TELTONIKA | Easy key to IoT

2020
JULY

NETWORKS
PRODUCTS CATALOG

OUR FOCUS

RELIABILITY EASE OF USE SECURITY

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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TRM240

INDUSTRIAL CELLULAR MODEM

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.

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

DURABLE
Rugged aluminium housing

USB
Interface for internet accsess

EFFICIENT
Low power consumption

COMPACT
Small size, easy installation

EASY TO USE
Controlled using Network manager

HARDWARE

Mobile	4G/LTE (Cat 1), 3G, 2G
Powering option	microUSB, 5 VDC
SIM	1 x Internal SIM holder (2FF)
Antenna connectors	1 x SMA for mobile
USB	1 x Micro USB slave
Status LEDs	1 x LTE, 1 x Network, 1 x Power
Ingress protection rating	IP30
Operating humidity	10 % to 90 % non-condensing
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	125 g

SOFTWARE

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.x/5.x/6.x/7.x/8.x/9.x
RIL driver	Android 4.x/5.x/6.x/7.x/8.x/9.x
NDIS driver	Windows 7/8/8.1/10
Gobinet driver	Linux 2.6~5.4
QMI_WWAN driver	Linux 3.4~5.4
Control via AT commands	3GPP TS27.007 and enhanced AT commands

TRM250

INDUSTRIAL CELLULAR MODEM

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

DURABLE
Rugged aluminum housing

USB
Interface for internet accsess

EFFICIENT
Low power consumption

COMPACT
Small size, easy installation

EASY TO USE
Controlled using Network manager

HARDWARE

Mobile	4G/LTE (Cat M1), NB-IoT, 2G
Powering option	microUSB, 5 VDC
SIM	1 x Internal SIM holder (2FF)
Antenna connectors	1 x SMA for mobile
USB	1 x Micro USB slave
Status LEDs	1 x Network, 1 x Power
Ingress protection rating	IP30
Operating humidity	10 % to 90 % non-condensing
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	125 g

SOFTWARE

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.x/5.x/6.x/7.x/8.x/9.x
RIL driver	Android 4.x/5.x/6.x/7.x/8.x/9.x
NDIS driver	Windows 7/8/8.1/10
Gobinet driver	Linux 2.6~5.4
QMI_WWAN driver	Linux 3.4~5.4
Control via AT commands	3GPP TS27.007 and enhanced AT commands

TRB140

INDUSTRIAL RUGGED LTE GATEWAY

Ultra-small, lightweight and energy efficient IoT device equipped 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.

CONNECTIVITY

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

DURABLE

Rugged aluminum housing

RUTOS

Easy to use, secure and feature rich OpenWRT based operating system

9-30V

Wide range of supported power supply voltages

COMPACT

Small size, easy installation

RMS

Compatible with Teltonika Remote Management System

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

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
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, X-mas, NULL flags, FIN scan attacks)
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, FOTA, 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	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging

TRB141

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

DURABLE

Rugged aluminum housing

I/O

Wide range of multiple Inputs/Outputs for remote monitoring and control

9-30V

Wide range of supported power supply voltages

COMPACT

Small size, easy installation

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/Wet 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, FOTA, 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

DURABLE

Rugged aluminum housing

SERIAL

Equipped with RS232 for serial communication

9-30V

Wide range of supported power supply voltages

COMPACT

Small size, easy installation

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

DURABLE
Rugged aluminum housing

SERIAL
Equipped with RS485 for serial communication

9-30V
Wide range of supported power supply voltages

COMPACT
Small size, easy installation

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 RS485
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	130 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, Telenor, 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

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

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

SERIAL
RS232/RS485 serial communication interfaces

9-30V
Wide range of power supply voltages

I/O
Multiple Inputs and Outputs for remote monitoring and control

GNSS
Global Navigation Satellite System for location services with geofencing functionality

HARDWARE

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

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, 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
Serial	Console, Over IP, Modem, NTRIP, Modbus
Administration	Multi user, Configuration profiles, Diagnostics, logs, Configuration backup

TRB255

INDUSTRIAL M2M GATEWAY

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.

