open2	YES/-	YES/-	YES/YES	YES/YES	YES/YES
UDP Standard	-	-	YES	YES	YES
Low power operation modes	-	YES	-	-	-
Datalogger	YES	YES	YES	YES	YES
MT Data Provider compatibility	YES	YES	YES	YES	YES
NTP	Client	Client	Client	Client	Client
FOTA (Firmware Over The Air)	YES	YES	YES	YES	YES
Remote configuration over network	YES	YES	YES	YES	YES







1/ number of inputs/outputs is configurable
 2/ option
 3/ or -20 ... 55°C - depending on the version of te internal battery

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MODULE	MT-156 HMI v2 Telemetry Module	MT-221 Telemetry Gateway	MT-331 Telemetry Module	MT-513 Telemetry Module	MT-651 Telemetry Module	MT-652 Telemetry Module
FEATURES						
Technology			CODESYS®			
4G (LTE)	Cat 1	Cat 1	Cat 1	YES	-	-
3G	YES	YES	YES	-	YES	YES
2G	YES	YES	YES	YES	YES	YES
LoRa®	-	-	-	-	-	-
BLE	-	-	-	-	YES ²	YES ²
GPS	-	-	-	-	YES	YES
Ethernet	10/100	YES	-	-	-	-
SMS	YES	YES	YES	YES	YES	YES
Hardware		NOVELTY				
Dimensions (L x W x H) in mm	157x86x58	105x86x58	124x63x30	105x86x58	190x75x55	190x75x55
Binary inputs	0 – 12 ¹	-	0 – 8 ¹	8	2	2
Binary outputs	0 – 12 ¹	-	0 – 4 ¹	3	2	2
Counter inputs	-	-	0 – 6 ¹	8	-	-
Analog inputs/outputs	10/-	-/-	0 – 2 ¹ /-	1/-	6/-	6/-
1-Wire input	1	-	1	-	-	-
Integrated sensor T/H	-	T	T	-	T	T
Ethernet ports	1	1	-	-	-	-
Serial ports RS232/422/485/TTL	2 (2/0/1/0) ²	1 (1/0/1/0)	-	1 (1/0/1/0) ²	1 (0/0/1/0)	1 (0/0/1/0)
M-bus interface	1	-	-	-	-	-
Voice channel	-	-	-	YES	-	-
LED indicators/display	YES/YES	YES	YES/-	YES/-	YES/-	YES/-
Real Time Clock (RTC)	YES	YES	YES	YES	YES	YES
Removable terminal blocks	YES	YES	YES	YES	YES	YES
GSM antenna connector	1xSMA	1 x SMA	1xSMA	1xSMA	1xSMA	1xSMA
GPS antenna	-	-	-	-	internal	1xSMA
SIM cards	2xSIM/MIM ²	SIM/MIM ²	SIM/MIM ²	SIM	2xSIM	2xSIM
Mounting options	DIN rail	DIN rail	DIN rail	DIN rail	DIN rail	DIN rail
Housing material	ABS	ABS	aluminium	ABS	ABS	ABS
Supply voltage (V DC)	10,8 – 30	10,8 – 30	9 – 30/PV	9 – 30	7 – 30	7 – 30
Power supply for external sensors	-	-	7 – 24	-	-	-
Internal battery supply	-	-	-	-	YES	-
Rechargeable battery int./ext.	-/YES	-	YES/-	-/-	-/-	YES/-
Operating temperature (°C)	-20...+65	-20 ... +65	0...+55 ³	-20...+55	-20...+55	-20...+55
Protection class	IP40	IP40	IP40	IP40	IP65	IP65
Functionality		NOVELTY				
Send/receive SMS	YES	-	YES	YES	YES	YES
Send SMS do defined group	-	-	YES	YES	-	-
Configuration by SMS	-	-	YES	YES	-	-
WebGUI	-	-	-	-	-	-
Data packet sending	YES	YES	YES	YES	YES	YES
Unsolicited messaging	YES	YES	YES	YES	YES	YES
User programming (lines of code limit)	5000	CODESYS®	-	-	-	-
Modbus RTU (master/slave)	YES/YES	YES	-	-	-	-
Modbus TCP (client/server)	YES/YES	YES	-	-	-	-
MQTT client	-	-	YES	YES ²	-	-
Open/Open2	-/-	YES/YES	YES/-	+/-	-/-	-/-
UDP Standard	YES	YES	-	-	-	-
Low power operation modes	-	-	YES	-	YES	YES
Datalogger	YES	YES	YES	YES	YES	YES
MT Data Provider compatibility	YES	YES	YES	YES	YES	YES
NTP	Client	Client	Client	Client	-	-
FOTA (Firmware Over The Air)	YES	YES	YES	YES	YES	YES
Remote configuration over network	YES	YES	YES	YES	YES	YES







