Teltonika Networks is a global provider of IoT & IIoT equipment based in Lithuania, Europe, with offices situated across four continents. During more than two decades of R&D, product development and manufacturing of IoT & M2M industrial networking devices, we have created a comprehensive product portfolio for the most challenging Industry 4.0 connectivity applications. Teltonika Networks controls all the stages of the product development life cycle, allowing it to be fast and flexible in reacting to market demands and changes while offering devices that are secure, reliable, and easy to use.
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# ACCESSORIES COMPATIBILITY

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- ELEVATOR CONNECTIVITY: 59
- REMOTE TOWER SITE MANAGEMENT: 60
- BOAT AND YACHT CONNECTIVITY: 61
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# USE CASES

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# NETWORKING PRODUCTS COMPARISON

- POWERING OPTIONS: 53
- ANTENNA OPTIONS: 54
- MOUNTING OPTIONS: 55
- BLUETOOTH SENSORS: 55
TRM240 is an Industrial grade USB-LTE Cat 1 Modem with rugged housing and external antenna for better signal coverage. This product is perfect for upgrading existing industrial equipment with cost-efficient LTE connectivity.

### HARDWARE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile</td>
<td>4G/LTE (Cat 1), 3G, 2G</td>
</tr>
<tr>
<td>Powering option</td>
<td>microUSB, 5 VDC</td>
</tr>
<tr>
<td>SIM</td>
<td>1 x Internal SIM holder (2FF)</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>1 x SMA for mobile</td>
</tr>
<tr>
<td>USB</td>
<td>1 x Micro USB slave</td>
</tr>
<tr>
<td>Status LEDs</td>
<td>1 x LTE, 1 x Network, 1 x Power</td>
</tr>
<tr>
<td>Ingress protection rating</td>
<td>IP30</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>10 % to 90 % non-condensing</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 °C to 75 °C</td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminium housing with DIN rail mounting option</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>75 x 25 x 65 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>125 g</td>
</tr>
</tbody>
</table>

### SOFTWARE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network manager</td>
<td>Windows 7/8/8.1/10, Linux distributions</td>
</tr>
<tr>
<td>USB serial driver</td>
<td>Windows 7/8/8.1/10, Windows CE 5.0/6.0, Linux 2.6~5.4, Android 4.x/5.x/6.x/7.x/8.x/9.x</td>
</tr>
<tr>
<td>RIL driver</td>
<td>Android 4.x/5.x/6.x/7.x/8.x/9.x</td>
</tr>
<tr>
<td>NDIS driver</td>
<td>Windows 7/8/8.1/10</td>
</tr>
<tr>
<td>Gobinet driver</td>
<td>Linux 2.6~5.4</td>
</tr>
<tr>
<td>QMI_WWAN driver</td>
<td>Linux 3.4~5.4</td>
</tr>
<tr>
<td>Control via AT commands</td>
<td>3GPP TS27.007 and enhanced AT commands</td>
</tr>
</tbody>
</table>
TRM250 is an industrial grade USB LTE Cat-M1/NB-IoT/EGPRS Modem with rugged housing and external antenna for better signal coverage. This product is perfect for providing cost-efficient Internet connectivity in remote monitoring applications.

**CONNECTIVITY**

- 4G/LTE (Cat M1), NB-IoT, 2G
- Low power consumption

**DURABLE**

- Rugged aluminum housing
- Small size, easy installation

**USB**

- Interface for internet access

**COMPACT**

- Easy to use
- Controlled using Network manager

**EASY TO USE**

- 4G/LTE (Cat M1), NB-IoT, 2G
- MicroUSB, 5 VDC
- 1 x Internal SIM holder (2FF)
- 1 x SMA for mobile
- 1 x Micro USB slave
- 1 x Network, 1 x Power
- IP30
- 10 % to 90 % non-condensing
- -40 °C to 75 °C
- Aluminium housing with DIN rail mounting option
- 75 x 25 x 65 mm
- 125 g

**SOFTWATE**

Network manager
- Windows 7/8/8.1/10
- Linux distributions

USB serial driver
- Windows 7/8/8.1/10
- Windows CE 5.0/6.0
- Linux 2.6~5.4
- Android 4.4/5.0/6.0/7.0/7.1/8.0/9.0

RIL driver
- Android 4.4/5.0/6.0/7.0/7.1/8.0/9.0

NDIS driver
- Windows 7/8/8.1/10

QMI_WWAN driver
- Linux 2.6~5.4

Control via AT commands
- 3GPP TS27.007 and enhanced AT commands
Connectivity
- Ultra-small, lightweight, and energy efficient IoT device with mission-critical LTE connectivity.
- Gigabit Ethernet interface and Linux environment offering a high degree of customization.
- TRB140 is perfect for projects and applications where a single device must be upgraded with reliable and secure Internet connectivity.

Durable
- Rugged aluminum housing
- Small size, easy installation
- Easy to use, secure and feature rich OpenWRT based operating system

RutOS
- Compatible with Teltonika Remote Management System

9-30V
- Wide range of supported power supply voltages

Software
- Operating system: RutOS
- Mobile features: Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits
- Network protocols: TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, DHCP, Telnet

Hardware
- Mobile: 4G/LTE (Cat 4), 3G, 2G
- CPU: Qualcomm, ARM Cortex A7, 1.2 GHz
- Memory: 512 MBytes Flash (70 MBytes for userspace), 128 MBytes RAM (50 MBytes for userspace)
- Powering option: 4pin power socket, 9-30 VDC
- SIM: 1 x Internal SIM holder (2FF)
- Antenna connectors: 1 x SMA for mobile
- Ethernet: 1 x 10/100/1000 Ethernet port
- Inputs/Outputs: On 4pin socket: 2 x Digital input/Digital open collector output (configurable)
- Other: 1 x Micro USB slave
- Status LEDs: 3 x Connection type, 5 x Signal strength, 2 x Ethernet, 1 x Power
- Operating temperature: -40 °C to 75 °C
- Housing: Aluminium housing with DIN rail mounting option
- Dimensions (W x H x D): 75 x 25 x 65 mm
- Weight: 134 g

Cloud solutions: RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

SMS features: SMS status, SMS configuration, Send/Read SMS via HTTP POST/GET, EMAIL to SMS, SMS to Email, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply

Services: DDM, VRPP, Wake On Lan (WOL), WEB filter, UPnP, Traffic Logging
**INDUSTRIAL RUGGED GPIO LTE GATEWAY**

Industrial and small LTE Cat 1 Gateway equipped with multiple Inputs/Outputs and MicroUSB port. Compact design makes this Gateway perfect for applications where devices must be remotely managed using I/O’s.

**CONNECTIVITY**
- 4G/LTE (Cat 1), 3G, 2G
- Wide range of supported power supply voltages

**DURABLE**
- Rugged aluminum housing

**COMPACT**
- Small size, easy installation

**I/O**
- Wide range of multiple Inputs/Outputs for remote monitoring and control

**RMS**
- Compatible with Teltonika Remote Management System

**HARDWARE**
- Mobile: 4G/LTE (Cat 1), 3G, 2G
- CPU: Qualcomm, ARM Cortex A7, 1.2 GHz
- Memory: 512 MBytes Flash (70 MBytes for userspace), 128 MBytes RAM (50 MBytes for userspace)
- Powering option: 4pin power socket, 9-30 VDC
- SIM: 1 x Internal SIM holder (2FF)
- Antenna connectors: 1 x SMA for mobile
- Inputs/Outputs: On 4pin socket: 2 x Digital input/Digital open collector output (configurable)
  - On 16pin socket: 1 x Isolated input, 1 x Single wire input, 1 x Analog input (with 4-20mA capability),
  - 1 x Latching relay output, 1 x Non-latching relay output, 2 x Dry/Dry input (configurable)
- Other: 1 x Micro USB slave
- Status LEDs: 3 x Connection type, 5 x Signal strength, 1 x Power
- Operating temperature: -40 °C to 75 °C
- Housing: Aluminium housing with DIN rail mounting option
- Dimensions (W x H x D): 75 x 25 x 65 mm
- Weight: 136 g

**SOFTWARE**
- Operating system: RutOS
- Network protocols: TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, DHCP, Telnet
- VPN and tunneling: OpenVPN, IPSec, GRE, PPTP, L2TP
- Monitoring and Management: WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS
- Connection monitoring: Ping Reboot, wget reboot, Periodic Reboot, LCP and ICMP for link inspection
- Cloud solutions: RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
- Services: DDNS, VRRP, WEB filter, UPnP, Traffic Logging
TRB142

INDUSTRIAL RUGGED LTE RS232 GATEWAY

Ultra-small, lightweight and energy efficient IoT device equipped with mission-critical LTE connectivity. TRB142 comes with a widely used RS232 Industrial interface for remote device management.

