

















MTX-IoT-S

4G IoT modem with 8x digital I/O, 2x ADC, ULP and battery

MTX-IoT-S is an innovative and powerful all-in-one solution for the IoT sector. It features a very effective ULP (Ultra Low Power) system that allows the device to work with primary batteries for years. This feature, together with its set of interfaces (RS232, RS485, USB, DI/O, ADC...) and the embedded MTX-Tunnel firmware, provides the MTX-IoT-S with a router-like functionality, and makes this modem ideal for most IoT applications, with no need for further hardware, shortening the time-to-market, and providing a cost-effective solution.



Main Features

 4G/3G/2G communications	 USB	 RS232 RS485	 8x digital I/O	 2x ADC 4x DAC	 Latch relay	 Battery	 Ultra Low Power
 GPS (optional)	 Cervello Stem	 4G/3G/2G serial gateway	 GPIO management	 Relays management	 DynDNS No-IP	 MQTT/s	 Modbus & datalogger

■ HARDWARE ■ SOFTWARE

Strengths & Benefits

- Ultra Low Power (ULP) system that allows the device to work with primary batteries for years.
- With a complete set of interfaces.
- 8x digital I/O and 6x analog I/O.
- Embedded MTX-Tunnel firmware.
- Compatible with Cervello Stem IoT platform.

Applications

- A modem ideal for most IoT applications.
- All-in-one solution for the IoT sector.

Specifications

MTX-IoT-S 4G

EUROPE: Penta-Band LTE: Bands 1, 3, 8, 20, 28 (700, 800, 900, 1800, 2100 MHz); Dual-Band UMTS/HSPA+: Bands 8, 1 (900, 2100 MHz); Dual-Band GSM: 900 and 1800 MHz

AUSTRALIA: Quad-Band LTE: Bands 3, 5, 8, 28 (1800, 850, 900, 700 MHz); Tri-Band UMTS: Bands 1, 5, 8 (WCDMA/FDD 2100, 850, 900 MHz)

LTE Cat. 1 DL: max. 10.2 Mbps, UL: max. 5.2 Mbps

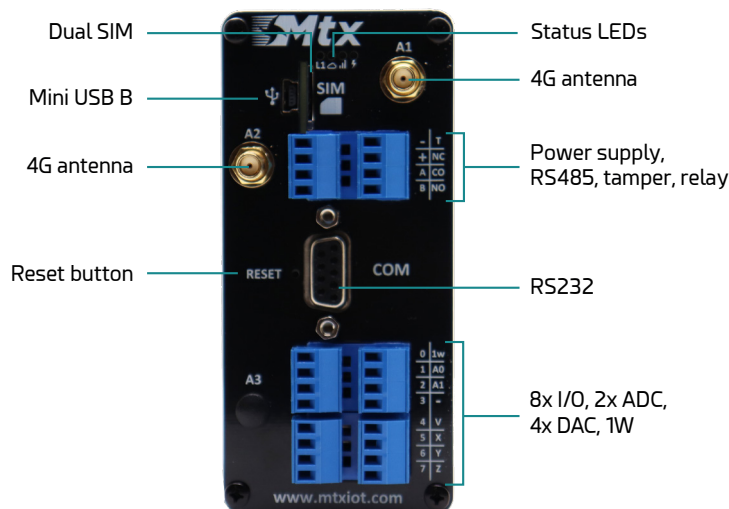
HSPA+ Cat.8 data rates DL: max. 7.2 Mbps, UL: max. 5.76 Mbps

GPRS Class 12 DL: max. 85.6 kbps, UL: max 85.6 kbps

SMS text and PDU mode support

Interfaces

- 4G/3G/2G connectivity
- RS232
- RS485
- 8x GPIOs (convertible to pulse input counter)
- 2x ADC (0-10V and 4-20mA)
- 4x DAC (0-10V and 20mA output max.)
- GPS (optional)
- Tamper input
- Latch relay (also available without relay)
- RF expansion 433/686/913MHz (optional)
- Real Time Clock with alarm functionality
- Accelerometer (optional)



Connectors

- 2x SMA F: 4G
- 1x SMA F: GPS (optional)
- Mini USB B
- 1x DB9: RS232
- 4x2 terminal block: power supply, RS485, tamper, relay
- 8x2 terminal block: 8x I/O, 2x ADC, 4x DAC, 1W
- Dual SIM: 2x external access microSIM

Characteristics

- Battery
- Ultra Low Power
- Status LEDs
- DC input: 7 to 30Vdc (36Vdc optional)
- Temperature range: -30 - 85°C
- Dimensions: 113x52x78mm
- Weight: 190gr.
- Certifications: CE, FCC, PTCRB, RoHS, ISO9001

