



MTXM2M

Modems, Gateways & Routers for M2M-IoT



VENDING – SECURITY - METERING - SMART CITY - ENERGY - INDUSTRIAL- MEDICAL

Wireless M2M-IoT devices

Designed and manufactured by Matrix Electronica, awarded 2015 Innovative Company. MTXM2M offers high tech M2M and IoT devices & software for M2M and IoT applications.



INNOVATIVE SME



MTXM2M Portfolio

MODEMS MTXM2M



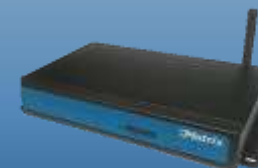
**MTX TUNNEL
SOFTWARE**



MTX GATEWAYS



3G, 4G ROUTERS



Embedded Modules



Sensors & Accesories



miniPCIe-CEFIRO

Industrial grade flexible miniPCIe card

- **Cellular communications:** 3G and 4G options
Java J2ME programmable module
- **WLAN b/g/n:** including Access Point and
Monitor Mode
- **Bluetooth 4.0:** standard Bluetooth v2.1 + Low
Energy
- **GPS receiver:** allow track & location
applications



MTX-65i

MTX-3G-JAVA

MTX-DIN-RIL

MTX-IND



2G and 3G JAVA programmable modems

- USB, Input & Outputs
- 2 RS232 Ports. RS485 Option
- Ultra Low Power * version
- Internal Battery Option
- GPS Receiver
- Bluetooth
- Radio Frequency ISM card



Industrial DIN RAIL and IP65 modems

- RS232/485/422
- AC-DC power, Battery inside
- Relays, Optoisolated GPIOs
- RF card for concentrator
- 2G and 3G



Other models:

MTX-LTE

USB, RS232 & GPS

MTX-HSPA-PH8

USB, audio, GPS, RS232



- VERY FLEXIBLE modem.