CONNECTIVITY
4G/LTE (Cat 1), 3G, 2G
9-30V
Wide range of supported power supply voltages

DURABLE
Rugged aluminium housing

COMPACT
Small size, easy installation

SERIAL
Equipped with RS232 for serial communication

RMS
Compatible with Teltonika Remote Management System

HARDWARE

Mobile
4G/LTE (Cat 1), 3G, 2G

CPU
Qualcomm, ARM Cortex A7, 1.2 GHz

Memory
512 MBytes Flash (70 MBytes for userspace), 128 MBytes RAM (50 MBytes for userspace)

Powering option
4pin power socket, 9-30 VDC

SIM
1 x Internal SIM holder (2FF)

Antenna connectors
1 x SMA for mobile

Inputs/Outputs
On 4pin socket: 2 x Digital input/Digital open collector output (configurable)
Serial
1 x RS232

Other
1 x Micro USB slave

Status LEDs
3 x Connection type, 5 x Signal strength, 1 x Power

Operating temperature
-40° C to 75° C

Housing
Aluminium housing with DIN rail mounting option

Dimensions (W x H x D)
75 x 25 x 65 mm

Weight
135 g

SOFTWARE

Operating system
RutOS

Network protocols
TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, DHCP, Telnet

Monitoring and Management
WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Connection monitoring
Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

Cloud solutions
RMS, FOTA, Telnet, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

Modbus
TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT

Serial
Console, Over IP, Modem, NTRIP, Modbus
## TRB145

**INDUSTRIAL RUGGED LTE RS485 GATEWAY**

Ultra-small, lightweight and energy efficient IoT device equipped with mission-critical LTE connectivity. TRB145 comes with a widely used RS485 Industrial interface for remote device management.

### CONNECTIVITY

<table>
<thead>
<tr>
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<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-30V</td>
<td>Wide range of supported power supply voltages</td>
</tr>
<tr>
<td>4G/LTE (Cat 1), 3G, 2G</td>
<td>Mobile 4G/LTE (Cat 1), 3G, 2G</td>
</tr>
</tbody>
</table>

### DURABLE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rugged aluminum housing</td>
<td>Rugged aluminum housing</td>
</tr>
</tbody>
</table>

### COMPACT

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small size, easy installation</td>
<td>Small size, easy installation</td>
</tr>
</tbody>
</table>

### SERIAL

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipped with RS485 for serial communication</td>
<td>Equipped with RS485 for serial communication</td>
</tr>
</tbody>
</table>

### HARDWARE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Qualcomm, ARM Cortex A7, 1.2 GHz</td>
</tr>
<tr>
<td>Memory</td>
<td>512 MBytes Flash (70 MBytes for userspace), 128 MBytes RAM (50 MBytes for userspace)</td>
</tr>
<tr>
<td>Powering option</td>
<td>4pin power socket, 9-30 VDC</td>
</tr>
<tr>
<td>SIM</td>
<td>1 x Internal SIM holder (2FF)</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>1 x SMA for mobile</td>
</tr>
<tr>
<td>Inputs/Outputs</td>
<td>On 4pin socket: 2 x Digital input/Digital open collector output (configurable)</td>
</tr>
<tr>
<td>Serial</td>
<td>1 x RS485</td>
</tr>
<tr>
<td>Other</td>
<td>1 x Micro USB slave</td>
</tr>
<tr>
<td>Status LEDs</td>
<td>3 x Connection type, 5 x Signal strength, 1 x Power</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40° C to 75° C</td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminium housing with DIN rail mounting option</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>75 x 25 x 65 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>130 g</td>
</tr>
</tbody>
</table>

### SOFTWARE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>RutOS</td>
</tr>
<tr>
<td>Network protocols</td>
<td>TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPI, DHCP, Telnet</td>
</tr>
<tr>
<td>Monitoring and Management</td>
<td>WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS</td>
</tr>
<tr>
<td>Connection monitoring</td>
<td>Ping Reboot, Wget reboot, Periodic Reboot, LLCP and ICMP for link inspection</td>
</tr>
<tr>
<td>Cloud solutions</td>
<td>RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulus, ThingWorx</td>
</tr>
<tr>
<td>Modbus</td>
<td>TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT</td>
</tr>
<tr>
<td>Serial</td>
<td>Console, Over IP, Modem, NTRIP, Modbus</td>
</tr>
</tbody>
</table>
TRB245

INDUSTRIAL M2M LTE GATEWAY

Industrial All-In-One M2M LTE, Cat. 4 Gateway equipped with multiple Inputs/Outputs, RS232, RS485 and Ethernet interfaces. All these features allow this device to be used universally in M2M applications.

CONNECTIVITY

9-30V
Wide range of power supply voltages

4G/LTE (Cat 4), 3G, 2G

Mobile features
Multiple PDN, Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits

Network protocols
TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, DHCP, Telnet

Monitoring and Management
WEB UI, CLI, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Connection monitoring
Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

Cloud solutions
RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

NTP
NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator

GNSS
NMEA forwarding, AVL, Geofencing

Modbus
TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT

Administration
Multi user, Configuration profiles, Diagnostics, logs, Configuration backup

DUAL SIM

I/O

With auto failover, backup WAN and other switching scenarios

Multiple Inputs and Outputs for remote monitoring and control

SERIAL

RS232/RS485 serial communication interfaces

GNSS

Global Navigation Satellite System for location services with geofencing functionality

Mobile

4G/LTE (Cat 4), 3G, 2G

CPU
Qualcomm, MIPS 24Kc, 650 MHz

Memory
16 MBytes Flash, 64 MBytes RAM

Powering option
16pin terminal, 9-30 VDC

SIM
2 x Internal SIM holders (2FF)

Antenna connectors
1 x SMA for mobile, 1 x SMA for GPS

Ethernet
1 x 10/100 Ethernet port

GNSS
GPS, GLONASS, BeiDou, Galileo, QZSS

Inputs/Outputs
On 16pin socket: 3 x Digital input/Digital open collector output (configurable), 1 x Analog input

Serial
1 x RS232, 1 x RS485

Status LEDs
3 x Connection type, 3 x Signal strength, 2 x Ethernet, 1 x Power

Operating temperature
-40 °C to 75 °C

Housing
Aluminium housing with DIN rail mounting option

Dimensions (W x H x D)
83 x 25 x 74 mm

Weight
165 g

HARDWARE

SOFTWARE

RutOS (OpenWrt based Linux OS)

Operating system
RutOS (OpenWrt based Linux OS)

Multiple PDN, Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits

TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, DHCP, Telnet

WEB UI, CLI, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator

NMEA forwarding, AVL, Geofencing

TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT

Console, Over IP, Modem, NTRIP, Modbus

Multi user, Configuration profiles, Diagnostics, logs, Configuration backup
<table>
<thead>
<tr>
<th><strong>Connectivity</strong></th>
<th><strong>DUAL SIM</strong></th>
<th><strong>Serial</strong></th>
<th><strong>GNSS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4G/LTE (Cat M1), NB-IoT, 2G</td>
<td>With auto failover, backup WAN and other switching scenarios</td>
<td>RS232/RS485 serial communication interfaces</td>
<td>Global Navigation Satellite System for location services with geofencing functionality</td>
</tr>
<tr>
<td>9-30V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wide range of supported power supply voltages</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TRB255**

Industrial All-In-One M2M LTE Cat M1/NB-IoT/EGPRS Gateway equipped with multiple Inputs/Outputs, RS232, RS485 and Ethernet interfaces. All these features allow this device to be used universally in M2M applications.

**HARDWARE**

- **Mobile**
  - 4G/LTE (Cat M1), NB-IoT, 2G
- **CPU**
  - Qualcomm, MIPS 24Kc, 650 MHz
- **Memory**
  - 16 MBytes Flash, 64 MBytes RAM
- **Powering option**
  - 16pin terminal, 9-30 VDC
- **SIM**
  - 2 x internal SIM holders (2FF)
- **Antenna connectors**
  - 1 x SMA for mobile, 1 x SMA for GPS
- **Ethernet**
  - 1 x 10/100 Ethernet port
- **GNSS**
  - GPS, GLONASS, BeiDou, Galileo, QZSS
- **Inputs/Outputs**
  - On 16pin socket: 3 x Digital input/Digital open collector output (configurable), 1 x Analog input
- **Serial**
  - 1 x RS232, 1 x RS485
- **Status LEDs**
  - 3 x Connection type, 3 x Signal strength, 2 x Ethernet, 1 x Power
- **Operating temperature**
  - -40 °C to 75 °C
- **Housing**
  - Aluminium housing with DIN rail mounting option
- **Dimensions (W x H x D)**
  - 83 x 25 x 74 mm
- **Weight**
  - 165 g

**SOFTWARE**

- **Operating system**
  - RutOS (OpenWrt based Linux OS)
- **Mobile features**
  - Multiple PDN, Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits
- **Network protocols**
  - TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, DHCP, Telnet
- **Monitoring and management**
  - WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS
- **Connection monitoring**
  - Ping Reboot, Wget reboot, Periodic Reboot, TCP and ICMP for link inspection
- **Cloud solutions**
  - RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumuloity, ThingWorx
- **NTP**
  - NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator
- **GNSS**
  - NMEA forwarding, AVL, Geofencing
- **Modbus**
  - TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT
- **Serial**
  - Console, Over IP, Modem, NTRIP, Modbus
- **Administration**
  - Multi user, Configuration profiles, Diagnostics, logs, Configuration backup
Compact, robust and powerful device tailored for Industrial M2M/IoT applications where no high data throughput is needed. RUT230 is equipped with 2 x Ethernet and Wireless interfaces. Device provides secure and stable internet connectivity for Industrial applications using RutOS software and security features.

