

SMARTbox mini

Connect any Modbus Device by Cloudfieldbus

SMARTbox mini is a fully integrated cellular gateway with Modbus support for connecting any Modbus device. Designed to work in industrial environments, it is the ideal solution for companies looking to add remote monitoring. SMARTbox mini leverages the IoT Cloud of Cumulocity and Cloud of Things enabling Modbus protocol by the unique solution Cloudfieldbus to support customers who need to monitor large numbers of devices to easily integrate that data.



Key features

- Modbus protocol support
- 2 analogue sensors (digital, analogue)
- DIN Rail Switchboard installation
- Telekom Cloud of Things for easy management Cloudfieldbus for easy Mng.
- LTE-M cellular technology
- SIM-free selection



Status & Alarm

Alarm, Status, Leakage, Doorswitch, Rotating field failure, Phase failure

Protocol

Modbus RTU RS485





RADIO

4G LTE	optional LTE Cat 1 B1(2100) B3(1800) B7(2600) B8(900) B20(800)
2G	B2 B3 B5 B8
NB-IOT/LTE-M	B1 B2 B3 B4 B5 B8 B12 B13 B18 B19 B20 B25 B28 B66 B71 B85 B103
Regions	WorldWide



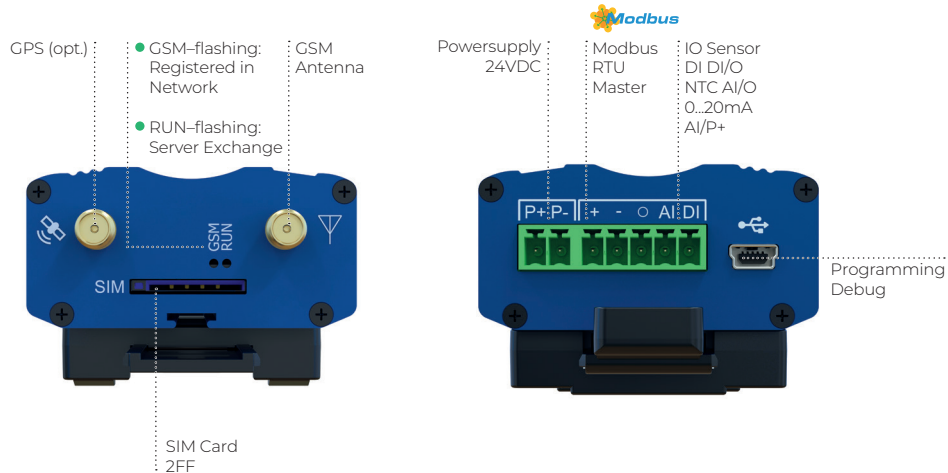
LOCATION SERVICE

GNSS	72-channel u-blox M8 engine GPS/QZSS L1C/A, GLONASS L1OF, BeiDou B1I, Galileo E1B/C, SBAS L1C/A: WAAS, EGNOS, MSAS,GAGAN
Tracking	Tracking by: · By PowerUp device · selectable time cycle



SENSORS - FIELDBUS

Layout



Type: Modbus RTU Master RS485/RS232 (optional)
 Baudrate: 4800, 9600, 19200, 38400, 57600, 115200
 Parity: Even, ODD, NONE
 Stopbits: 2,1
 Functions: · Funct. 1 (Read Single Coils)
 · Funct. 2 (Read Input Status)
 · Funct. 3 (Read Holding Registers)
 · Funct. 4 (Read Input Registers)
 · Funct. 5 (Write Coil)
 · Funct. 6 (Write Holding Register)

Datapoints: Max. 10 Modbus Slaves, with 100 datapoints per device or 1000 datapoints with 1 device