2G or 3G Java programmable

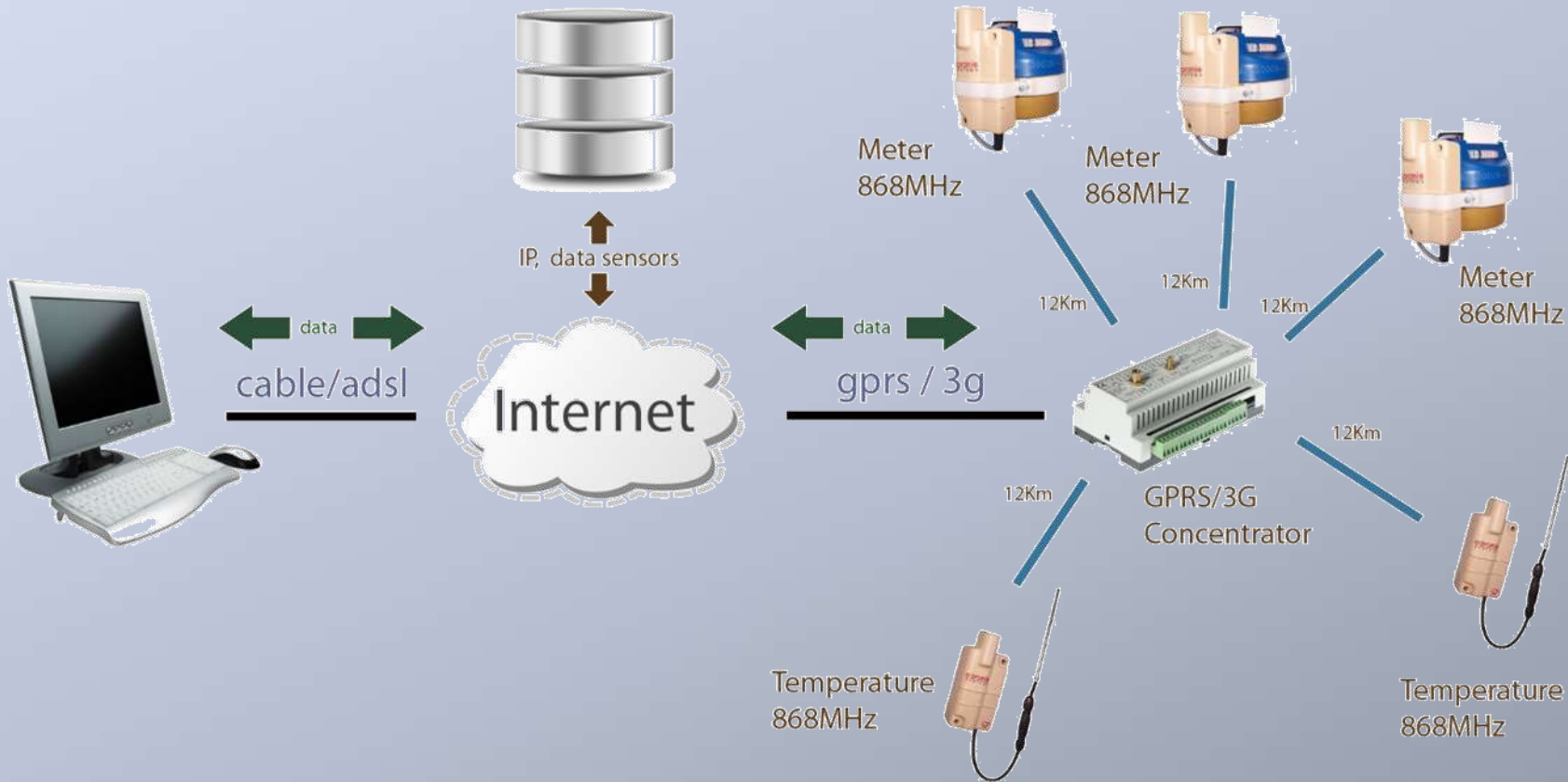
Possible options-versions

- GPS/GNSS receiver
- IonLi Battery inside. Accelerometer
- RS485
- Optoisolated Input Outputs, Analog Inputs
- RF card (BT, GPS, WMBUS...)
- Ultra Low Power...
- Basic Very LOW COST Version

MTX-IoT



MTXTUNNEL: Can be embedded in JAVA programmable modems
EASY. PLUG & PLAY. Fast time to market. Extremely Low cost.



- Advanced serial to GPRS/3G transparent Gateways
- Internal Webserver & Telnet
- SMS/IP alarms
- GPIO telemetry & control
- DynDNS
- Cable replacer
- GPRS/3G – I2C/SPI tunnel
- SMS to serial tunnel
- Metering GSM-GPRS
- Modbus concentrator
- RF Mesh concentrator
- Bluetooth bridge
- Intelligent relays
- Automatic time synchronization
- GPS management fleet control
- Routing, NAT, iCloud services

2G-3G-4G Open platform Linux Gateway

MTX-GTW



- Linux kernel 3.5. **JAVA** VM.
- i.MX28: ARM9 @ 454MHz
- RAM: 128MB Flash: 4GB
- Ethernet + USB OTG
- 1x RS232/485/422 2x RS232
- CAN, GPIOs, Relays, VGA
- MiniPCIe GPRS/HSPA/LTE
- WiFi Client / Access point

MTX-GATEWAY-IND



RF card:

- Wavenis
- WMBus
- Bluetooth 2.1
- Zigbee
- Bluetooth Smart
- GPS

MTX-GATEWAY-OEM



Versions

- OEM
- Industrial IP65
- Compact size



ARM9 processor



Quad Band LTE
Tri Band HSPA+
UMTS (WCDMA)



Ethernet



USB 2.0 OTG
RS232/RS485
CAN/1-Wire



GPS/GLONASS



Wi-Fi b/g/n

NEW



MTX-TITAN



MTX-HELIOS



NEW



3G connectivity supervisor
 DHCP server (Ethernet and WiFi) NAT
 Up to 4 tunnels (3G to RS232/USB)
 CSD call manager for metering apps
 External device manager
 SMS alarms, relay control

Modbus RTU. Datalogger.
 Data in JSON format
 Modem control via AT commands
 DynDNS, NoIP & Private DNS
 Webserver.
 NTP time/date sync.
 IP65 housing

1 Ethernet Port
 1 RS232-RS485
 4G/3G/2G
 DynDNS, VPN, NTP, Versions
 Wifi
 GPS
 4 Ethernet ports

Industrial range
 Up to 4 Ethernet ports
 Serial interface
 Digital I/Os
 Wifi
 VPN supported



Quad Band LTE
 Tri Band HSPA+
 UMTS (WCDMA)