**COMPACT**
- Small size – easy integration

**CONNECTIVITY**
- Worldwide 3G network coverage

**WAN FAILOVER**
- Automatic switching to available Backup connection

**WIFI**
- Wireless Access Point with Hotspot functionality

**I/O**
- Digital Input/Output for remote monitoring and control

**RMS**
- Compatible with Teltonika Remote Management System

**HARDWARE**

Mobile
- 3G, 2G

CPU
- Atheros, MIPS 24Kc, 400 MHz

Memory
- 16 MBytes Flash, 64 MBytes RAM

Powering option
- 4pin power socket, 9-30 VDC

SIM
- 1 x External SIM holder (2FF)

Antenna connectors
- 1 x SMA for mobile, 1 x RP-SMA for WiFi

Ethernet
- 2 x 10/100 Ethernet ports: 1 x WAN (configurable as LAN), 1 x LAN

WIFI
- IEEE 802.11b/g/n, Access point (AP), Station (STA)

Inputs/Outputs
- On 4pin socket: 1 x Digital Input, 1 x Digital open collector output

Status LEDs
- 2 x Connection type, 5 x Signal strength, 2 x Ethernet, 1 x Power

Operating temperature
- -40 °C to 75 °C

Housing
- Aluminium housing with DIN rail mounting option, plastic panels

Dimensions (W x H x D)
- 83 x 25 x 74 mm

Weight
- 130 g

**SOFTWARE**

Operating system
- RutOS (OpenWrt based Linux OS)

Network protocols
- TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet

Network Failover (Network backup)
- VLAN, QoS, Load Balancing

Firewall
- Port forward, Traffic rules, Custom rules, Pre-configured firewall rules, DMZ, NAT, NAT-T, NAT helpers, Unlimited firewall configuration via CLI

Security
- DDOS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), Port scan prevention (SYN-FIN, SYN-RST, Xmas, NULL flags, FIN scan attacks)

VPN and tunneling
- OpenVPN, IPsec, GRE, PPTP, L2TP, SSL, L2F, DMVPN, SSTP

Monitoring and management
- WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Connection monitoring
- Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

Cloud solutions
- RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

SMS features
- SMS status, SMS configuration, Send/Read SMS via HTTP/POST/GET, EMAIL to SMS, SMS to EMAIL, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP

Services
- DDNS, VRSP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging

**HISTORY**

23
Compact, robust and powerful device tailored for Industrial M2M/IoT applications. RUT240 is equipped with 2 x Ethernet and Wireless interfaces with Hotspot functionality. Device provides secure and stable Internet connectivity for Industrial applications using RutOS software and security features with RMS support.

**COMPACT**
Small size – easy integration

**CONNECTIVITY**
4G/LTE (Cat 4), 3G, 2G

**WAN FAILOVER**
Automatic switch to available backup connection

**WIFI**
Wireless Access Point with Hotspot functionality

**I/O**
Digital Input/Output for remote monitoring and control

**RMS**
Compatible with Teltonika Remote Management System

**HARDWARE**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile</td>
<td>4G/LTE (Cat 4), 3G, 2G</td>
</tr>
<tr>
<td>CPU</td>
<td>Atheros, MIPS 24Kc, 400 MHz</td>
</tr>
<tr>
<td>Memory</td>
<td>16 MBBytes Flash, 64 MBBytes RAM</td>
</tr>
<tr>
<td>Powering option</td>
<td>4pin power socket, 9-30 VDC</td>
</tr>
<tr>
<td>SIM</td>
<td>1 x External SIM holder (2FF)</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>2 x SMA for mobile, 1 x RP-SMA for WIFI</td>
</tr>
<tr>
<td>Ethernet</td>
<td>2 x 10/100 Ethernet ports: 1 x WAN (configurable as LAN), 1 x LAN</td>
</tr>
<tr>
<td>WiFi</td>
<td>IEEE 802.11b/g/n, Access point (AP), Station (STA)</td>
</tr>
<tr>
<td>Inputs/Outputs</td>
<td>On 4pin socket: 1 x Digital Input, 1 x Digital open collector output</td>
</tr>
<tr>
<td>Status LEDs</td>
<td>3 x Connection type, 5 x Signal strength, 2 x Ethernet, 1 x Power</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 °C to 75 °C</td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminium housing with DIN rail mounting option, plastic panels</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>83 x 25 x 74 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>135 g</td>
</tr>
</tbody>
</table>

**SOFTWARE**

Operating system
RutOS (OpenWrt based Linux OS)

Mobile features
Auto APN, Band lock

Network protocols
TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPpoe, DHCP, Telnet

Network
Failover (Network backup), VLAN, QoS, Load Balancing

Security
DDoS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), Port scan prevention (SYN-FIN, SYN-RST, X-mas, NULL flags, FIN scan attack), Port filtering

VPN and tunneling
OpenVPN, Ipsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP

Monitoring and management
WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Connection monitoring
Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

Cloud solutions
RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

SMS features
SMS status, SMS configuration, Send/Read SMS via HTTP POST/GET, EMAIL to SMS, SMS to Email, SMS to HTTP, SMS to SMS, scheduled SMS, SMS auto reply, SMPP

Services
DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging
## HARDWARE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Atheros, MIPS 74Kc, 550 MHz</td>
</tr>
<tr>
<td>Memory</td>
<td>16 MBBytes Flash, 64 MBBytes RAM</td>
</tr>
<tr>
<td>Powering option</td>
<td>4pin power socket, 9-30 VDC</td>
</tr>
<tr>
<td>SIM</td>
<td>1 x External SIM holder (2FF)</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>2 x FAKRA D for mobile, 1 x FAKRA C for GPS</td>
</tr>
<tr>
<td>WIFI</td>
<td>IEEE 802.11bg/n, Access point (AP), Station (STA)</td>
</tr>
<tr>
<td>GNSS</td>
<td>GPS, GLONASS, BeiDou, Galileo, QZSS</td>
</tr>
<tr>
<td>Inputs/Outputs</td>
<td>On 4pin socket: 1 x Digital input</td>
</tr>
<tr>
<td>Status LEDs</td>
<td>3 x Connection type, 5 x Signal strength, 1 x WiFi, 1 x Power</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 °C to 75 °C</td>
</tr>
<tr>
<td>Housing</td>
<td>Plastic housing</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>131 x 18 x 79 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>110 g</td>
</tr>
</tbody>
</table>

## SOFTWARE

Operating system: RutOS (OpenWrt based Linux OS)

Network protocols: TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet

Network Failover (Network backup), VLAN, QoS, Load Balancing

Monitoring and management: WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Connection monitoring: Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

Cloud solutions: RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocty, ThingNex

Hotspot: External/Internal Radius, SMS OTP, MAC authentication, Walled Garden

Supported Hotspot platforms: IronWiFi, HotspotSystem, Cloud4Wi, SAI + WiFi, MugCloud, Purple.ai

NTP: NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator

GNSS: NMEA forwarding, AVL, Geofencing

---

**CONNECTIVITY**

- 4G/LTE (Cat 4), 3G, 2G
- E-mark certified, ultra-slim router equipped with ignition detection (sleep mode), Overvoltage Protection and Automotive FAKRA connectors. RUT850 comes with RutOS software and security features and custom GNSS tracking protocol that is compatible with main Global AVL tracking platforms.

**GNSS**

- Global Navigation Satellite System for location services with geofencing functionality
- GPS, GLONASS, BeiDou, Galileo, QZSS

**WIFI**

- Wireless Access Point with Hotspot functionality
- Compatible with Telenor, Azure IoT Hub, Cloud of Things, Cumulocty, ThingNex

**SLEEP MODE**

With ignition detection and overvoltage protection

**DURABLE**

- Vibration resistant FAKRA connectors

**RMS**

- Compatible with Teltonika Remote Management System

**RUT850 AUTOMOTIVE CELLULAR ROUTER**

**HARDWARE**

- Mobile 4G/LTE (Cat 4), 3G, 2G
- CPU Atheros, MIPS 74Kc, 550 MHz
- Memory 16 MBBytes Flash, 64 MBBytes RAM
- Powering option 4pin power socket, 9-30 VDC
- SIM 1 x External SIM holder (2FF)
- Antenna connectors 2 x FAKRA D for mobile, 1 x FAKRA C for GPS
- WIFI IEEE 802.11bg/n, Access point (AP), Station (STA)
- GNSS GPS, GLONASS, BeiDou, Galileo, QZSS
- Inputs/Outputs On 4pin socket: 1 x Digital input
- Status LEDs 3 x Connection type, 5 x Signal strength, 1 x WiFi, 1 x Power
- Operating temperature -40 °C to 75 °C
- Housing Plastic housing
- Dimensions (W x H x D) 131 x 18 x 79 mm
- Weight 110 g

---

**OPERATING SYSTEM**

- RutOS (OpenWrt based Linux OS)
- Network protocols TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet
- Network Failover (Network backup), VLAN, QoS, Load Balancing
- Monitoring and management WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS
- Connection monitoring Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection
- Cloud solutions RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocty, ThingNex
- Hotspot External/Internal Radius, SMS OTP, MAC authentication, Walled Garden
- Supported Hotspot platforms IronWiFi, HotspotSystem, Cloud4Wi, SAI + WiFi, MugCloud, Purple.ai
- NTP NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator
- GNSS NMEA forwarding, AVL, Geofencing
**RUT900**

**INDUSTRIAL CELLULAR ROUTER**

This router is equipped with Dual-SIM, 4 x Ethernet interfaces and WiFi. RUT900 is a robust and powerful device tailored for Industrial M2M/IoT applications where no high data throughput is needed. RUT900 comes with core RutOS software and security features with RMS support.