CONNECTIVITY

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

DUAL SIM

With auto failover, backup WAN and other switching scenarios

SERIAL

RS232/RS485 serial communication interfaces

9-30V

Wide range of supported power supply voltages

I/O

Multiple Inputs and Outputs for remote monitoring and control

GNSS

Global Navigation Satellite System for location services with geofencing functionality

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, 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
Serial	Console, Over IP, Modem, NTRIP, Modbus
Administration	Multi user, Configuration profiles, Diagnostics, logs, Configuration backup

RUT230

INDUSTRIAL CELLULAR ROUTER

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.

CONNECTIVITY

Worldwide 3G network coverage

WAN FAILOVER

Automatic switching to available Backup connection

WIFI

Wireless Access Point with Hotspot functionality

COMPACT

Small size – easy integration

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, X-mas, NULL flags, FIN scan attacks)
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, FOTA, 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 HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP
Services	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging

RUT240

INDUSTRIAL CELLULAR ROUTER

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.

CONNECTIVITY

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

WAN FAILOVER

Automatic switch to available backup connection

WIFI

Wireless Access Point with Hotspot functionality

COMPACT

Small size – easy integration

I/O

Digital Input/Output for remote monitoring and control

RMS

Compatible with Teltonika Remote Management System

HARDWARE

Mobile	4G/LTE (Cat 4), 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	2 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	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, plastic panels
Dimensions (W x H x D)	83 x 25 x 74 mm
Weight	135 g

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

RUT850

AUTOMOTIVE CELLULAR ROUTER

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.

CONNECTIVITY

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

GNSS

Global Navigation Satellite System for location services with geofencing functionality

WIFI

Wireless Access Point with Hotspot functionality

SLEEP MODE

With ignition detection and overvoltage protection

DURABLE

Vibration resistant FAKRA connectors

RMS

Compatible with Teltonika Remote Management System

HARDWARE

Mobile	4G/LTE (Cat 4), 3G, 2G
CPU	Atheros, MIPS 74Kc, 550 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	2 x FAKRA D for mobile, 1 x FAKRA C for GPS
WiFi	IEEE 802.11b/g/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

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, 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, MugiCloud, 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

WIFI

Wireless Access Point with Hotspot functionality

DUAL SIM

With auto failover, backup WAN and other switching scenarios

ETHERNET

4x Ethernet ports with VLAN functionality

RMS

Compatible with Teltonika Remote Management System

HARDWARE

Mobile	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 802.11b/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

SOFTWARE

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, 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
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

RUT950

INDUSTRIAL CELLULAR ROUTER

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.

CONNECTIVITY

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

WAN FAILOVER

Automatic switch to available backup connection

WIFI

Wireless Access Point with Hotspot functionality

DUAL SIM

With auto failover, backup WAN and other switching scenarios

ETHERNET

4 x Ethernet interfaces with VLAN functionality

RMS

Compatible with Teltonika Remote Management System

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 802.11b/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

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

RUT955

INDUSTRIAL CELLULAR ROUTER

Equipped with Dual-SIM, 4 x Ethernet, WiFi and RS232, RS485, USB interfaces and Inputs/Outputs. RUT955 comes with RutOS advanced software features such as Modbus, SNMP, TR-069, NTRIP, MQTT protocol support and custom GNSS tracking protocol that is compatible with Global AVL tracking platforms.

CONNECTIVITY

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

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

RMS

Compatible with Teltonika Remote Management System

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, 1 x SMA for GPS
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)
GNSS	GPS, GLONASS, BeiDou, Galileo, QZSS
Inputs/Outputs	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)
Serial	1 x RS232, 1 x RS485
Other	1 x USB host, 1 x MicroSD
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	295 g

SOFTWARE

Operating system	RutOS (OpenWrt based Linux OS)
Mobile features	Band lock, SIM switch, Operator black/white list, Data/SMS limits
Network	Failover (Network backup), VLAN, QoS, Load Balancing
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, 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
Serial	Console, Over IP, Modem, NTRIP, Modbus

RUTX08

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.

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

9-50 V

This router supports a wide range of power supply voltage for versatile integration

PROTOCOLS

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

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
Ethernet	4 x 10/100/1000 Ethernet ports: 1 x WAN (configurable as LAN), 3 x LAN
Inputs/Outputs	On 4pin socket: 1 x Digital input, 1 x Digital open collector output
Other	1 x USB Host
Status LEDs	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 32 x 95 mm
Weight	345 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
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
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 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, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
Services	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging
Administration	Multi user, Configuration profiles, Diagnostics, logs, Configuration backup

RUTX09

INDUSTRIAL CELLULAR ROUTER

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.