Ethernet



GPS/GLONASS



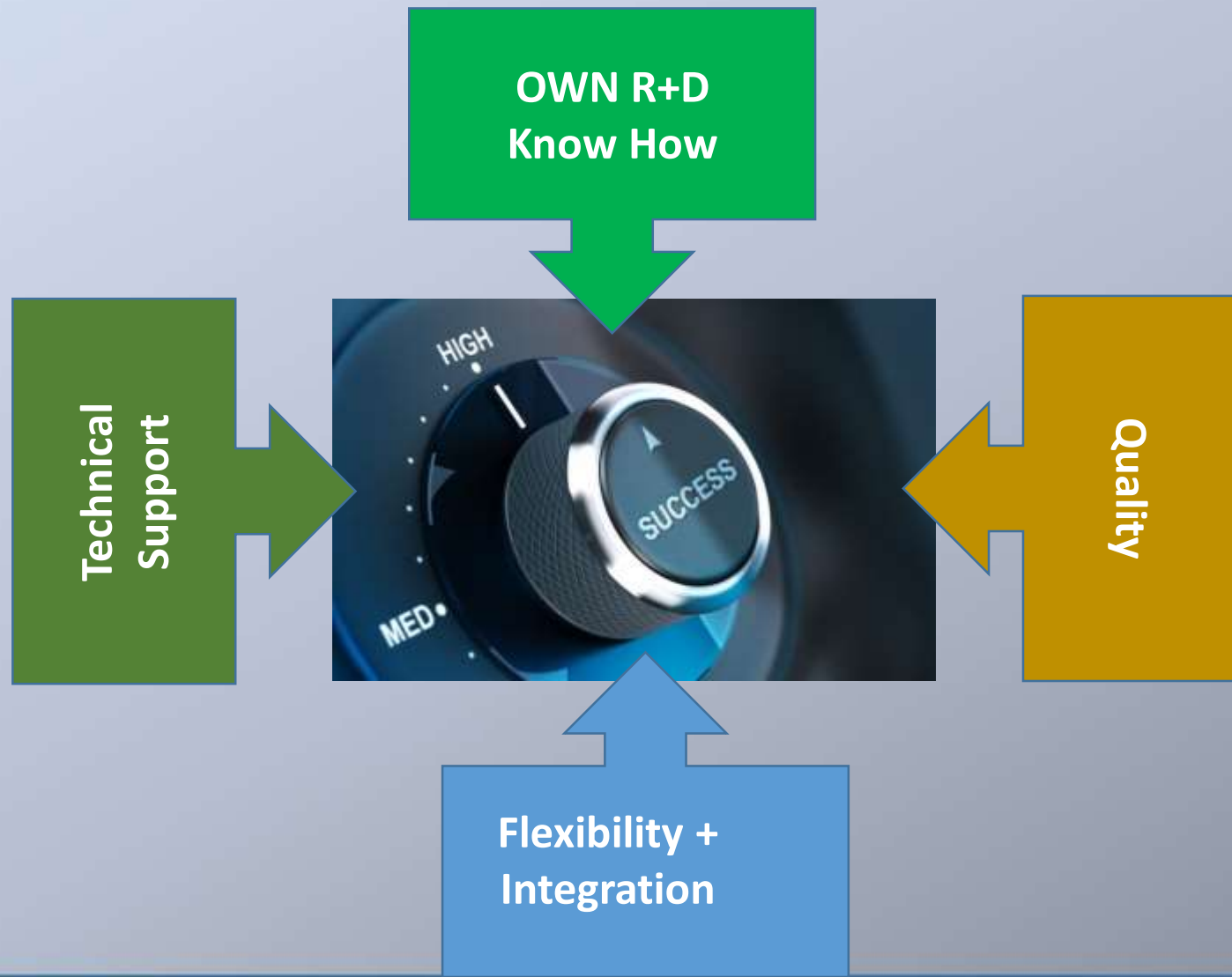
Wi-Fi b/g/n



RS232 port



Extended Temperature Range



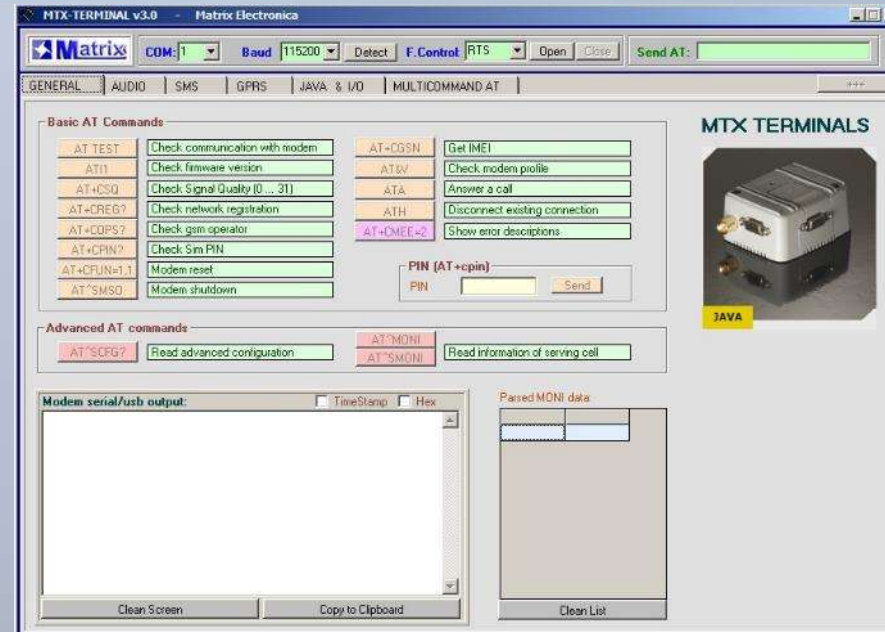


SUPPORT



- EXPERTISE

- NETWORKING
- GNSS
- BLUETOOTH, WIFI...
- LINUX, WIN CE
- RF SHORT RANGE
- APPS



- TERMINAL TOOL
- BLOG & WIKI
- FTP: DOCS, EXAMPLES, TOOLS, VIDEOS...