**CONNECTIVITY**

**Worldwide 3G network coverage**

**WAN FAILOVER**

For additional connection reliability

**DUAL SIM**

With auto failover, backup WAN and other switching scenarios

**ETHERNET**

4x Ethernet ports with VLAN functionality

**WIFI**

Wireless Access Point with Hotspot functionality

**RMS**

Compatible with Teltonika Remote Management System

**SOFTWARE**

**HARDWARE**

- **Mobile**: 3G, 2G
- **CPU**: Atheros, MIPS 74Kc, 550 MHz
- **Memory**: 16 MB ( conserve Flash, 128 MB ( conserve RAM
- **Powering option**: 4pin power socket, 9-30 VDC
- **SIM**: 2 x External SIM holders (2FF)
- **Antenna connectors**: 2 x SMA for mobile, 2 x RP-SMA for WiFi
- **Ethernet**: 4 x 10/100 Ethernet ports: 1 x WAN ( configurable as LAN ), 3 x LAN
- **WiFi**: IEEE 802.11b/g/n, Access point (AP), Station (STA)
- **Inputs/Outputs**: On 4pin socket: 1 x Digital input, 1 x Digital open collector output
- **Status LEDs**: 1 x Bi-Color connection type, 5 x Signal strength, 4 x Ethernet, 1 x Power
- **Operating temperature**: -40 °C to 75 °C
- **Housing**: Aluminium housing with DIN rail mounting option, plastic panels with flat mounting option
- **Dimensions**: (W x H x D) 109 x 50 x 103 mm
- **Weight**: 263 g

**Operating system**: RutOS (OpenWrt based Linux OS)

**Mobile features**: SIM switch, Data/SMS limits

**Network protocols**: TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet

**Network Failover**: Network backup, VLAN, QoS, Load Balancing

**Monitoring and management**: WEB UI, CLI, SSH, TR-069, SNMP, JSON-RPC, MQTT, RMS

**Connection monitoring**: Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

**Cloud solutions**: RMS, POTA, Telemir, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

**SMS features**: SMS status, SMS configuration, Send/Read SMS via HTTP POST/GET, EMAIL to SMS, SMS to Email, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP

**Services**: DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging
This router is equipped with Dual-SIM, 4 x Ethernet interfaces and WiFi. Device is designed as Main/Backup Internet source and can guarantee reliable internet connection with high data throughput and data redundancy. RUT950 comes with rutOS software and security features with RMS support.

**WAN FAILOVER**

Automatic switch to available backup connection

**ETHERNET**

4 x Ethernet interfaces with VLAN functionality

**RMS**

Compatible with Teltonika Remote Management System

**CONNECTIVITY**

DUAL SIM

With auto failover, backup WAN and other switching scenarios

4G/LTE (Cat 4), 3G, 2G

**WIFI**

Wireless Access Point with Hotspot functionality

**HARDWARE**

Mobile

4G/LTE (Cat 4), 3G, 2G

CPU

Atheros, MIPS 74Kc, 550 MHz

Memory

16 MBytes Flash, 128 MBytes RAM

Powering option

4pin power socket, 9-30 VDC

SIM

2 x External SIM holders (2FF)

Antenna connectors

2 x SMA for mobile, 2 x RP-SMA for WiFi

Ethernet

4 x 10/100 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN

WIFI

IEEE 802.11bg/n, Access point (AP), Station (STA)

Inputs/Outputs

On 4pin socket: 1 x Digital input, 1 x Digital open collector output

Status LEDs

1 x Bi-Color connection type, 5 x Signal strength, 4 x Ethernet, 1 x Power

Operating temperature

-40 °C to 75 °C

Housing

Aluminium housing with DIN rail mounting option, plastic panels with flat mounting option

Dimensions (W x H x D)

109 x 50 x 103 mm

Weight

263 g

**SOFTWARE**

Routing

Static routes, Dynamic routes (BGP, OSPFv2, RIP/v1/v2, NHRP), Routing rules

VPN and tunneling

OpenVPN, IPsec, GRE, PPTP, L2TP, Strunnel, DMVPN, SSTP

Monitoring and management

WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Connection monitoring

Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

Cloud solutions

RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

Hotspot

External/Internal Radius, SMS OTP, MAC authentication, Walled Garden

Supported Hotspot platforms

IronWiFi, HotspotSystem, CloudWiFi, SAI + WiFi, MugiCloud, Purple.ai

SMS features

SMS status, SMS configuration, Send/Read SMS via HTTP POST/GET, EMAIL to SMS, SMS to Email, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP

Services

DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging

**SOFTWARE**

Operating system

RutOS (OpenWrt based Linux OS)

Mobile features

Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits

Network Failover (Network backup), VLAN, QoS, Load Balancing

VPN and tunneling

OpenVPN, IPsec, GRE, PPTP, L2TP, Tunnel, DMVPN, SSTP

Monitoring and management

WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Connection monitoring

Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection

Cloud solutions

RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

Hotspot

External/Internal Radius, SMS OTP, MAC authentication, Walled Garden

Supported Hotspot platforms

IronWiFi, HotspotSystem, CloudWiFi, SAI + WiFi, MugiCloud, Purple.ai

SMS features

SMS status, SMS configuration, Send/Read SMS via HTTP POST/GET, EMAIL to SMS, SMS to Email, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP

Services

DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging
**CONNECTIVITY**

- **4G/LTE (Cat 4), 3G, 2G**
- **16 MBytes Flash, 128 MBytes RAM**
- **4pin power socket, 9-30 VDC**
- **2 x External SIM holders (2FF)**
- **2 x SMA for mobile, 2 x RP-SMA for WiFi, 1 x SMA for GPS**
- **4 x 10/100 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN**
- **IEEE 802.11b/g/n, Access point (AP), Station (STA)**
- **GPS, GLONASS, Beidou, Galileo, QZSS**
- **On 4pin socket: 1 x Digital input, 1 x Digital open collector output**
- **On 10pin socket: 1 x Isolated digital input, 1 x Digital dry input, 1 x Analog input, 1 x Isolated open collector output (requires external voltage), 1 x Relay output (non-latching)**
- **1 x RS232, 1 x RS485**
- **1 x USB host, 1 x MicroSD**
- **-40 °C to 75 °C**
- **Aluminium housing with DIN rail mounting option, plastic panels with flat mounting option**
- **109 x 50 x 103 mm**
- **295 g**

**DUAL SIM**

For additional connection reliability

**GNSS**

Global Navigation Satellite System for location services and time synchronization

**I/O**

- Multiple digital and analog inputs and outputs for equipment control and event notification

**SERIAL**

- **RS232/RS485 serial communication interfaces**
- **Compatible with Teltonika Remote Management System**

**RMS**

- **RutOS (OpenWrt based Linux OS)**
- **Band lock, SIM switch, Operator black/white list, Data/SMS limits**
- **Failover (Network backup), VLAN, QoS, Load Balancing**
- **WEB UI, CLI, SSH, SMS, TR-069, SNMP, NTRIP, MQTT, RMS**
- **RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, CumulusIo, ThingWorx**
- **NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator**
- **NMEA forwarding, AVL, Geofencing**
- **TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT**
- **Console, Over IP, Modem, NTRIP, Modbus**

**SOFTWARE**

Operating system

- **RutOS (OpenWrt based Linux OS)**
- **NTP, Telnet, Azure IoT Hub, Cloud of Things, CumulusIo, ThingWorx**
- **TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT**
- **Console, Over IP, Modem, NTRIP, Modbus**

**HARDWARE**

- **4G/LTE (Cat 4), 3G, 2G**
- **Atheros, MIPS 74Kc, 550 MHz**
- **16 MBytes Flash, 128 MBytes RAM**
- **4pin power socket, 9-30 VDC**
- **2 x External SIM holders (2FF)**
- **2 x SMA for mobile, 2 x RP-SMA for WiFi, 1 x SMA for GPS**
- **4 x 10/100 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN**
- **IEEE 802.11b/g/n, Access point (AP), Station (STA)**
- **GPS, GLONASS, Beidou, Galileo, QZSS**
- **On 4pin socket: 1 x Digital input, 1 x Digital open collector output**
- **On 10pin socket: 1 x Isolated digital input, 1 x Digital dry input, 1 x Analog input, 1 x Isolated open collector output (requires external voltage), 1 x Relay output (non-latching)**
- **1 x RS232, 1 x RS485**
- **1 x USB host, 1 x MicroSD**
- **-40 °C to 75 °C**
- **Aluminium housing with DIN rail mounting option, plastic panels with flat mounting option**
- **109 x 50 x 103 mm**
- **295 g**
**INDUSTRIAL ETHERNET ROUTER**
This robust industrial router is equipped with 4 x Gigabit Ethernet ports, Quad-core CPU and 256 MB of RAM. These powerful specifications combined with core RutOS software features, such as multiple VPN services, advanced firewall and RMS support, makes this device a superb Industrial performer.