SENSORS - FIELDBUS

Sensors	12 I/O's	12 Flex IOs -10 Universal Inputs + 1 fix selectable analog Input + 1 fix selectable digital Input + 1 Output -including powering of sensors 1 Output (up to 7 Outputs)
	DIN	Selectable by hardware jumper (either Low-Side or High-Side): · Digital Input (Low-Side = NPN, GND): DIN NO/DIN NC · Digital Input (High-Side = PNP, 24VDC): DIN NO/DIN NC · Digital Input: Push-Pull
	AIN	Selectable by hardware jumper (either NTC or 0..20mA) · Temperature: NTC10K (-40°C .. 105°C, Res.: 0,1K) · Current Input: 0..20mA/4...20mA (Res.: 0,1mA)
LED	Net/Run	Cloud connection state
	lot/GSM	Sensor processing data state
USB		USB 2.0 HS - programming, Logging and Trace the device



MANAGEMENT PLATFORM

Supported Platforms	Telekom Cloud der Dinge, Cumulocity IoT, AI, Mindsphere, ooredoo, Telia, ...and more
Communication	MQTT, LWM2M OMA, https, TLS,TCP, UDP, HTTP
Access	Bi-directional communication
OTA	yes
FOTA	yes



GENERAL

Dimension	72 x 53,5 x 26 mm
Weight	89g
Antenna	SMA Connector
Supply	Nominal voltage range: 12-30 VDC, +/-10% Maximum continuous (average) supply current: 300 mA at 12V, 150mA at 24V
Mounting	Via DIN Rail Adapter
SIM Card	2FF
Operate T/H	-40°C...85°C/Max. 85%
Storage T	-40°C...85°C/Max. 85%
IP Class	IP20
Approvals	
Conformity	2014/53/EU (Radio Equipment Directive-RED) Radio EN301511 v12.5.1 EN301908 v13.1.1 EMC EN 301489-1 v2.2.0 General Part EN 301489-52 v1.1.0 DIN EN 61326-1 - 2018-09 Safety DIN EN 61010-1:2020-03;VDE 0411-1:2020-03
Warranty	2 years

Remote Manager

Third Party IoT-Platforms

Fleetmanagement:

- Activate, monitor and diagnose your devices from a single point – on your desktop or mobile app
- Monitor the health of your connected facility by taking graphs from different widgets. A large selection of evaluation and diagram types are available.

Cockpit:

- Creating threshold monitoring, events, critical alarms, warnings and reports

Open API:

- Create Notifications or simply use the REST API from the Cloud platform to feed your third party system with all the data



... and more

Ordering Codes

GATEWAYS

	ORDERCODE	BATTERY	EXT. SENSORS	FIELDBUS	RADIO	LOCATION SERVICE	INT. SENSORS
mini RS485	MB2013010XX	12-36VDC, IP30	-	RS485, Modbus RTU Master	LTE Cat1, 2G Fallback	-	1 x TempSensor NTC, 1 x Digital Input
mini RS485 GPS	MB2013210XX	12-36VDC, IP30	-	RS485, Modbus RTU Master	LTE Cat1, 2G Fallback	GPS, Glonass	1 x TempSensor NTC, 1 x Digital Input
mini RS232	MB2023010XX	12-36VDC, IP30	-	RS232, Modbus RTU Master	LTE Cat1, 2G Fallback	-	1 x TempSensor NTC, 1 x Digital Input
mini RS232 GPS	MB2023210XX	12-36VDC, IP30	-	RS232, Modbus RTU Master	LTE Cat1, 2G Fallback	GPS, Glonass	1 x TempSensor NTC, 1 x Digital Input
mini ETH	MB2033010XX	12-36VDC, IP30	-	Modbus TCP / IP Client, HTTP Server	LTE Cat1, 2G Fallback	-	-
mini ETH GPS	MB2033210XX	12-36VDC, IP30	-	Modbus TCP / IP Client, HTTP Server	LTE Cat1, 2G Fallback	GPS, Glonass	-

ACCESSOIRES

	ORDERCODE	DESCRIPTION
PowerSupply 24VCTypC	70400	Powersupply 24VDC/1A for mini and cube series, with 2pole 3,81 connector
GSM HQ SMA	70624	Adjustable Antenna, Covering Worldwide LTE Bands, 3G/2G Fallback, SMA
GSM HQ SMA 5m cable	70622	Magnetic Mount Antenna, Covering Worldwide LTE Bands, 3G/2G Fallback, 5m, SMA
SET mini DIN-Rail holder	70716	Din Rail Adapter for Mini Series