• E-MAIL

GSMSUPPORT@MATRIX.ES





OWN
R+D
Know
How

R & D

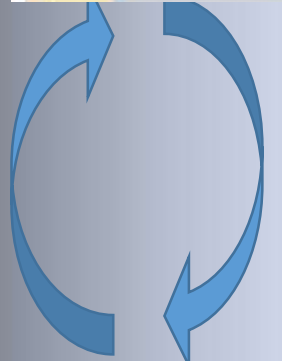
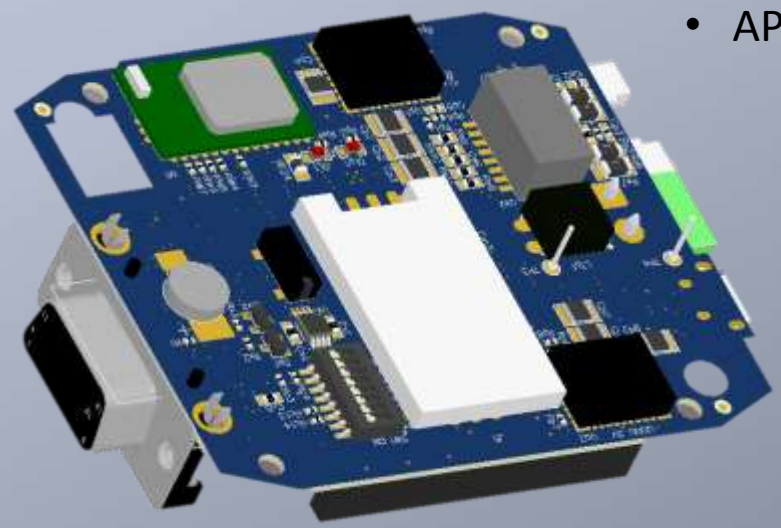


• HW, SW
Integration

- JAVA CODE
- Gps parser
- Bluetooth
- LINUX CORE,
DRIVERS.

• EXPERTISE

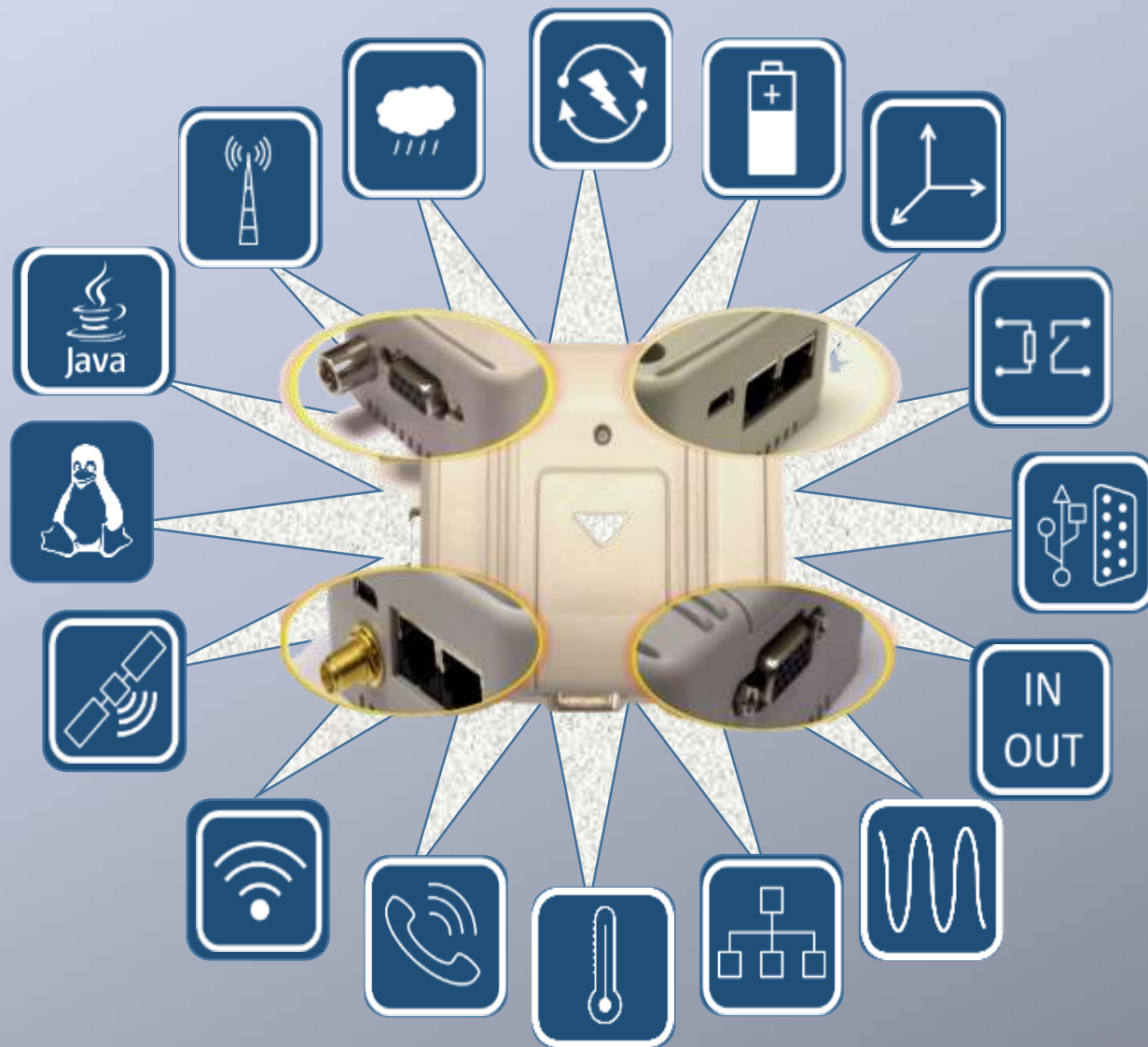
- NETWORKING
- GNSS
- BLUETOOTH, WIFI...
- LINUX, WIN CE
- RF SHORT RANGE
- APPS