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MODULE	MT-713 v.3 Telemetry Module	MT-718 Telemetry Module	MTX-2050 v2 Telemetry Gateway	ML-231 Location Module	ML-941 Location Module	GW-102 Industrial Router
FEATURES						
Technology						
4G (LTE)	Cat M1/NB1	Cat 1, Cat M1/NB1	Cat 1	-	-	Cat M1/NB1
3G	YES	-	YES	-	-	-
2G	YES	YES	YES	YES	YES	YES
LoRa®	-	-	-	-	-	-
BLE	YES ²	YES ²	-	-	-	YES
GPS	YES ²	-	-	YES	YES	YES
Ethernet	-	-	10/100	-	-	-
SMS	YES	YES	YES	YES	YES	YES
Hardware		NOVELTY				
Dimensions (L x W x H) in mm	122x120x65/95	151x125x90	105x86x59	112x65x23,5	62,5x33x11	80,5x150,5x55
Binary inputs	0 – 5 ¹	0 – 5 ¹	0 – 4 ¹	5	-	0 – 2 ¹
Binary outputs	2	2	0 – 2 ¹	2	1	0 – 2 ¹
Counter inputs	0 – 5 ¹	0 – 5 ¹	0 – 4 ¹	2 ¹	-	0 – 2 ¹
Analog inputs/outputs	3/-	3/-	-/-	2/-	-/-	-/-
1-Wire input	-	-	-	2	-	-
Integrated sensor T/H	T	T/H ²	T	T	T	T/H
Ethernet ports	-	-	1	-	-	-
Serial ports RS232/422/485/TTL	1 (0/0/1/0) ²	1 (0/0/1/0) ²	2 (1/0/2/0) ²	1 (0/0/0/1) ²	1 (0/0/0/1) ²	2 (0/0/2/0)
M-bus interface	-	-	-	-	-	-
Voice channel	-	-	-	-	-	-
LED indicators/display	YES/-	YES/-	YES/-	YES/-	YES/-	YES/-
Real Time Clock (RTC)	YES	YES	YES	YES	YES	YES
Removable terminal blocks	YES	YES	YES	-	-	-
GSM antenna connector	1xSMA	1 x SMA	2xSMA	1xSMA	-	1xSMA
GPS antenna	1xMCX ²	-	-	1xMCX	-	1xSMA
SIM cards	SIM/MIM ²	SIM/MIM ²	2xSIM/MIM ²	SIM/MIM ²	SIM	SIM/MIM ²
Mounting options	surface	surface	DIN rail	surface	-	surface
Housing material	ABS	PC UL94V-0	ABS	ABS	-	ABS
Supply voltage (V DC)	9 – 30 ²	9 – 30 ²	10,8 – 53	9 – 30	2 – 5	9 – 30
Power supply for external sensors	0 – 5/15 ² /24 ²	0 – 5/15 ² /24 ²	-	-	-	7/80 mA
Internal battery supply	3/6xR20	6XR20	-	-	YES ²	-
Rechargeable battery int./ext.	-/-	-/-	-/-	-/YES	-/-	YES ² /-
Operating temperature (°C)	-20...+55	-20 ... +55	-30...+65	-20...+55	-20...+55	-40...+125
Protection class	IP67	IP68	IP40	IP40	-	IP67
Functionality		NOVELTY				
Send/receive SMS	YES	YES	YES	YES	YES	YES
Send SMS do defined group	-	-	YES	-	-	-
Configuration by SMS	YES	YES	-	YES	YES	YES
WebGUI	-	-	YES	-	-	-
Data packet sending	YES	YES	YES	YES	YES	YES
Unsolicited messaging	YES	YES	YES	YES	YES	YES
User programming (lines of code limit)	µProg (32 linie)	µProg (32 linie)	5000	-	-	-
Modbus RTU (master/slave)	YES ² /-	YES ² /-	YES/YES	-	-	YES/-
Modbus TCP (client/server)	-	-	YES/YES	-	-	-
MQTT client	-	-	-	-	-	-
Open/Open2	YES/YES	YES/YES	-/-	-/-	-/-	+/-
UDP Standard	-	-	-	-	-	-
Low power operation modes	YES	YES	-	YES	YES	YES
Datalogger	YES	YES	YES	YES	YES	YES
MT Data Provider compatibility	YES	YES	YES	YES	YES	YES
NTP	-	-	Client	-	-	-
FOTA (Firmware Over The Air)	YES	YES	YES	YES	YES	YES
Remote configuration over network	YES	YES	YES	YES	YES	YES