4G LTE CAT 6

Cellular speeds up to 300Mbps with Carrier Aggregation

DUAL SIM

With auto failover, backup WAN and other switching scenarios

GIGABIT ETH

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

GNSS

Global Navigation Satellite System for location services and time synchronization

SECURITY

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

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
SIM	2 x External SIM holders (2FF)
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

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, 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
Services	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging
Administration	Multi user, Configuration profiles, Diagnostics, logs, Configuration backup

RUTX10

PROFESSIONAL ETHERNET ROUTER

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

PROTOCOLS

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

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 Etherner, 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, PPPoE, 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, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
Hotspot	External/Internal Radius, MAC authentication, Walled Garden
Supported Hotspot platforms	IronWiFi, HotspotSystem, Cloud4Wi, SAI + WiFi, MugiCloud, Purple.ai
Services	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging

RUTX11

INDUSTRIAL CELLULAR ROUTER

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. It is equipped with 4 x Gigabit Ethernet, Bluetooth LE, and AC Wi-Fi with remote management capabilities.

4G LTE CAT 6

Cellular 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

GNSS

Global Navigation Satellite System for location services and time synchronization

PROTOCOLS

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

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
SIM	2 x External SIM holders (2FF)
Antenna connectors	2 x SMA for mobile, 2 x RP-SMA for WiFi, 1 x RP-SMA for Bluetooth, 1 x SMA for GPS
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)
GNSS	GPS, GLONASS, BeiDou, Galileo, QZSS
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	4 x WAN type, 2 x Connection type, 5 x Signal strength, 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 44 x 95 mm
Weight	456 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	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
Cloud solutions	RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx
Hotspot	External/Internal Radius, SMS OTP, MAC authentication, Walled Garden
NTP	NTP Server, NTP Client, Sync with: External NTP server, GNSS, Mobile operator
GNSS	NMEA forwarding, AVL, Geofencing

RUTX12

DUAL LTE CAT 6 INDUSTRIAL CELLULAR ROUTER

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 loosing connection is not an option.

DUAL LTE

Cellular speeds up to 600Mbps with dual simultaneous LTE CAT 6 connections

DUAL SIM

Instant failover switching

WIFI & BT

Wave-2 802.11ac Dual Band WIFI and Bluetooth LE

GNSS

Global Navigation Satellite System for location services and time synchronization

LOAD BALANCING

Allows to use multiple WAN sources to increase throughput

RMS

Compatible with Teltonika Remote Management System

HARDWARE

Mobile	2 X 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 (2FF)
Antenna connectors	4 x SMA for mobile, 2 x RP-SMA for WiFi, 1 x RP-SMA for Bluetooth, 1 x SMA for GPS
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)
GNSS	GPS, GLONASS, BeiDou, Galileo, QZSS
Connectors	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
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	4 x WAN type, 6 x Connection type, 6 x Signal strength, 2 x WiFi, 10 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)	132 x 44 x 95 mm
Weight	540 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	Failover (Network backup), VLAN, QoS, Load Balancing
Routing	Static routes, Dynamic routes (BGP, OSPFv2, RIPv1/v2, EIGRP, NHRP), Routing rules
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, Cumulocity, ThingWorx
Hotspot	External/Internal Radius, SMS OTP, MAC authentication, Walled Garden
Supported Hotspot platforms	IronWiFi, HotspotSystem, Cloud4Wi, SAI + WiFi, MugiCloud, Purple.ai

RUTXR1

ENTERPRISE SFP/LTE RACK MOUNT READY ROUTER

Rack-mounted LTE Cat6 router with redundant power supplies and WAN interfaces (WAN failover), Dual SIM, SFP, USB and dedicated console ports. This feature-rich device with well-known and powerful RutOS is perfect where fast and ultra-reliable connection is needed.