Flexibility +
Integration

FEATURING



Plenty of interfaces
 Many options
 Technology **integration**
 Flexible custom design
 Ready for tomorrow
 (LoRA, etc)

GPS
 GLONASS
 Bluetooth
 Wifi
 Battery
 Can
 Wmbus
 Vga
 RFID
 Mesh
 AUDIO

Sensors products

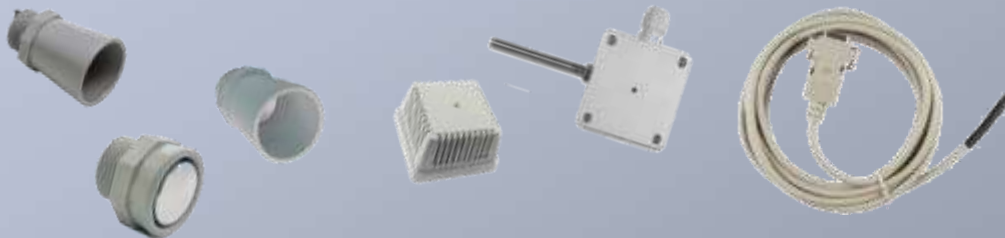
- Distance infrared sensor
- Temperature (RS485 modbus)
- Accelerometer Giroscope Magnetometer

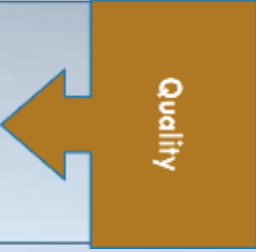
Support integration. Java or Linux code

- Example fuel level (analog input)

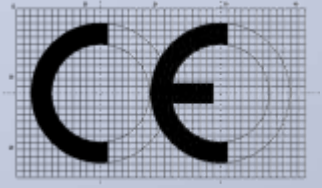
ACCESORIES

- ANTENNAS
- CABLES
- POWER SUPPLY





APPROVALS



Design and manufactured in UE



under ISO9001



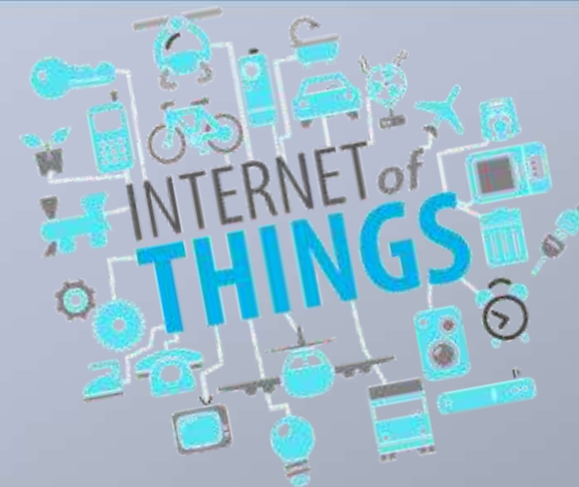
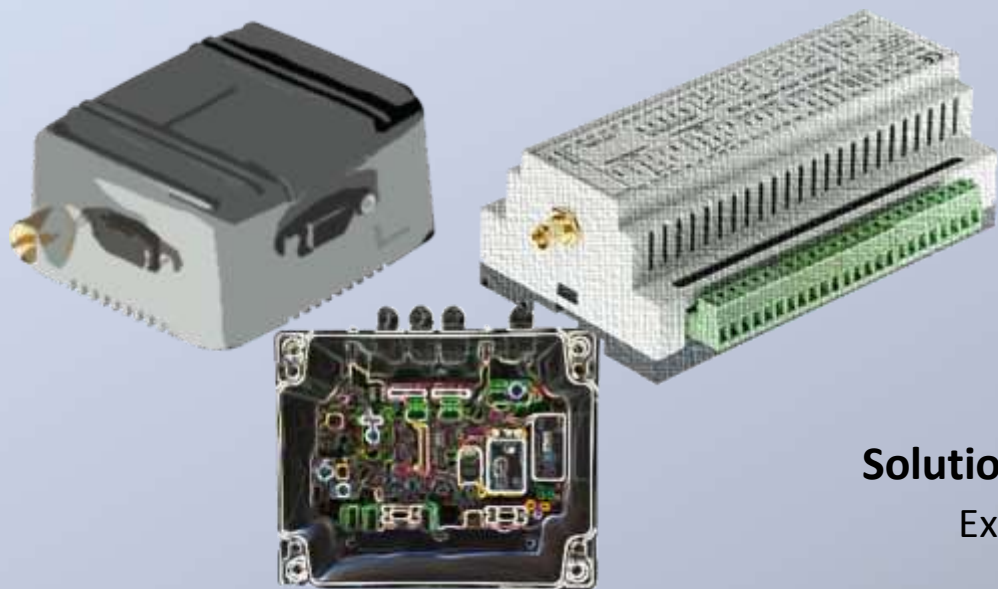
INTERNATIONAL SHOWS



World wide sold



Advanced m2m-iot innovative products



Solutions for your M2M-IoT daily applications

Examples

- Vending-Telemetry
- Fleet Management
- Modbus Telemetry
- Smarty City
- IoT Gateway
- Industrial Router - Transport



MTX-3G-JAVA-BT on vending machines

Remote maintenance and control can be done remotely either using 2G or 3G network or locally without connecting any cable.