**HARDWARE**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Qualcomm, 4 x ARM Cortex A7, 717 MHz</td>
</tr>
<tr>
<td>Memory</td>
<td>256 MBytes Flash, 256 MBytes RAM</td>
</tr>
<tr>
<td>Powering option</td>
<td>4pin power socket, 9-50 VDC</td>
</tr>
<tr>
<td>Ethernet</td>
<td>4 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN</td>
</tr>
<tr>
<td>Inputs/Outputs</td>
<td>On 4pin socket: 1 x Digital input, 1 x Digital open collector output</td>
</tr>
<tr>
<td>Other</td>
<td>1 x USB Host</td>
</tr>
<tr>
<td>Status LEDs</td>
<td>8 x Ethernet, 1 x Power</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>-40 °C to 75 °C</td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminium housing with DIN rail mounting option and grounding capability</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>115 x 32 x 95 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>345 g</td>
</tr>
</tbody>
</table>

**SOFTWARE**

- **Operating system**: RutOS (OpenWrt based Linux OS)
- **Network protocols**: TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPTP, L2TP, DHCP, Telnet
- **Routing**: Static routes, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRP), Routing rules
- **Firewall**: Port forward, Traffic rules, Custom rules, Pre-configured firewall rules; DMZ, NAT, NAT-T, NAT helpers, Unlimited firewall configuration via CLI

**PROTOCOLS**

- Multiple protocols supported including MQTT, Modbus TCP, BGP, GRE

**SECURITY**

- DDOS prevention (SYN flood protection, SEH attack prevention, HTTP/HTTPS attack prevention), Port scan prevention (SYN-FIN, SYN-RST, Xmas, NULL flags, FIN scan attacks)
- **VPN and tunneling**: OpenVPN, IPSec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeroTier
- **Monitoring and management**: WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS
- **Cloud solutions**: RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
- **Services**: DDNS, VRPP, Wake On Lan (WOL), WEB filter, UPnP, Network shares (Samba), Traffic Logging
- **Administration**: Multi user, Configuration profiles, Diagnostics, logs, Configuration backup
This powerful LTE Cat 6 cellular industrial router is designed for professional and IoT applications where steady and fast connection and high data throughput is required.

**GNSS**
Global Navigation Satellite System for location services and time synchronization

**DUAL SIM**
With auto failover, backup WAN and other switching scenarios

**SECURITY**
Firewall and numerous VPN services including OpenVPN, IPsec, PPTP, L2TP & DMVPN

**RMS**
Compatible with Teltonika Remote Management System

**4G LTE CAT 6**
Cellular speeds up to 300Mbps with Carrier Aggregation

**GNSS**
Global Navigation Satellite System for location services and time synchronisation

**DUAL SIM**
With auto failover, backup WAN and other switching scenarios

**GIGABIT ETH**
4 x Gigabit Ethernet ports with up to 128 port/lag-based VLANs supported

**SOFTWARE**
Operating system RutOS (OpenWrt based Linux OS)

Mobile features Multiple PDN, Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits

Network protocols TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet

Network Failover (Network backup), VLAN, QoS, Load Balancing

VPN and tunneling OpenVPN, IPsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeroTier

Monitoring and management WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Cloud solutions RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx

NTP NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator

GNSS NMEA forwarding, AVL, Geofencing

Services DDoS, VRPP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging

Administration Multi user, Configuration profiles, Diagnostics, logs, Configuration backup

**HARDWARE**
Mobile 4G/LTE (Cat 6), 3G

CPU Qualcomm, 4 x ARM Cortex A7, 717 MHz

Memory 256 MBytes Flash, 256 MBytes RAM

Powering option 4pin power socket, 9-50 VDC

SIM 2 x External SIM holders (ZFF)

Antenna connectors 2 x SMA for mobile, 1 x SMA for GPS

Ethernet 4 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN

GNSS GPS, GLONASS, BeiDou, Galileo, QZSS

Inputs/Outputs On 4pin socket: 1 x Digital Input, 1 x Digital open collector output

Other 1 x USB host

Status LEDs 3 x WAN type, 2 x Connection type, 5 x Signal strength, 8 x Ethernet, 1 x Power

Operating temperature -40 °C to 75 °C

Housing Aluminium housing with DIN rail mounting option and grounding capability

Dimensions (W x H x D) 115 x 44 x 95 mm

Weight 455 g
This professional router combines the best of wired and wireless routing functionalities with Gigabit Ethernet, Bluetooth LE, and AC Wi-Fi. Advanced remote management capabilities along with numerous security & networking protocols supported make RUTX10 an ideal choice for professional applications.

**GIGABIT ETH**
4 x Gigabit Ethernet ports with up to 128 port/tag-based VLANs supported

**I/O & USB**
Digital Input / Output for remote monitoring and control and USB 2.0 Interface

**WIFI & BT**
Wave-2 802.11ac, Dual Band WiFi and Bluetooth LE

**SECURITY**
Firewall and numerous VPN services including OpenVPN, IPsec, PPTP, L2TP & DMVPN

**RMS**
Compatible with Teltonika Remote Management System

**HARDWARE**
- **CPU**: Qualcomm, 4 x ARM Cortex A7, 717 MHz
- **Memory**: 256 MBytes Flash, 256 MBytes RAM
- **Powering option**: 4pin power socket, 9-50 VDC
- **Antenna connectors**: 2 x RP-SMA for WiFi, 1 x RP-SMA for Bluetooth
- **Ethernet**: 4 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN
- **WiFi**: IEEE 802.11b/g/n 2.4GHz, IEEE 802.11ac/n/a 5GHz, Access point (AP), Station (STA)
- **Bluetooth**: 4.0 (Low energy)
- **Inputs/Outputs**: On 4pin socket: 1 x Digital input, 1 x Digital open collector output
- **Other**: 1 x USB host
- **Status LEDs**: 2 x WiFi, 8 x Ethernet, 1 x Power
- **Operating temperature**: -40 °C to 75 °C
- **Housing**: Aluminium housing with DIN rail mounting option and grounding capability
- **Dimensions**: 115 x 32 x 95 mm
- **Weight**: 355 g

**SOFTWARE**
- **Operating system**: RutOS (OpenWrt based Linux OS)
- **Network protocols**: TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPTP, L2TP, DHCP, Telnet
- **Routing**: Static routes, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRP), Routing rules
- **VPN and tunneling**: OpenVPN, IPsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeroTier
- **Monitoring and management**: WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS
- **Connection monitoring**: Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection
- **Cloud solutions**: RMS, ROTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulusity, ThingWorx
- **Hotspot**: External/Internal Radius, MAC Authentication, Walled Garden
- **Supported Hotspot platforms**: IronWiFi, HostspotSystem, Cloud4Wi, SAI + WiFi, MugCloud, Purple.ai
- **Services**: DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging
## RUTX11

**Industrial Cellular Router**

The powerful LTE Cat 6 cellular industrial router is designed for professional and IoT applications where steady and fast connection and high data throughput is required. It is equipped with 4 x Gigabit Ethernet, Bluetooth LE, and AC Wi-Fi, with remote management capabilities.