Processor

- Flash: 4G 31MB
- RAM: 4G 18MB
- CPU: 4G ARM11

References

PRODUCTS

■ MTX-IoT-S [4-N-N]	000199802407
■ MTX-IoT-S [4-R4-N]	000199801494
■ MTX-IoT-S [4-N-GPS]	000199802409
■ MTX-IoT-S [4-N-WMbus]	000199802417
■ MTX-IoT-S [4-N-GPS] (AUS)	000199802410
■ MTX-IoT-S [4-N-N] (AUS)	000199802408

[X-N-Wireless modules]		
4: 4G/3G/2G	N: no options R4: 4 relays	N: no options GPS: GPS/Glonass (-165dBm) WMbus: Wireless M-Bus

MTX-Tunnel Software Features

CONNECTIVITY

- 4G/3G/2G serial gateways: TCP client, TCP server, UDP client/server, accept incoming CSD calls, up to 2 simultaneous tunnel
- IP connectivity mode: permanent 100% time, under request (SMS, missed call), change on a digital input, analog input out of level, serial data on RS232/RS485 port, scheduled date/hour/time

TCP SERVICES

- Web server, Telnet, SNMP, Tacacs+, NTP
- Datalogger: MQTT, MQTTS, HTTP, HTTPs, FTP
- Shows the status of digital and analog inputs
- Change digital output level and relays
- Execute AT commands remotely: Telnet, MQTT/MQTTS, SMS, HTTP

SECURITY

- Authorized phone numbers
- Firewall IP, SSL/TLS connections, encrypted config
- Secure OTAP (remote FW upgrade)
- Watchdog hardware

ALARMS AND CONTROL

- Send SMS/MQTT alarm when the level of digital or analog input change
- SMS can be sent to up to 10 remote users
- Execute remote AT commands
- Change the status of digital outputs & relays
- Customizable SMS commands

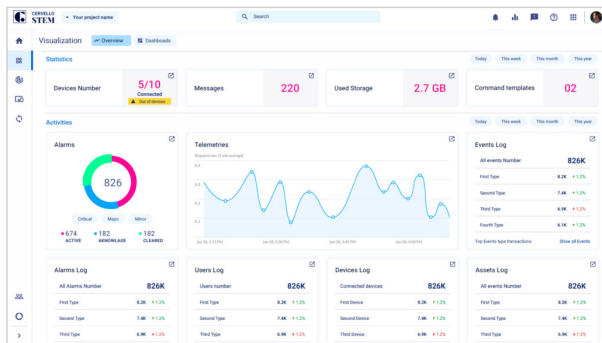
SOLUTIONS FOR DYNAMIC IP

- IP session using a SMS or missed call
- DynDNS and NoIP
- Private DNS

METERING, MODBUS, SENSORS...

- 868 MHz remote monitoring sensors (Wavenis)
- Master for modbus RTU devices, Modbus TCP slave, Modbus TCP to RTU gateway
- Relays control
- Access to serial devices using 2G/3G/4G and GSM
- Astronomical clock

Cervello Stem - IoT Platform



GENERAL FEATURES

- Up to unlimited devices
- Autoprovisioning
- Real time dashboards
- Remote control
- Monitoring engine
- Alarms and alerts
- Rules engine
- Remote update
- Connect engine*
- API Keys*
- Analytics*
- Multi-tenant*
- White labeling*
- Custom admin role*

MONITOR

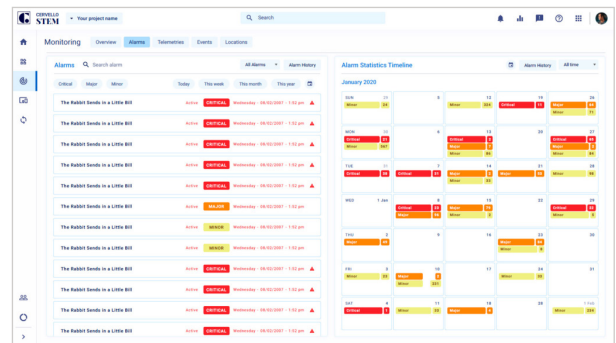
- Alarms, Events and Incidents
- Tracking*

CONTROL

- Command template
- OTA

*Upgrade required

**Available with compatible devices with MTX-Tunnel or MTX-Titan



DEVICES INVENTORY

- Add single from template
- Add Bulk from template and from autoprovisioning
- Manage: Device template, Groups, Assets and Bulk actions

CONNECT

- Topics*
- Transformation*
- Integration keys*

VISUALIZE

- Dashboards
- Reports

AUTOMATE

- Rules Engine
- Actions
- Triggers

SECURITY

- 2-factor authentication
- SSL for end user application
- Custom admin roles*

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