Advantages

- MTX M2M modem can send machine serial RS232 data transparently to a server.
- Another serial to Bluetooth tunnel connection is possible to get machine data locally.
- Connect sensors to analog/digital inputs: Read temperature/humidity.
- Switch on/off external device (fan/light...) using digital outputs.





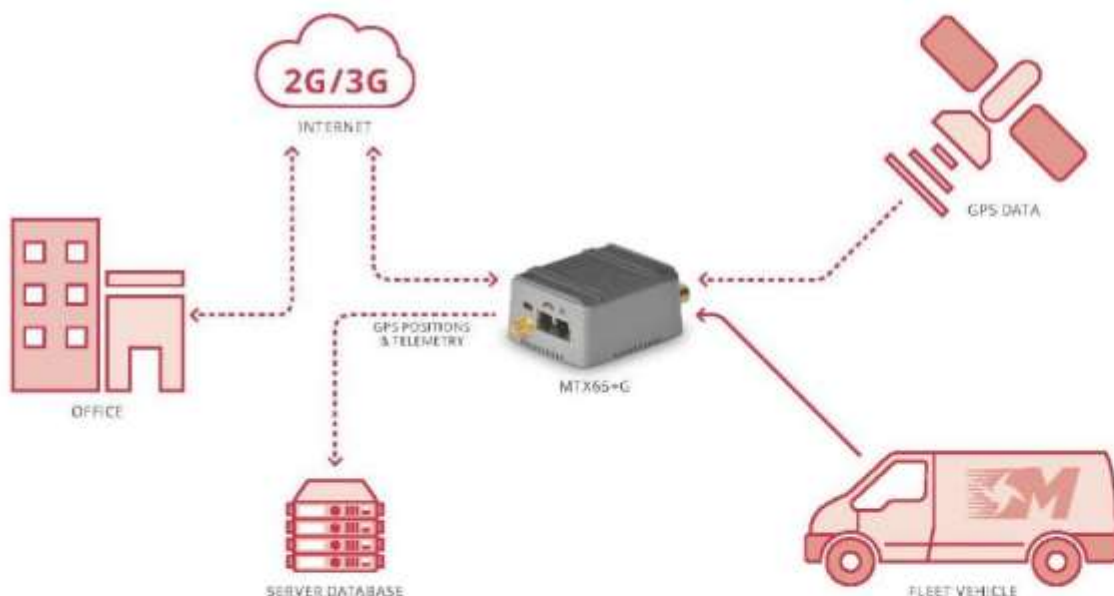
MTX-65+G

Fleet management, AVL and transport solutions



MTX-65+G on fleet management

MTX-65+G provides smooth vehicle telematics solutions, efficient and safe operations for both fleets and mobile units.



Advantages

- MTX-65+G modem includes GPS/GLONASS receiver plus accelerometer.
- Extra internal Li-Po battery.
- Remote reading of sensor/device (temperature) or RS232 port. Use analog or digital inputs (ignition contact, door switch) or switch a digital output.
- Automatic switch on from stop to movement.
- MTXM2M with GNSS can be JAVA programmed or have MTX-TUNNEL-GPS track&tracing software for a fast time to market.