### Hardware

<table>
<thead>
<tr>
<th>Mobile</th>
<th>4G/LTE (Cat 6), 3G</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Qualcomm, 4 x ARM Cortex A7, 717 MHz</td>
</tr>
<tr>
<td>Memory</td>
<td>256 MBytes Flash, 256 MBytes RAM</td>
</tr>
<tr>
<td>Powering option</td>
<td>4pin power socket, 9-50 VDC</td>
</tr>
<tr>
<td>SIM</td>
<td>2 x External SIM holders (2FF)</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>2 x SMA for mobile, 2 x RP-SMA for WiFi, 1 x RP-SMA for Bluetooth, 1 x SMA for GPS</td>
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<tr>
<td>Ethernet</td>
<td>4 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN</td>
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<tr>
<td>WIFI</td>
<td>IEEE 802.11b/g/n 2.4GHz, IEEE 802.11ac/n/a 5GHz, Access point (AP), Station (STA)</td>
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<td>GNSS</td>
<td>GPS, GLONASS, BeiDou, Galileo, QZSS</td>
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<tr>
<td>Bluetooth</td>
<td>4.0 (Low energy)</td>
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<tr>
<td>Inputs/Outputs</td>
<td>On 4pin socket: 1 x Digital input, 1 x Digital open collector output</td>
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<tr>
<td>Other</td>
<td>1 x USB host</td>
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<tr>
<td>Status LEDs</td>
<td>4 x WAN type, 2 x Connection type, 5 x Signal strength, 2 x WIFI, 8 x Ethernet, 1 x Power</td>
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<tr>
<td>Operating temperature</td>
<td>-40 °C to 75 °C</td>
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<tr>
<td>Housing</td>
<td>Aluminium housing with DIN rail mounting option and grounding capability</td>
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<td>Dimensions</td>
<td>115 x 44 x 95 mm</td>
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<td>Weight</td>
<td>456 g</td>
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### Software

<table>
<thead>
<tr>
<th>Operating system</th>
<th>RutOS (OpenWrt based Linux OS)</th>
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</thead>
<tbody>
<tr>
<td>Mobile features</td>
<td>Multiple PDN, Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits</td>
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<tr>
<td>Network</td>
<td>Failover (Network backup), VLAN, QoS, Load Balancing</td>
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<tr>
<td>Routing</td>
<td>Static routes, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRRP), Routing rules</td>
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<tr>
<td>VPN and tunneling</td>
<td>OpenVPN, IPv6, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeroTier</td>
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<tr>
<td>Cloud solutions</td>
<td>RMS, POTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx</td>
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<tr>
<td>Hotspot</td>
<td>External/Internal Radius, SMS OTP, MAC authentication, Walled Garden</td>
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<td>NTP</td>
<td>NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator</td>
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<tr>
<td>GNSS</td>
<td>NMEA forwarding, AVL, Geofencing</td>
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</tbody>
</table>

### GNSS

**Global Navigation Satellite System for location services and time synchronization**

### 4G LTE CAT 6

Voltage speeds up to 300Mbps with Carrier Aggregation

### DUAL SIM

With auto failover, backup WAN and other switching scenarios

### WIFI & BT

Wave-2 802.11ac Dual Band WiFi and Bluetooth LE

### PROTOCOLS

Multiple protocols supported including MQTT, Modbus TCP, BGP, GRE

### RMS

Compatible with Teltonika Remote Management System

<QR Code>
Powerful Dual LTE Cat 6 router is designed for mission critical applications. Equipped with two LTE modems for dual simultaneous connections allowing instant seamless LTE service switching and load balancing features make this device irreplaceable in applications where losing connection is not an option.

**DUAL LTE**
Cellular speeds up to 600Mbps with dual simultaneous LTE Cat 6 connections

**DUAL SIM**
Instant failover switching

**GNSS**
Global Navigation Satellite System for location services and time synchronization

**LOAD BALANCING**
Allows to use multiple WAN sources to increase throughput

**WIFI & BT**
Wave-2 802.11ac Dual Band WIFI and Bluetooth LE

**RMS**
Compatible with Teltonika Remote Management System

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**RUTX12**

**HARDWARE**

<table>
<thead>
<tr>
<th>Mobile</th>
<th>2 x 4G/LTE (Cat 6), 3G</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Qualcomm, 4 x ARM Cortex A7, 717 MHz</td>
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<tr>
<td>Memory</td>
<td>256 MB/bytes Flash, 256 MB/bytes RAM</td>
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<tr>
<td>Powering option</td>
<td>4pin power socket, 9-50 VDC</td>
</tr>
<tr>
<td>SIM</td>
<td>2 x External SIM holders (2FF)</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>4 x SMA for mobile, 2 x RP-SMA for WiFi, 1 x RP-SMA for Bluetooth, 1 x SMA for GPS</td>
</tr>
<tr>
<td>Ethernet</td>
<td>5 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 4 x LAN</td>
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<tr>
<td>WiFi</td>
<td>IEEE 802.11b/g/n 2.4GHz, IEEE 802.11ac/n/a 5GHz, Access point (AP), Station (STA)</td>
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<tr>
<td>GNSS</td>
<td>GPS, GLONASS, Beidou, Galileo, QZSS</td>
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<tr>
<td>Connectors</td>
<td>1 x 4 pin DC, 5 x Ethernet, 4 x SMA for LTE, 2 x WiFi RP-SMA, 1 x SMA for GNSS, 1 x RP-SMA for Bluetooth</td>
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<tr>
<td>Bluetooth</td>
<td>4.0 (Low energy)</td>
</tr>
<tr>
<td>Inputs/Outputs</td>
<td>On 4pin socket: 1 x Digital input, 1 x Digital open collector output</td>
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<td>Status LEDs</td>
<td>4 x WAN type, 6 x Connection type, 6 x Signal strength, 2 x WiFi, 10 x Ethernet, 1 x Power</td>
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<tr>
<td>Operating temperature</td>
<td>-40 °C to 75 °C</td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminium housing with DIN rail mounting option and grounding capability</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>132 x 44 x 95 mm</td>
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<td>Weight</td>
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</table>

**SOFTWARE**

<table>
<thead>
<tr>
<th>Operating system</th>
<th>RutOS (OpenWrt based Linux OS)</th>
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<tbody>
<tr>
<td>Mobile features</td>
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<td>Network</td>
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<tr>
<td>Routing</td>
<td>Static routes, Dynamic routes (BGP, OSPFv2, RIP/v2, EIGRP, NHIP), Routing rules</td>
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<tr>
<td>Monitoring and management</td>
<td>WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS</td>
</tr>
<tr>
<td>Cloud solutions</td>
<td>RMS, FDTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx</td>
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<tr>
<td>Hotspot</td>
<td>External/Internal Radius, SMS OTP, MAC authentication, Walled Garden</td>
</tr>
<tr>
<td>Supported Hotspot platforms</td>
<td>IronWiFi, HotspotSystem, Cloud4Wi, SAI + WiFi, MugiCloud, Purple.ai</td>
</tr>
</tbody>
</table>
RUTXR1

ENTERPRISE SFP/LTE RACK MOUNT READY ROUTER

Cellular speeds up to 300Mbps with Carrier Aggregation

SFP port for long-range Fiber-optic communication

DUAL SIM

With auto failover, backup WAN and other switching scenarios

GIGABIT ETH

5 x Gigabit Ethernet ports

WIFI

Wave-2 802.11ac Dual Band WIFI

RMS

Compatible with Teltonika Remote Management System

HARDWARE

Mobile
4G/LTE (Cat 6), 3G

CPU
Qualcomm, 4 x ARM Cortex A7, 717 MHz

Memory
256 MBytes Flash, 256 MBytes RAM

Powering option
4pin power socket, 9-50 VDC (main)
4pin power socket, 9-50 VDC (redundant)

SIM
2 x External SIM holders (2FF)

Antenna connectors
2 x SMA for mobile, 2 x RP.SMA for WIFI

Ethernet
5 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 4 x LAN

WiFi
IEEE 802.11b/g/n 2.4GHz, IEEE 802.11ac/n/a 5GHz, Access point (AP), Station (STA)

Other
1 x USB host, 1 x SFP, 1 x RS232 console

Status LEDs
2 x WAN type, 2 x Connection type, 3 x Signal strength, 2 x SIM, 2 x Console, 10 x Ethernet, 2 x Power

Operating temperature
-40 °C to 75 °C

Housing
Full aluminium rack unit housing with grounding capability

Dimensions (W x H x D)
272 x 44 x 123 mm

Weight
1050 g

SOFTWARE

Operating system
RutOS (OpenWrt based Linux OS)

Mobile features
Multiple PDN, Auto APN, Band lock, SIM switch, Operator black/white list, Data/SMS limits

Network protocols
TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet

Network
Failover (Network backup), VLAN, QoS, Load Balancing

Routing
Static routes, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRP), Routing rules

VPN and tunneling
OpenVPN, IPsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeroTier

Monitoring and management
WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS

Cloud solutions
RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, CumuloNet, ThingWorx

Services
DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging

COMING SOON
**HARDWARE**

Powering option 4pin power socket, 7-58 VDC

Power consumption Idle: < 2 W, Max: < 9 W (no PoE device connected)

PoE standard 802.3af/at (max 30 W per port, total power budget 120W*)

Ethernet 5 x 10/100/1000 Ethernet ports: 4 x PoE, 1 x Uplink

Status LEDs 10 x Ethernet, 1 x Power

Ingress protection rating IP30

Operating temperature -40 °C to 75 °C

Housing Aluminium housing with wall or DIN rail mounting option and grounding capability

Dimensions 115 x 32 x 95 mm

Weight 340 g

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**PERFORMANCE SPECIFICATIONS**

Bandwidth 10 Gbps

Packet buffer 128 KB

Jumbo frame support 9216 bytes

MAC address table size 2K entries

Auto MDI/MDI-X Cable Detection Yes

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*Provided power supply only allows 60 W PoE power budget at PSE, to reach maximum 120 W at PSE >130 W power PSU must be used

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**TSW100**

**POE**

4 x PoE ports with 802.3af and 802.3at support

**DURABLE**

Rugged aluminium housing

**ETHERNET**

5 x Gigabit Ethernet with speeds up to 1000 Mbps

**MOUNTING**

DIN rail and surface mounting options

**PLUG-N-PLAY**

No additional configuration needed
REMOTE ACCESS
Have remote access to other equipment, including devices that aren’t manufactured by Teltonika

