

TBOX MS-GSM-M1

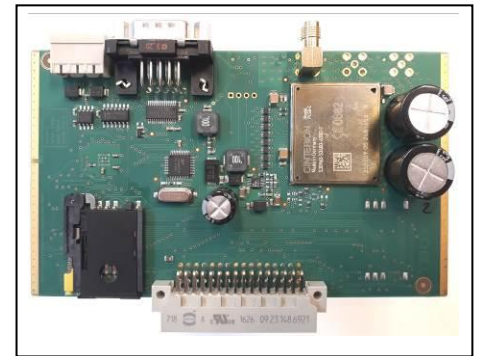
Version 1.02

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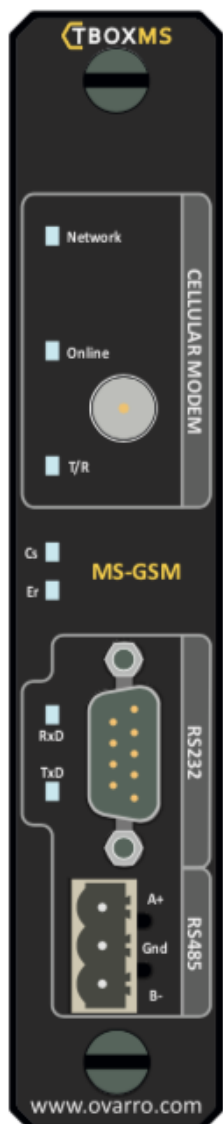
Available for MS-CPU32(-S2), not available for MS-CPU16

Requires TWinSoft 12.8 + OS 1.51 or higher

- Worldwide LTE-M/NB-IoT modem
 - Including AT&T and Verizon
- Eighteen FDD-LTE Bands
- Quad Band GSM (2G) fallback
- 3GPP Rel.14 compliant
- IP mode communication (through APN)
- Send/Receive SMS
- 1 RS232/RS485 port non isolated



Technical Specifications



General

Construction	Industrial grade LTE-M (Cat.M1) and NB-IoT (Cat.NB1 & Cat.NB2) with support for 2G
Consumption	On the BUS : 30 mA On Vp : Max. 4.75 W
Replacement	Hot insertable/removable. No risk to damage hardware, but a reset is required
Test	Automatic test of the access of the card by the CPU (See LED 'CS' below)

LTE Cat. M/NB/2G

Frequencies	FDD-LTE Bands: 1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 27, 28, 66, 71, 85 Quad-Band GSM: 850, 900, 1800 and 1900 MHz
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LEDs GSM (yellow)	Network: Flashes when the GSM is connected to the network On Line: Indicates that the GSM is connected to an APN T/R: Flash ON when GSM is transmitting
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SIM card	3V and 1.8V SIM cards Standard size SIM card.
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Antenna connector	Screw connector, type SMA female (Jack) on MS-GSM card
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RS232 – RS485

Mode	RS232 or RS485 (no simultaneous use of both modes)
Isolation	No isolation. Gnd is linked to earth by internal connection
RS232	<u>Signals:</u> Rx/D, Tx/D, CTS, RTS, DTR, DSR, DCD, RI <u>Connector:</u> 9 pin Sub-D (male)
RS485	<u>Cabling:</u> 2 wires (A+ and B-) for multi-points connection

Termination: no need for termination resistor (failsafe bias resistors included: pullup and pulldown resistors which assures a logical level TRUE when A and B are opened or in short circuit)

Number of slaves: 256 (if RS485 technology of slaves allows it too)

Connector: screw connector (3 x 5.08 mm)

LEDs for both ports (yellow)

RxD Indicates reception of data

TxD Indicates transmission of data

LED

Cs **Card Selection (green)**: card corresponding to card declared in TWinSoft.

ER **Error (red)**: card type not corresponding to the one declared in TWinSoft.

Environment

Temperature storage -40°C to 85°C

Temperature working (ambient) **Industrial Temperature**: -40°C to 70°C

Humidity 15 to 95 % without condensation

Altitude Max. 5000 m

Dimensions

Without connector Height x Depth x Width: **150 x 83 x 29 mm**

Weight 300 g

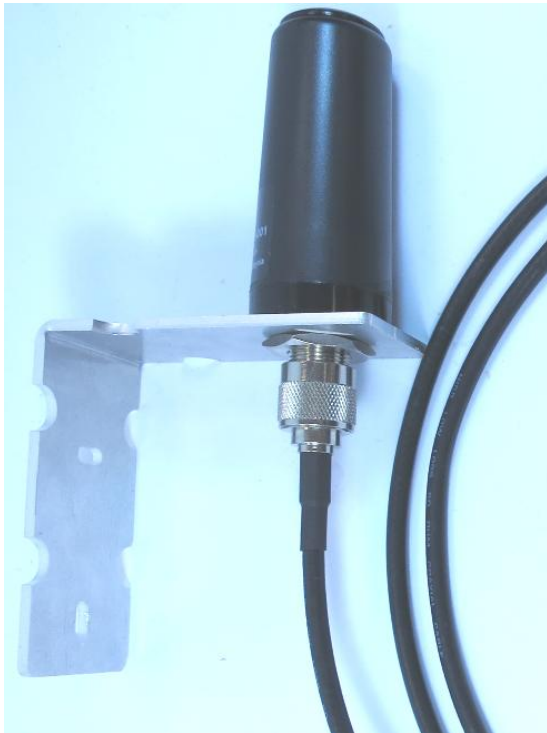
Approvals

CE, UL, CSA, RED, FCC, IC, GCF, REACH, RoHS

USA: AT&T, Verizon (cat M).

Antennas

One model of antenna covers all frequencies (700/800/850/1800/1900/2100/2500/2600 MHz).
Reference. **ACC-GSM-ANT-4G**



Antenna Surge Arrestor

Connection to the arrestor:

1. Use the N-M>>N-M connector from the arrestor to connect it to the antenna (remove N-M>>FME-M from antenna if mounted).
2. Connect N-M>>FME-M adapter supplied with the antenna to the other side of the arrestor.
3. Connect the corresponding antenna cable.