GSM/GPRS Quad Band



Java Programmable



I2C Optocoupled GPIO



Extended Temperature Range



3-Axis Accelerometer



USB 2.0 RS232/RS485 Connectivity



Internal Battery



Analog Input



GPS

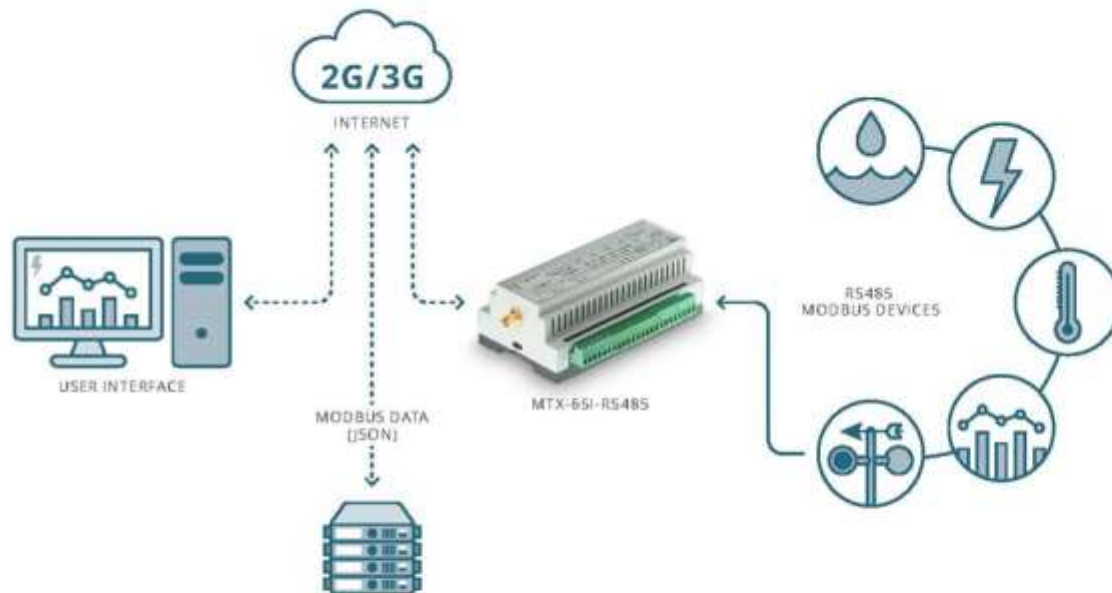


Automatic Restart after shutdown



MTX-DIN-3G on Modbus applications

MTX M2M wireless modem can interface and read/write RS485 ModBus equipment. All information is packed in JSON object format to make easy central server applications.



Advantages

- RS485 ModBus RTU to TCP tunneling.
- ModBus register reading and writing remotely. Datalogger.
- JSON packetized data transmission allow easy front office server application (web page)
- Extra I2C, GPIO and relays to read sensors or switch any load.





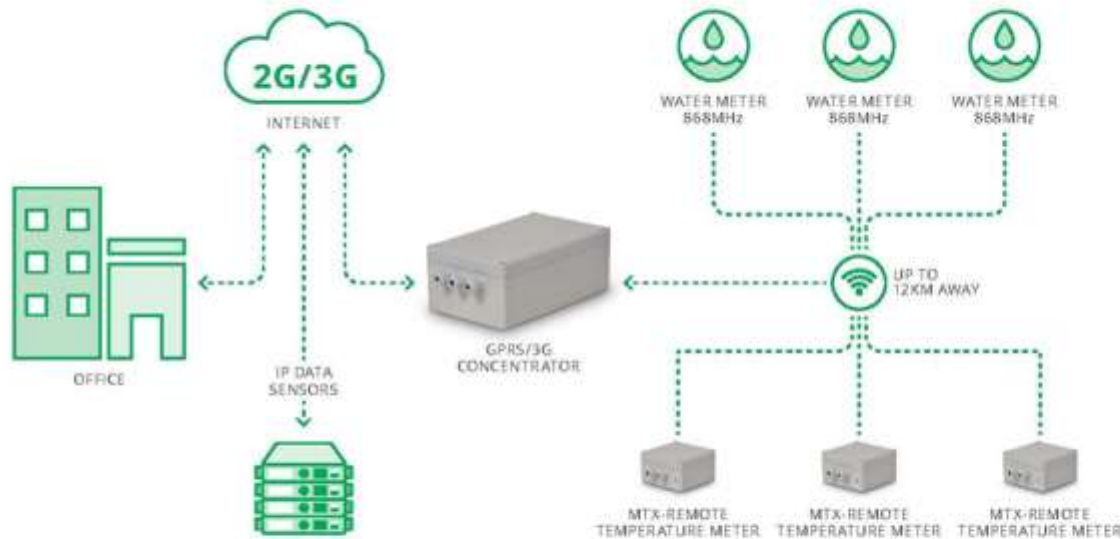
MTX-IND-3G

Mesh network concentrator



MTX-IND-3G on Smart Cities

MTX-IND-3G has 2G or 3G communication module and a radio frequency card such as Bluetooth, Wifi, Wibus or ISM to create MESH network and connect wireless external sensors or equipments, saving installation costs.



Advantages

- Read and control hundreds of water meters, temperature sensors and others using a wireless connection.
- Use in outdoor environment - IP65 housing.
- RS232 or RS485 bus for transparent or Modbus communication.
- No AC-DC and UPS needed: internal power and internal battery unit for backup operations.
- Compatible with Wavenis devices.

Five Band UMTS (WCDMA) HSPA+	Java Programmable	I2C Optocoupled GPIO	Extended Temperature Range	RoHS & WEEE Compliant Pb-free	USB 2.0 RS232/RS485 Connectivity	Relay Outputs	Analog Input	Outdoor IP65 Compliant	Automatic Restart after shutdown

