#WeAreConnectivity

SMART SOLUTIONS FOR A CHANGING WORLD

MTX-IoT

Advanced 4G/3G modular programmable IoT modem

The MTX-IoT devices are an innovative and powerful solution for the most demanding IoT applications, enabling 4G/3G high speed cellular data transmission, GSM voice, SMS.

MTX-IoT are Java J2ME programmable and have many interfaces (RS232/485, USB, optoisolated IOs, analog-to-digital converter) avoiding need for further hardware reducing costs. Its modular architecture allows a series of optional features:

- GPS module: allows tracking
- RF card: up to 2 wireless modules
- Analog audio: enabling voice applications*

It is also compatible with MTX-Tunnel, an optional firmware that can be executed in our MTX modems to use them as powerful gateways or routers.

MAIN FEATURES

- 4G/3G/2G communications
- USB
- RS232/485
- GPIO
- Analog inputs
- GPS
- Wavenis
- Internet services
- Java
- MTX-Tunnel
- Firmware update over the air

- DC input: 8 to 50 Vdc
- Temperature range: -30º to +85ºC
- Dimensions: 78.1x66.8x37.2mm
- Weight: <190gr

Datasheet dubject to changes | 2019/2

SUPPORT: iotsupport@mtxm2m.com
SALES: info@mtxm2m.com
mtxm2m.com

HARDWARE FEATURES

	MTX-IoT 4G	MTX-IoT 3G
	LTE 5 Bands (700, 800, 900, 1800, 2100MHz), GSM/GPRS/EDGE: 2 Bands (900, 1800MHz)	UMTS/HSPA+: 5 Bands (800, 850, 900, 1900, 2100MHz), GSM/GPRS/EDGE: 4 Bands (850, 900, 1800, 1900MHz)
4G	LTE Cat.1: DL 10.2Mbps, UL 5.2Mbps	
3G	HSPA (3GPP release 6,7): DL 7.2Mbps, UL 5.7Mbps; HSDPA Cat.8/HSUPA Cat.6 UMTS (3GPP release 4): PS data rate 384 kbps DL, UL 384kbps	HSPA (3GPP release 6,7): DL 7.2Mbps, UL 5.7Mbps; HSDPA Cat.8/HSUPA Cat.6 UMTS (3GPP release 4): PS data rate 384 kbps DL, UL 384kbps
2G	GPRS (EU only): DL 85.6kbps, UL 85.6kbps	EGPRS: multislot class 12; EDGE E2 power class for 8PSK GPRS class 12; mobile station class B; PBCCH support
CSD	CSD data transmission up to 9.6 kbps, V.110, non-transparent	CSD data transmission up to 9.6 kbps, V.110, non-transparent
SMS	SMS: text and PDU mode support	SMS: point-to-point MO and MT; text and PDU mode

Interfaces

- 4G/3G/2G connectivity
- USB
- RS232 (up to 2)
- RS485
- GPIOs
- 3x pulse input counter
- GPS (optional)
- RF expansion (optional)
- Audio in/out (optional)
- SIM card interface 1.8V and 3V
- Power supply
- Operating status LEDs
- Real Time Clock with alarm functionality

Connectors (STD version)

- 2x SMA F: 4G
- 1x FME F: 3G
- 1x SMA F: GPS
- Micro USB
- 2x RJ11 (only for audio version)
- 1x DB9: RS232
- 1x DB15: RS232, GPIO, pulse input, ADCs
- 1x terminal block (5-ways): power supply, RS485, input

Processor

	4G	3G
Flash	31MB	10MB
RAM	18MB	10MB
CPU	ARM11	ARM11

SOFTWARE FEATURES

Special Features

- USB interfaces support composite modes and Linux/Mac compliant mode
- Firmware update over the air via USB/RS232
- Multiplexer according 3GPP TS 27.010
- RLS monitoring and informal network scan

Java Features

- Oracle Java ME embedded 3.2
- Compliant to CLDC 1.1 HI and IMP-NG standards
- Capable of running multiple MIDlets in parallel with inter-MIDlet communication
- Java standard APIs: JSR75 (FileConnection), JSR177 (CRYPTO), JSR280 (XML)
- Accessible periphery for Java applications
- Memory space for Java applications

ORDERING INFORMATION

MTX-IoT [3-S-N-N]*	**199801393**
MTX-IoT [4-S-N-N]	**199801436**
MTX-IoT [4-S-N-N] AUS	**199801446**
MTX-IoT [4-S-N-N] USA	**199801439**
MTX-IoT [4-S-N-N] USA-V	**199801440**
MTX-IoT [3-S-G-N]*	**199801415**