UPDATES
With RMS you can update hundreds of devices to the latest firmware version in just a few clicks

REALTIME ALERT SYSTEM
Use real-time email alerts in order to stay informed on what’s happening to your devices

ACTIVITY REPORTS
Set up a custom report system that contains information on user requested device parameters

REMOTE MONITORING
RMS is a client-server based system, which provides the possibility to access devices remotely even without the use of a public IP address

SOFTWARE
Connection with server
MQTT protocol (with SSL certificates); VPN

Proxy
Webui, CLI, HTTP(HTTPS) Non-teltonika device

Cloud
Amazon Web Service

Eligible devices
RUT230, RUT240, RUT850, RUT950, RUT955, RUTX08, RUTX09, RUTX10, RUTX11, RUTX12, RUTXR1, TRB140, TRB141, TRB142, TRB145, TRB245, TRB255

Security
OWASP II, Cis v7

Alerts
Signal strength, SIM switch, device status change (online/offline), mobile data (connected/disconnected), GPS positioning

Update types
Firmware update, configuration upload

Report types
Manual one time reports (day, week, month), periodic reports (daily, weekly, monthly)

Available downloads
Device configuration, event logs, troubleshot file, CSV file of currently visible devices, generated reports, uploaded firmware files, uploaded configuration files

Static device parameters
IMEI, model, manufacturer, hardware version, IMSI, product code, batch number, modem revision

Dynamic device parameters
SIM state, PIN state, net state, signal (-dBm), operator, operator number, connection type, temperature, sent bytes (of both SIM cards, if available), received bytes (of both SIM cards, if available), firmware version, current SIM slot, router uptime, mobile IP, WAN state, WAN IP, cell ID, MCC, MNC, LAC, ICCID, RSCP, ECIO, RSRP, SINR, RSRQ

Hotspot parameters
Hotspot SSID, hotspot status (enabled/disabled), hotspot IP, total downloaded data, total uploaded data, users, active users, active user MAC, active user IP, active user start time, active user end time, active user use time, user downloaded data, user uploaded data, hotspot download limit, hotspot upload limit

GPS parameters
Status, latitude, longitude, fix time, GPS date/time, altitude, speed, satellite count, course, accuracy

Input/output parameters
Digital input, digital isolated input, analog input, digital O/C output, digital relay output

MAIN FEATURES
Unified protocol
Enjoy a well-rounded solution for managing multiple Teltonika devices from a single platform

Remote access to non-Teltonika devices
If your Teltonika device is on RMS, it can be used to generate remote access links to equipment that is connected to its private network

Remote firmware/backup updates
Make sure you don’t miss out on various improvements and new features that come with new firmwares

GPS history
Always stay informed of where your devices are and have been with the help of location history

Statistics displays charts
Use automatically generated charts to monitor the history of your device activities

REMOTE MANAGEMENT SYSTEM
This platform allows users to analyze and monitor router statistical data, access WebUI interface of individual devices, change configuration of multiple connected routers using customizable selected profiles. In addition, it is possible to do remote automatic firmware updates and access equipment behind the router.
RutOS is our unified router Operating System and the core component of all Teltonika networking products. 10+ years of development made RutOS grow to the highest Industry standards. Security, stability and user experience are the key values that our platform is built around. Intuitive Web interface and constantly growing Wiki/Crowd-Support platforms help our partners to cut costs on engineer training while implementing new devices or migrating from other systems.

Teltonika networking products stand out as easily manageable devices on the market. Multiple remote monitoring and control functions are inseparable part of RutOS. This Open-source OpenWrt based Operating System along with full software documentation enable easy development of custom software solutions or new functionality as well as fast integration with 3rd party platforms.

**MAIN FEATURES**

| Mobile features | Operator black/white list, band lock, multiple PDN, auto APN, data/SMS limits, SIM switch |
| Network protocols | TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet |
| Network | Failover (network backup), VLAN, QoS, Load Balancing |
| Routing | Static routes, Dynamic routes (BGP, OSPFv2, RIPv2, EIGRP, NHRP), Routing rules |
| Firewall | Port forward: traffic rules, custom rules, pre-configured firewall rules, DMZ, NAT, NAT-T, NAT helpers, unlimited firewall configuration via CLI |
| Security | DoS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), port scan prevention (SYN-FIN, SYN-RST, X-mas, NULL flags, FIN scan attacks) |
| VPN and tunneling | OpenVPN, IPSec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP, WireGuard, ZeronTier |
| Monitoring and management | WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RSM |
| Connection monitoring | Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection |
| Cloud solutions | RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx |
| Hotspot | External/Internal Radius, SMS OTP, MAC authentication, Walled Garden |
| Supported Hotspot platforms | IronWiFi, HotspotSystem, Cloud4Wi, SAI + WiFi, MagCloud, Purple.ai |
| NTP | NTP Server, NTP Client, sync with: external NTP server, GNSS, mobile operator |
| GNSS | NMEA forwarding, AVL, geofencing |
| Modbus | TCP slave, TCP master, RTU master, RTU gateway, Modbus over MQTT |
| Serial | Console, over IP, modem, NTRIP, Modbus |
| SMS features | SMS status, SMS configuration, send/read SMS via HTTP POST/GET, EMAIL to SMS, SMS to Email, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP |
| Services | DNS, WRTP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging |
| Administration | Multi user, configuration profiles, diagnostics, logs, configuration backup |
| Supported languages | Multi user, configuration profiles, diagnostics, logs, configuration backup |
| Development tools | SDK package with build environment provided |

* Available RUTOS WebUI functionality depends on device’s hardware capabilities
### NETWORKING PRODUCTS COMPARISON

<table>
<thead>
<tr>
<th>Products key features</th>
<th>TRB140</th>
<th>TRB141</th>
<th>TRB142</th>
<th>TRB145</th>
<th>TRB245</th>
<th>TRB255</th>
<th>RUT230</th>
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<th>RUT955</th>
<th>RUTX08</th>
<th>RUTX09</th>
<th>RUTX10</th>
<th>RUTX11</th>
<th>RUTX12</th>
<th>RUTXR1</th>
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<tbody>
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<td>CPU (MHz)</td>
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<td>RAM (MB)</td>
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### ACCESSORIES / POWERING OPTIONS

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<th>Accessories/Powering Options</th>
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<td>US power supply, 18 W</td>
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<td>Automotive power supply, 4 pin</td>
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<td>DIN Rail power supply</td>
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ACCESSORIES / ANTENNA OPTIONS

COMBO MIMO mobile/GNSS/ WiFi ROOF SMA antenna
Order code: 003R-00253

COMBO SISO mobile/GNSS/ WiFi ROOF SMA antenna
Order code: 003R-00254

COMBO MIMO mobile ROOF SMA antenna
Order code: 003R-00252

Mobile magnetic SMA antenna
Order code: 003R-00229

COMBO MIMO mobile/GNSS/ WiFi ROOF SMA antenna
Order code: 003R-00253

Combi mobile/GNSS/ WiFi ROOF SMA antenna
Order code: 003R-00254

Mobile magnetic SMA antenna
Order code: 003R-00229

COMBO SISO mobile/GNSS/ WiFi ROOF SMA antenna
Order code: 003R-00254

COMBO MIMO mobile ROOF SMA antenna
Order code: 003R-00252

Mobile magnetic SMA antenna
Order code: 003R-00229

ACCESSORIES / MOUNTING OPTIONS

Compact DIN Rail Kit*
Order code: 088-00270

DIN Rail Kit*
Order code: 088-00267

Surface mounting kit*
Order code: 088-00260

TRB DIN Rail Kit**
Order code: 088-00256

ACCESSORIES / BLUETOOTH SENSOR

Blue COIN T***
Order code: PRIEDAS12R

Blue PUCK T EN 12830***
Order code: PRIEDAS485

Blue PUCK RHT***
Order code: PRIEDAS7HR

Blue PUCK MAG***
Order code: PRIEDAS1LH

Blue PUCK MOV***
Order code: PRIEDASMMF

Blue PUCK T***
Order code: PRIEDASJDS

Blue PUCK ID***
Order code: PRIEDASC3D

Blue SLIM ID***
Order code: PRIEDASN6O

* Compatible with RUT2**, RUT9** and RUTX** series devices.
** Compatible with TRB14* series devices.
*** Compatible with RUTX10 and RUTX11 devices.
**ACCESSORIES COMPATIBILITY**

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<th>Device Type</th>
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<td>US POWER SUPPLY, 18W</td>
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OIL & GAS PIPELINE MONITORING

Our lives depend on energy and while many countries are working towards a more sustainable future with development focused on renewable energy, oil & gas remain the most popular sources of energy today. Combined, oil & gas account for more than 60% of the global energy consumption, according to BP estimates.