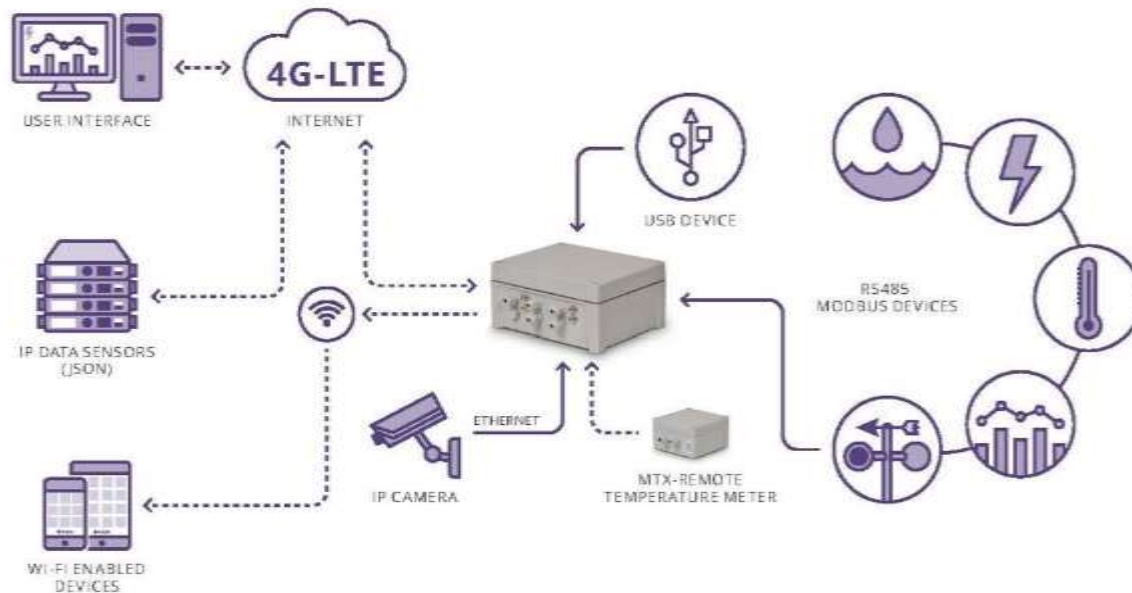
MTX-TITAN

IoT Gateway: Connect everything to the internet



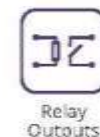
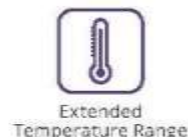
MTX-TITAN as IoT Gateway

Features the most complete interfaces in one equipment. Ethernet, serial, GPIO, USB, wireless Wifi and 3G/4G are the perfect connections for Smart City and IoT Gateway applications.



Advantages

- Serial, USB and Ethernet data communication machines to 3G/4G connection.
- Wifi (Access point) provides local internet connectivity.
- Flexible connections and tunneling
- LTE-4G used for Video security streaming.
- Control Modbus equipments (water meter, Street lighting, noise/polution sensors etc..)
- ISM, Bluetooth or Zigbee radio frequency card to create mesh sensor network.
- Use relay and control any external devices





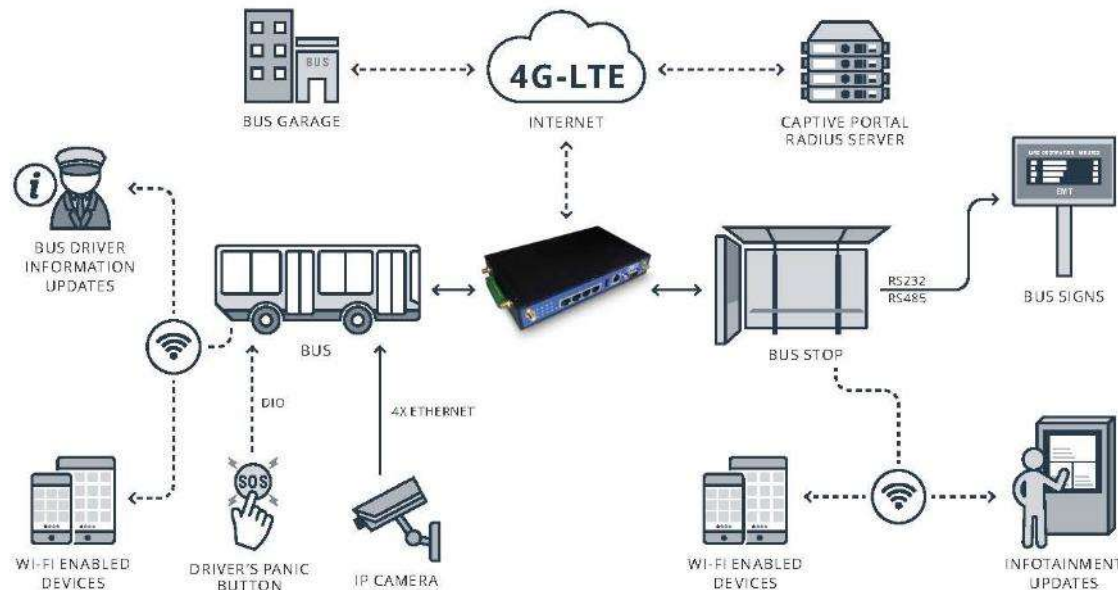
MTX-ROUTER HELIOS II

Industrial Wireless Router



MTX-ROUTER HELIOS II as Intelligent Transportation System

The perfect solution for in-vehicle video surveillance, infotainment updates, bus driver information, real time alerts, WiFi Hotspot, and secure communication with the control center.



Advantages

- 4G-LTE for High speed internet access.
- Wifi 802.11n Access Point with more than 50 clients.
- Captive portal functionality with Radius server authentication.
- 4 Ethernet ports for IP cameras.
- VPNs: IPSec, PPTP, Open VPN for secure communication with the control center.



Quad Band LTE
Tri Band HSPA+
UMTS (WCDMA)



4x Ethernet



DIO



Industrial
Temperature
Range



USB 2.0
RS232/RS485
Connectivity



Wi-Fi b/g/n
Access Point



SMS Alarms
and Control



Web Interface