4G LTE CAT 6

Cellular speeds up to 300Mbps with Carrier Aggregation

DUAL SIM

With auto failover, backup WAN and other switching scenarios

WIFI

Wave-2 802.11ac Dual Band WIFI

SFP

SFP port for long-range Fiber-optic communication

GIGABIT ETH

5 x Gigabit Ethernet ports

RMS

Compatible with Teltonika Remote Management System

HARDWARE

COMING SOON

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

TSW100

INDUSTRIAL UNMANAGED POE+ SWITCH

TSW100 – 5-port, unmanaged full Gigabit Ethernet switch supporting Power-over-Ethernet (802.3af and 802.3at standards). This device is classified as power source equipment (PSE), and when used in this way, TSW100 switch enables centralization of the power supply, providing up to 30 watts of power per port and reducing the effort for installing power. It has 10/100/1000 Mbps Ethernet ports to provide an economical high-bandwidth solution for your industrial Ethernet network.

POE

4 x PoE ports with 802.3af and 802.3at support

DURABLE

Rugged aluminium housing

MOUNTING

DIN rail and surface mounting options

POWER BUDGET

Total power budget at PSE up to 120 W

ETHERNET

5 x Gigabit Ethernet with speeds up to 1000 Mbps

PLUG-N-PLAY

No additional configuration needed

HARDWARE

Powering option	4pin power socket, 7-58 VDC
Power consumption	Idle: < 2 W, Max: < 9 W (no PoE device connected)
PoE standart	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

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

*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

RMS

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.

REMOTE ACCESS

Have remote access to other equipment, including devices that aren't manufactured by Teltonika

ALERT

Use real-time email alerts in order to stay informed on what's happening to your devices

SECURITY

RMS complies with CIS v7 infrastructure security certificate and has been awarded OWASP level 2 security certificate

UPDATES

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

REPORTS

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

HOTSPOT

Maintain complete awareness of your WiFi network by being able to add or delete users and monitor data usage

MAIN FEATURES

Unfied 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
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
Hotspot tracking service	Manage and track the activity of your WiFi Hotspot
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 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, RUT900, RUT950, RUT955, RUTX08, RUTX09, RUTX10, RUTX11, RUTX12, RUTXR1, TRB140, TRB141, TRB142, TRB145, TRB245, TRB255
Security	OWASP II, Cis v7
Creatable alerts	Signal strength, SIM switch, device status change (online/offline), mobile data (connected/disconnected), GPS geofencing
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, troubleshoot 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 state, mobile 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 OC output, digital relay output

RUTOS

Operating System for Networking products

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, 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
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 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
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, MugiCloud, 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	DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Network shares (Samba), Traffic Logging
Administration	Multi user, configuration profiles, diagnostics, logs, configuration backup
Supported languages	Busybox shell, Lua, C, C++
Development tools	SDK package with build environment provided

* Available RUTOS WebUI functionality depends on device's hardware capabilities

NETWORKING PRODUCTS COMPARISON

Products key features	TMR240	TMR250	TRB140	TRB141	TRB142	TRB145	TRB245	TRB255	RUT230	RUT240	RUT850	RUT900	RUT950	RUT955	RUTX08	RUTX09	RUTX10	RUTX11	RUTX12	RUTXR1
4G/LTE category	Cat1	M1/NB	Cat4	Cat1	Cat1	Cat1	Cat4	M1/NB		Cat4	Cat4		Cat4	Cat4		Cat6		Cat6	2xCat6	Cat6
3G	•		•	•	•	•	•		•	•	•	•	•	•		•		•	•	•
2G	•	•	•	•	•	•	•	•	•	•	•	•	•	•						
CPU (MHz)			1200	1200	1200	1200	650	650	400	400	550	550	550	550	4x717	4x717	4x717	4x717	4x717	4x717
RAM (MB)			128	128	128	128	64	64	64	64	64	128	128	128	256	256	256	256	256	256
Flash memory (MB)			512	512	512	512	16	16	16	16	16	16	16	16	256	256	256	256	256	256
Passive PoE									•	•		•	•	•	•	•	•	•	•	
Power voltage (VDC)	5	5	9-30	9-30	9-30	9-30	9-30	9-30	9-30	9-30	9-30	9-30	9-30	9-30	9-50	9-50	9-50	9-50	9-50	2x(9-50)
SIM card slots	1	1	1	1	1	1	2	2	1	1	1	2	2	2		2		2	2	2
Ethernet ports			1				1	1	2	2		4	4	4	4	4	4	4	5	5
Ethernet speed (Mbps)			1000				100	100	100	100		100	100	100	1000	1000	1000	1000	1000	1000
WiFi standard									n	n	n	n	n	n			ac	ac	ac	ac
GNSS							•	•			•			•				•	•	
Inputs/Outputs			2	8	2	2	4	4	2	2	2	2	2	6	2	2	2	2	2	
RS232					•		•	•						•						
RS485						•	•	•						•						
Bluetooth																	•	•	•	
USB	Slave	Slave	Slave	Slave	Slave	Slave								Host	Host	Host	Host	Host	Host	Host
DIN Rail mounting	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	
Rack mounting																				•
Flat surface mounting	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Grounding terminal															•	•	•	•	•	•
Sleep mode	•	•									•									
RMS support			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
RutOS			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

