MTX-StarRail

Industrial IoT Router with dual LTE/4G for railway solutions

The MTX-StarRail is a new line of industrial routers for railway applications. It has EN50155 (railway), E13/ISO7637 (vehicles), and IEC60945 (marine) certifications, as well as industrial connectors and temperature range. This device has a complete set of wireless interfaces: dual LTE/4G/3G with auto failolver, Ethernet Ultra POE, RS232, WiFi, GPS, USB, audio... together with advanced router functionalities, such as: Modbus, LTE load balance, SMS control and alarms, VPN management, 4G to RS232/USB gateways, datalogging, DynDNS/NoIP cliente, remote firmware upgrade.

Status: Under development

MAIN FEATURES

Dual LTE/4G	4x USB	RS232 422/485	5x GbEthernet Ultra POE 60W	8x DIOs isolated 2KV	GPS	Audio	Railway EN50155
4G/3G/2G serial gateway	Modbus	Datalogger	DynDNS and No-IP	MQTT/s	VPN management	IPsec server/client	Security TPM

● Hardware features   ● MTX-Titan software features

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FREE FOR ONE YEAR WITH MTX DEVICES*

Autoprovisioning	Alarms and Alerts	Remote Control	Real time Dashboards	Rules engine	Monitoring engine	Analytics	Remote update

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

⚡ DC input: 24 to 110 Vdc
🌡 Temperature range: -40° to 70ºC
⬚ Dimensions: 321x210x73mm
🔌 Weight: 350-450gr

CE FC RoHS Compliant ISO 9001

HARDWARE FEATURES

	MTX-StarRail 600 (x2)	MTX-StarRail 1200 (x4)
	Eleven bands LTE-advanced FDD: 1, 3, 5, 7, 8, 18, 19, 20, 26, 28A/B Four bands LTE-advanced TDD: 38, 39, 40, 41 Five bands UMTS: 5, 6, 8, 3, 1 Two bands GSM: 900, 1800 MHz	Eleven bands LTE-advanced FDD: 1, 3, 5, 7, 8, 18, 19, 20, 26, 28A/B Four bands LTE-advanced TDD: 38, 39, 40, 41 Five bands UMTS: 5, 6, 8, 3, 1 Two bands GSM: 900, 1800 MHz
4G	LTE Cat. 6, DL CA up to 40MHz, DL/UL max: 300 Mbps/50 Mbps	LTE Cat. 6, DL CA up to 40MHz, DL/UL max: 300 Mbps/50 Mbps
3G	HSPA+ Dual Carrier DL Cat. 24/UL Cat. 6, DL/UL max: 42 Mbps/5.76 Mbps UMTS DL/UL: max. 384 kbps	HSPA+ Dual Carrier DL Cat. 24/UL Cat. 6, DL/UL max: 42 Mbps/5.76 Mbps UMTS DL/UL: max. 384 kbps
2G	EDGE Class 12 DL/UL: max. 237 kbps GPRS Class 12 DL/UL: max. 85.6 kbps	EDGE Class 12 DL/UL: max. 237 kbps GPRS Class 12 DL/UL: max. 85.6 kbps

Interfaces and Features

Dual LTE — Dual LTE/4G/3G/2G connectivity

4x LED indicator

2x audio (mic-in/line-out)

1x 10/100/1000 Mbps Ethernet
4x 10/100/1000 Mbps Ethernet POE 802.3bt

4x USB 2.0

1x DVI-I: graphic interface

1x RS232/422/485

GPS

1x remote switch

1x reset button

2x HDD/SDD tray

1x power-in

3x PCI Express mini card slots (2x PCIe used for dual LTE)

4x SIM card slots

4x CANbus (optional)

8-in/8-out isolated DIOs
Isolation voltage 2KV

WiFi (optional)

Certifications E13/ISO7637 (vehicles), EN50155 (railway), IEC60945 (marine)

