

MTX-Router-Titan-3G

Industrial Outdoor Router with GSM/GPRS/3G and RF options



Cellular Router
Five Band
UMTS (WCDMA)
HSPA+



Wi-Fi b/g/n
Access Point



Ethernet



Cellular to serial
gateway
USB/RS232/485/422



Relay output



ModBus & ISM
sensors monitoring



DynDNS/No-IP
compatible



GSM
positioning



SMS alarms and
control



Extended
Temperature
Range



The MTX-Router-Titan-3G is an **innovative industrial router with unlimited** that comprises a complete set of wireless and wired interfaces powered by an ARM9 processor module. By providing an easy integration and powerful interfaces, it avoids further hardware components.

Plenty of interfaces: Ethernet, WiFi, USB, RS232, 1-Wire, I2C, GPIOs and relays; it can be used in **infinite M2M and IoT applications**. A 3G (UMTS/HSPA) modem is attached internally.

The MTX-Router-Titan-3G also includes advanced functionalities such as:

DHCP server, NAT, WiFi Access Point, CSD call manager, 3G to RS232/USB gateways, external sensor dataloggers (temperature, distance, Modbus RTU, Waveflow RS868 MHz for metering applications), DynDNS/NoIP client, relay control, GSM cell positioning, remote firmware upgrade, among others.

General features

- 3G router
 - UMTS/HSPA+ : Five-Band
800/850/900/1900/2100MHz
 - GSM/GPRS/EDGE: : Quad band
850/900/1800/1900MHz
- 3G connectivity supervisor to maintain connection always active
- **IP65 enclosure**
- DHCP server (for Ethernet and WiFi interfaces)
- Internal GPS (optional)
- NAT / IP Firewall
- Up to 4 3G-to-RS232/USB simultaneous gateways
- CSD call manager (for metering applications)
- External device manager:
 - Temperature sensors
Datalogger, SMS alarms, relay activation, etc. Data can be sent to a webserver in JSON format
 - Distance sensors
Datalogger, SMS alarms, relay activation, etc. Data can be sent to a webserver in JSON format
 - Modbus RTU devices.
Datalogger. Data can be sent to a webserver in JSON format
 - Waveflow 868MHz Wavenis
Datalogger. Data can be sent to a webserver in JSON format
- Modem control via AT commands (Hayes, TS 27.007, TS 27.005)
- DynDNS, NoIP and Private DNS services
- Remote relay control
- GSM cell positioning
- Programmable autoreset
- Internal configuration webserver (all logos and pictures can be customized by user)
- Operating status LEDs
- NTP time/date synchronization
- User permissions and configuration backup
- Remote firmware upgrade
- Supply voltage range:
 - AC input: 90 to 264VAC / 120-370VDC
 - DC input: +7Vdc to +50Vdc
- Operating temperature range: -40°C to +85°C
- Dimensions, excluding connectors or cable glands: 201 x 163 x 98mm
- Weight: <500 g

Optional modules and expansions

- Wavenis 25/500mW (for RF metering applications)
- MTX-Mod-GPS (for GPS applications)
- MTX-Temp (temperature sensor)
- Maxbotix (distance sensor)

Interfaces

- Ethernet 10/100 BaseT RJ45
- Internal Wi-Fi b/g/n (AP support)
- USB 2.0 (compatible with FTDI and ACM USB devices)
- HD-Dsub15 (also available as plug-In type terminal block):
 - 2x RS232 (2-wire)
 - 1x RS232 (4-wire) / RS485
 - 1x 1-Wire BUS
 - Out 3.3V, 5V, 24V
- Relay with plug-in type terminal blocks:
 - 2x 8A/250VAC relays
- Operating status LEDs
- SIM card interface 1.8V/3V

Specifications

- **HSPA (3GPP Release 6,7)**
 - DL 7.2Mbps, UL 5.7Mbps
 - HSDPA Cat.8 / HSUPA Cat.6 data rates
 - Compressed mode (CM) according to 3GPP TS25.212
- **UMTS (3GPP Release 4)**
 - PS data rate – 384 kbps DL, UL 384kbps
 - CS data rate – 64 kbps DL, UL 64kbps
- **HSPA (3GPP Release 6,7)**
 - DL 7.2Mbps, UL 5.7Mbps
 - HSDPA Cat.8 / HSUPA Cat.6 data rates
- **GPRS**
 - GPRS class 12
 - Mobile station class B
 - PBCCH support
 - Coding schemes CS 1-4
- **EGPRS**
 - Multislot class 12
 - EDGE E2 power class for 8PSK
- **CSD data transmission**
 - Up to 9.6kbps
 - V.110
 - Non-transparent mode
 - USSD support
- **SMS**
 - Point-to-point MO and MT
 - SMS cell broadcast
 - Text and PDU mode

Ordering information

MTX-Router-Titan-3G: 199.802.117

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Detailed Special Features

Serial gateways

- 3 simultaneous 2G/3G/Eth/Wifi <-> 232/485/USB gateways
- Modes: TCP Server / TCP Client
- SSH encryption enabled
- Accept incoming CSD call for metering applications

Modbus

- Modbus TCP / Modbus RTU Gateway
- Modbus TCP / RTU to SNMP gateway (SNMP connectivity for any Modbus device)
- Modbus slave for management from PLCs (send/receive SMS, Email, SNMP traps...)
- User scripts

Datalogger

- Data from sensors (temperature, distance, ...)
- Serial data collected by RS232, RS485 or USB
- GPS data for tracking applications or fleet management
- Automatic data sending (HTTP / HTTPS / FTP) with JSON format

Sensors

- Externals: temperature, distance, any Modbus RTU/TCP device
- Compatible with Wavenis RF Sensors (WaveFlow, WaveSense, WaveTherm) using an internal Wavocard (optional module).
- GPS (optional module)
- 1-Wire temperature compatible (DS18S20, DS1822, DS18B20, DS1825, DS28EA00)
- Jamming detection

Internal Relays

- Control & activation by: web UI, timetable, SMS, astronomical clock, temperature, distance, jamming, movement, modbus read values, snmp, ...
- Automatic activation by GPS.
- Watchdog for external devices (relay is activated if ping doesn't respond)

SMS

- Full control by SMS with phone number authorizations
- Relay activation by custom SMS message
- Alarms (digital input, temperature, modbus data read, ...)
- Allows send / receive SMS by ModbusTCP (for PLC)

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VPN

- OpenVPN with client / server mode
- Permanent or activated by SMS, AT command, Modbus, snmp, serial, ...

Other

- Compatible with DynDNS / No-IP and Private DNS
- GSM Cell Location
- Programmable autoreset (schedule, timer, ...)
- Multioperator SIM utilities (integrated rssi scanning tool)
- Time synchronization (NTP) with timezones
- Over The Air firmware upgrade
- Full management with AT Command by serial, socket, sms, modbus, snmp, ...
- NAT, Firewall, DHCP, etc. and other standard router characteristics
- Clear and understandable application notes with examples (OpenVPN, Serial gateways, Modbus, Datalogger, SMS, Metering, SNMP, ...)

Customization

- Configurable Logos and text from web UI
- Personalized menus for different users.
- Firmware can be personalized with custom features (*depending on number of devices)