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MODULE	RM-120 RS232/M-Bus Converter	MT-UPS-1 Telemetry Module	IOT-RT-01 IOT Sensor	IOT-RTH-02 IOT Sensor	IOT-RG-01 IOT Gateway	IOT-RG-02 IOT Gateway
FEATURES						
Technology						
4G (LTE)	-	-	-	-	-	-
3G	-	-	-	-	-	-
2G	-	-	-	-	-	-
LoRa®	-	-	YES	YES	YES	YES
BLE	-	-	-	-	-	-
GPS	-	-	-	-	-	-
Ethernet	-	-	-	-	-	-
SMS	-	-	-	-	-	-
Hardware						
Dimensions (L x W x H) in mm	35x86x58	86x35x58	71x71x27	71x71x27	18x90x58	18x90x58
Binary inputs	-	-	-	-	-	-
Binary outputs	-	-	-	-	-	-
Counter inputs	-	-	-	-	-	-
Analog inputs/outputs	-/-	-/-	-/-	-/-	-/-	-/-
1-Wire input	-	-	-	-	-	-
Integrated sensor T/H	-	-	T	T/H	-	-
Ethernet ports	-	-	-	-	-	-
Serial ports RS232/422/485/TTL	1	-	-	-	1 (1/0/0/0)	1 (0/0/1/0)
M-bus interface	1	-	-	-	-	-
Voice channel	-	-	-	-	-	-
LED indicators/display	YES/-	YES/-	YES/-	YES/-	YES/-	YES/-
Real Time Clock (RTC)	-	-	YES	YES	-	-
Removable terminal blocks	YES	YES	-	-	YES	YES
GSM antenna connector	-	-	-	-	1xSMA	1xSMA
GPS antenna	-	-	-	-	-	-
SIM cards	-	-	-	-	-	-
Mounting options	DIN rail	DIN rail	surface	surface	DIN rail	DIN rail
Housing material	ABS	ABS	ABS	ABS	ABS	ABS
Supply voltage (V DC)	21,6 – 42/PV	21,6 – 42	-	-	5 – 30	5 – 30
Power supply for external sensors	-	-	-	-	-	-
Internal battery supply	-	-	AA/3,6V	AA/3,6V	-	-
Rechargeable battery int./ext.	-/-	-/YES	-/-	-/-	-	-
Operating temperature (°C)	-20...+55	-20...+55	-20...+60	-20...+60	-20...+60	-20...+60
Protection class	IP40	IP40	IP30	IP30	IP40	IP40
Functionality						
Send/receive SMS	-	-	-	-	-	-
Send SMS do defined group	-	-	-	-	-	-
Configuration by SMS	-	-	-	-	-	-
WebGUI	-	-	-	-	-	-
Data packet sending	-	-	-	-	-	-
Unsolicited messaging	-	-	-	-	-	-
User programming (lines of code limit)	-	-	-	-	-	-
Modbus RTU (master/slave)	-	-	-	-	-/YES	-/YES
Modbus TCP (client/server)	-	-	-	-	-	-
MQTT client	-	-	-	-	-	-
Open/Open2	-/-	-/-	-/-	-/-	-/-	-/-
UDP Standard	-	-	-	-	-	-
Low power operation modes	-	-	YES	YES	-	-
Datalogger	-	-	-	-	-	-
MT Data Provider compatibility	-	-	-	-	-	-
NTP	-	-	-	-	-	-
FOTA (Firmware Over The Air)	-	-	-	-	-	-
Remote configuration over network	-	-	-	-	-	-

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