Connectors

- 8x SMA connectivity antennas
- 2x TRS: audio
- 4x USB 2.0
- 1x RJ45 Gigabit Ethernet
- 1x DVI-I: graphic interface
- 1x DB9 M: RS232/422/485
- 4x M12 F: Gigabit Ethernet POE 60W
- 1x M12 M: power-in
- 3x PCI Express mini card slots
- 4x SIM card slots
- 4x CANbus connectors (optional)
- 8x Terminal block: DIOs
- 2x SATA slots
- Internal micro SIM

Processor

- CPU: Celeron 3965U 2C@2.2GHz
- RAM: 4G
- HDD: 32G mSATA (2x slots SATA available)

● MTX-TITAN SOFTWARE FEATURES ●

Connectivity

- Dual LTE/4G with auto failover
- Load balancing
- Multioperator SIM utilities (integrated rssi scanning tool)
- 4G connectivity supervisor to maintain connection always active

Serial Gateways

- 3 simultaneous 4G/3G/2G/Eth/WiFi <-> RS232/485/USB gateways
- Modes: TCP server/TCP client
- SSH encryption enabled

Modbus

- Modbus TCP/Modbus RTU gateway
- Modbus TCP/RTU to SNMP gateway (SNMP connectivity for any modbus device)
- Modbus slave RTU/TCP (send/recevice 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/MQTT) with JSON format

VPN

- OpenVPN with client/server mode
- Permanent or activated by SMS, AT command, modbus, SNMP, serial...
- IPsecserver/client

SMS

- Full control by SMS with phone number authorizations
- Alarms (digital input, temp., MBus data read)
- Send/receive SMS by Modbus TCP (for PLC)

Other

- Compatible with DynDNS/No-IP & private DNS
- GSM cell location
- Programmable autoreset (schedule, timer...)
- 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
- Internal configuration webserver (all logos and pictures can be customized by user)
- Clear and understandable application notes with examples (OpenVPN, serial gateways, modbus, datalogger, SMS, metering, SNMPv2 and SNMPv3...)
- Traffic control (prevents excessive data traffic consumption), TACACS+ (for HTTP, Telnet and SSH), multiuser profiles
- SecurityTPM

Sensor Compatible

- Temperature sensor MTX-Temp-RS232
- Distance sensors (ultrasound) Maxbotics
- Modbus RTU/TCP sensors
- RF868 Wavenis/wireless M-Bus sensors
- Internal jamming detection sensor with alarm indicator

*The Titan network architecture is protected by nearly 60 hardware and software patents.

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General Features

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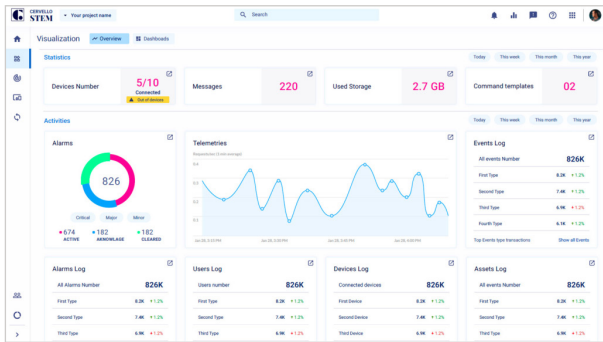- Remote control
- Monitoring engine
- Alarms and alerts
- Rules engine
- Remote update
- Connect engine*
- API Keys*
- Analytics*
- Multi-tenant*
- White labeling*
- Custom admin role*

Monitor

- Alarms, Events and Incidents
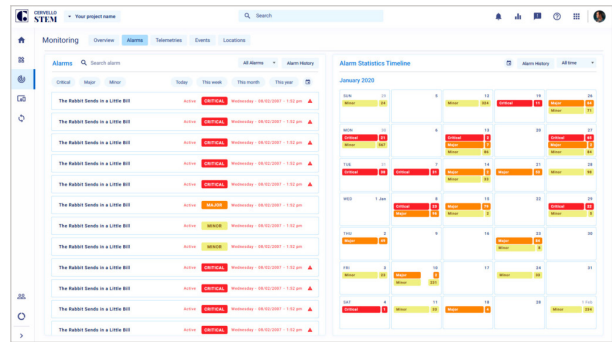- Tracking*

Control

- Command template
- OTA

Devices Inventory

- Add single and 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*

*Upgrade required

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