SOLUTION
Pipeline infrastructure is usually placed in remote areas where wired Internet connectivity is not available. The satellite communications are still highly expensive, however, global expansion of 4G LTE coverage enables Oil & Gas companies to implement a wide pipeline flow monitoring network by using dedicated flow meters which output data using industrial protocols. In many cases – serial communication with RS-485 and Modbus industrial protocol is used. The data generated by the flow meter must be obtained and forwarded to control centers, SCADA systems to aggregate and interpret centrally. TRB145 Serial IoT Gateway by Teltonika Networks is perfect for such applications - with RS-485 interface, Modbus RTU Master functionality and 4G LTE Cat 1 it is able to periodically read flow meter information and send gathered data to remote HTTP/HTTPS servers or various IoT platforms using MQTT. Finally, wide power supply range and low energy consumption allows TRB145 to be powered up by combining solar power and batteries.

BENEFITS
- Low-cost and quick to deploy - multiple TRBs can be simultaneously configured immediately using Teltonika Remote Management System (RMS).
- High availability and low data cost – 4G LTE is highly available globally and cost efficient due to low amounts of data needed for this application.
- Data security – TRB145 supports advanced data protection with embedded Firewall and encryption with multiple VPN services available, such as OpenVPN, IPsec, PPTP, L2TP and others. Immediate notifications – if preset flow values fall out of defined criteria, system operators can setup TRB145 to receive immediate alarms.

ELEVATOR CONNECTIVITY

Today, we see massive growth in urban development. New shopping malls, skyscrapers, hospitals, offices are built all over the world. All these buildings have one thing in common, but the most important one is an elevator. According to Statista, the elevator market size in 2019 exceeded 90 billion USD, and there are forecasts that the market will grow up to 135 billion USD by 2026. This means that every day many elevators must be installed and maintained.

SOLUTION
All maintenance companies invest in security systems and reliability to optimise their operations and reduce the potential need for physical maintenance traveling to all locations where they have elevators deployed. Since the whole solution is subject to a risk of failure, there must be a reliable way to provide a stable and secure Internet connectivity. Our partners connect all parts of such an elevator solution to our RUTX09 industrial cellular router. It is equipped with 4G LTE Cat6 & 2 SIM card slots, which ensures additional connection reliability through the failover feature. Also, it has four gigabit Ethernet interfaces – sufficient to connect all solution components. Furthermore, it runs our RutOS operating system designed with a multitude of security services such as multiple VPNs, firewalls, DDoS attack prevention features, and more. The whole solution can be easily controlled and monitored remotely by using our software system RMS – Remote Management System.

BENEFITS
- Internet failover – possibility to use two different operator SIM cards for internet backup and failover.
- Security – our products have been tested and validated by the most prominent ISP across the globe.
- Easy to use – RUTX09 is powered by our RutOS, which has a very friendly user interface – easy to use and understand.
- Alerts and notifications – if an error occurs, you can be sure that with the help of RMS, you will get alerts and notifications as soon as possible, saving your time and costs.
REMOTE TOWER SITE MANAGEMENT

According to GSMA, there are more than 5.2 billion unique mobile subscribers and more than 9 billion mobile connections worldwide. This number includes cellular IoT subscribers and is continuously growing as the world is moving forward towards digitalization. As the number of subscribers and providers is growing, the need for more cellular base stations is also increasing rapidly.

SOLUTION

The cellular base station tower site is a complex infrastructure solution since it includes various elements, as mentioned above. However, most of those parts are connected directly to the tower site controller (also called site manager), which jointly monitors and allows to control everything using a single platform. These tower site controllers need to be connected to the Internet. Our partners are using the RUTX11 to ensure a secure and reliable connection, which grants the tower site controller connected to the Internet using 4G LTE. Also, this professional cellular router is equipped with Gigabit Ethernet and Wi-Fi, which allows connecting additional components like CCTV cameras or access control barriers. Furthermore, every maintenance company must have alerts and notifications if something happens to the system. In this case, the whole system is controlled remotely via the management software, and our router - RUTX11 - is managed and controlled via RMS – Remote Management System. The RMS ensures that RUTX11 gets all the latest firmware updates and can provide valuable alerts and usage reports.

ENERGY&UTILITIES

BOAT AND YACHT CONNECTIVITY

Europe and North America have witnessed high demand for recreational boats during the forecast period as the commercial adoption of boats have increased in these regions. With over 37,000 kilometers of inland waterways and over 70,000 kilometers of coastline, Europe offers its 480 million citizens a perfect ecosystem to participate in recreational marine activities annually. Countries such as Belgium and Croatia have witnessed significant growth in the recreational boat market. There are approximately 6 million boats kept in European waters.

SOLUTION

As we can see in the topology, there are possibilities to use different products from Teltonika Networks portfolio depending on the size of the vessel and the demanded solution. There are numerous applications when Internet connectivity on a boat is essential: weather forecasts, voyage planning, CCTV monitoring. However, when it comes to recreational services - marketing value can be just as significant. With public WiFi service on a boat, trip operators can provide additional value to the consumers while offsetting the costs of mobile data plans with interactive captive portals and digital advertising. Moreover, such tools provide valuable data to help further develop a growing customer base. Both devices RUT950 and RUTX12 are compatible with the Remote Management System - IoT platform for Teltonika Networks devices. With the help of it, you can set the alerts if the boat or yacht has left the geofence area, which you have specified on the platform.

BENEFITS

Performance - RUTX12 with 2 LTE CAT 6 cellular modules working simultaneously provide speeds up to 600 Mbps and is ready for industrial applications with rugged aluminium housing, wide operating temperature range, and resistance to vibrations.

Functionality - RUT950 has 2 SIM card slots, which provides flexibility to choose between different mobile operators in different areas.

Remote monitoring - with RMS, you can conveniently monitor your property, get notifications about any undesirable issues with both RUTX12 and RUT950.

Security – with advanced RutOS features, RUTX12 and RUT950 offer multiple VPN options, embedded firewall, and other security features to comply with high-security standards.
**OUT-OF-BAND MANAGEMENT FOR CISCO ISR**

Out-of-band management has long been used to access a remote site or device, as a way to monitor, restore service or determine an issue affecting service. The most popular method of out-of-band access was the PSTN (Public Switched Telephone Network), via analog POTS lines (Plain Old Telephone Service) or ISDN lines (Integrated Switched Digital Network). Dial-up modems or ISDN equipment attached to remote site devices would accept incoming calls from an administrator at the main site. These lines are still in common use today.

**SOLUTION**

The most reliable option for remote site monitoring is having a certified network technician on-site at all times, though in most cases costs of doing so are too large to justify. Most commonly such engineers are hired by dedicated businesses offering technical support services which delegate their technical engineers on-demand to the location of client’s infrastructure in case the main router is unreachable over its wired Internet connection. In the majority of cases, a simple reboot or configuration change is needed. However, the costs of hiring a certified professional engineer to travel to a remote site, debug and solve a problem are significantly higher than upgrading existing PSTN infrastructure to reliable and secure remote access solution for out-of-band management.

**BENEFITS**

- **Fast deployment** – multiple RUT955s can be quickly preconfigured for out-of-band management using Teltonika RMS.
- **Reduced network maintenance costs** – even one on-site visit by a certified technical support engineer can be more expensive than installing a single RUT955 for out-of-band management.
- **Support speed** – a professional engineer can access the console interface of an ISR remotely immediately and resolve any arising issues avoiding time zone differences and traveling time to site.

**4G CONNECTIVITY IN VENDING MACHINES**

The worldwide vending machine market is valued more than 5.8 billion USD and will grow to nearly 7 billion USD in 2024, according to the MarketWatch. The habits of the people are changing, due to the faster pace of life, everybody is trying to save as much time as possible. This leads to a shift of buyer behavior more and more customers buy drinks, food and other products from vending machines; it is simpler and way faster than going to a grocery store.

**SOLUTION**

Connection reliability is the most crucial feature for the vending machine market since all parts of the solution are connected to one single device. If the machine loses connectivity to the Internet, most of these solution components would stop functioning. Installing a professional cellular router like RUTX11, vending machine operators can connect all parts of the vending solution to a single device and have Internet backup because RUTX11 is equipped with LTE Cat 6 with 2 SIM cards supported. The whole solution can be monitored via RMS, which gives the possibility to get notifications and alerts if something unexpected happens. Also, RUTX11 works as a gateway to the service center, allowing operators to monitor the stock levels inside the vending machine and make efficient decisions for refilling the machine.

**BENEFITS**

- **Versatility** – RUTX11 is perfect for this solution since it is compatible with different devices including Bluetooth sensors, payment terminal and digital screen using Ethernet and Wi-Fi interfaces.
- **Reliability** – Dual SIM is an essential feature for Internet backup and reliable connectivity, ensuring that connection is not lost even in the event of cellular operator disruptions.
- **Remote management** – RUTX11 is fully compatible with Teltonika Networks Remote Management System (RMS) which enables robust remote monitoring and management capabilities.
- **Security** – RUTX11 supports advanced firewall, access control and multiple VPN options, such as OpenVPN, IPSec, and others – essential for ensuring electronic payment functionality.
Crowd-support forum
https://community.teltonika.lt/

Wiki knowledge base
https://wiki.teltonika.lt/

Teltonika-networks
https://teltonika-networks.com/