MTX-IoT [3-S-A-N]*	**199801403**
MTX-IoT [3-S-N-GPS]*	**199801456**
MTX-IoT [3-S-A-GPS]*	**199801448**
MTX-IoT [4-S-N-GPS]	**199801452**
MTX-IoT [4-S-N-W868]	**199801404**

*With MoQ

ORDERING INFORMATION

MTX - IoT [C - Variant - Options - Wireless]

C

3: 3G/2G
4: 4G/3G/2G

Variants

STANDARD MODELS:
S: both DB9 and DB15 connectors are available

CUSTOM MODELS:
15: only connector available DB15
9: only connector available DB9
LC: neither DB9 nor DB15 connectors are available

Wireless Modules

N: no options
W868: Wavenis/Emeris 25mW 868MHz
W868LR: Wavenis/Emeris 500mW 868MHz
W915: Wavenis/Emeris 25mW 915MHz
W915LR: Wavenis/Emeris 500mW 915MHz
GPS: GPS/Glonass (-165dBm)

Note: if using 2 modules, the RS232 (8-wire) port (DB9) will not be available anymore.

Options

N: no options
A: analog audio
S: SuperCap

Note: not all options are available at the same time.

FEATURES & COMPATIBILITY

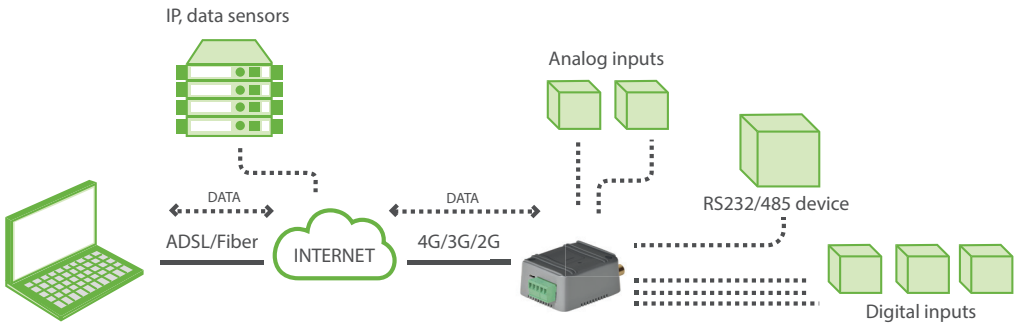
MTX-IoT			
	STANDARD VERSIONS	CUSTOM VERSIONS (by request only)	
	-S	-15	-9
GPS	*	*	*
RS232 (8-wire)	X		X
RS232 (4-wire)	X	X	
RS485	X	X	X
USB	X	X	X
ADC	x2	x2	
Optoisolated IO	x4	x4	
Counter input	x3	x3	x1
Analog Audio (A)	(*1)	(*1)	(*1)
Internal wireless module	(*1)	(*1)	(*1)

* Optional (*1): option. See incompatibility table

	3G (3G/2G)	4G (4G/3G/2G)	RS232 (8-wire) DB9	RS232 (4-wire) DB15	RS485	-A (Analog audio)	-S (SuperCap)	Wireless module	GPS module
3G (3G/2G)									
4G (4G/3G/2G)									
RS232 (8-wire) DB9								(*1)	(*1)
RS232 (4-wire) DB15								(*1)	(*1)
RS485								(*1)	(*1)
-A (Analog audio)									
-S (SuperCap)									
Wireless module			(*1)	(*1)	(*1)				
GPS module			(*1)	(*1)	(*1)				

Compatible Non-compatible (*1): all serial ports not available at the same time

TUNNEL SOFTWARE FEATURES



MAIN FEATURES

- 4G 3G/2G — Serial to 4G/3G/2G
- IN OUT — GPIO control
- GPS management
- Dyn DNS — DynDNS and No-IP
- MQTT/MQTTs/ HTTP/HTTPs
- RF mesh concentrator
- Modbus master datalogger
- SMS — SMS control

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

Security

- Authorized phone numbers
- Firewall IP, SSL connections, encrypted config.
- Secure OTAP (remote FIU upgrade)
- Watchdog hardware

SMS Alarm and Control

- Send SMS alarm when the level of digital input change
- SMS can be sent to up 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 GPRS and GSM
- Astronomical clock