ACCESSORIES / POWERING OPTIONS

EU power supply, 4.5 W
Order code: 035R-00163

UK power supply, 4.5 W
Order code: 035R-00161

AU power supply, 4.5 W
Order code: 035R-00160

US power supply, 4.5 W
Order code: 035R-00162

EU power supply, 9 W
Order code: 035R-00143

UK power supply, 9 W
Order code: 035R-00148

AU power supply, 9 W
Order code: 035R-00152

US power supply, 9 W
Order code: 035R-00149

EU power supply, 18 W
Order code: 035R-00150

UK power supply, 18 W
Order code: 035R-00151

AU power supply, 18 W
Order code: 035R-00153

US power supply, 18 W
Order code: 035R-00154

Automotive power supply, 4 pin
Order code: 058R-00249

4 pin power cable with 4-way screw terminal
Order code: 058R-00229

DIN Rail power supply
Order code: 035R-00156

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

Mobile SMA antenna
Order code: 003R-00225

WiFi magnetic SMA antenna
Order code: 003R-00230

WiFi SMA antenna
Order code: 003R-00224

Bluetooth magnetic SMA antenna
Order code: 003R-00256

GNSS Adhesive SMA antenna
Order code: 003R-00250

GNSS Adhesive fakra antenna
Order code: 003R-00235

Mobile adhesive fakra antenna
Order code: 003R-00177

Mobile adhesive sma antenna
Order code: 003R-00263

WiFi dual-band SMA antenna
Order code: 003R-00249

WiFi dual-band magnetic antenna
Order code: 003R-00247

Angled Compact Mobile antenna
Order code: 003R-00296

Straight Compact Mobile antenna
Order code: 003R-00281

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: PRIEDAS4B5

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, RUTX11, RUTX12 devices.

ACCESSORIES COMPATIBILITY

	TRB140	TRB141	TRB142	TRB145	TRB245	TRB255	RUT230	RUT240	RUT850	RUT900	RUT950	RUT955	RUTX08	RUTX09	RUTX10	RUTX11	RUTX12	RUTXR1
EU POWER SUPPLY, 4.5W Order code: 035R-00163	•	•	•	•														
UK POWER SUPPLY, 4.5W Order code: 035R-00161	•	•	•	•														
AU POWER SUPPLY, 4.5W Order code: 035R-00160	•	•	•	•														
US POWER SUPPLY, 4.5W Order code: 035R-00162	•	•	•	•														
EU POWER SUPPLY, 9W Order code: 035R-00143							•	•	•	•	•	•						
UK POWER SUPPLY, 9W Order code: 035R-00148							•	•	•	•	•	•						
AU POWER SUPPLY, 9W Order code: 035R-00152							•	•	•	•	•	•						
US power supply, 9 W Order code: 035R-00149							•	•	•	•	•	•						
EU POWER SUPPLY, 18W Order code: 035R-00150 V													•	•	•	•	•	•
UK POWER SUPPLY, 18W Order code: 035R-00151													•	•	•	•	•	•
AU POWER SUPPLY, 18W Order code: 035R-00153													•	•	•	•	•	•
US POWER SUPPLY, 18W Order code: 035R-00154													•	•	•	•	•	•
POWER CABLE WITH 4-WAY SCREW TERMINAL Order code: 058R-00229	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•
AUTOMOTIVE POWER SUPPLY Order code: 058R-00249	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•
DIN RAIL POWER SUPPLY Order code: 035R-00156	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
COMBO MIMO MOBILE/GNSS/WIFI ROOF SMA ANTENNA Order code: 003R-00253							•	•		•	•	•			•	•	•	•
COMBO MIMO MOBILE ROOF SMA ANTENNA Order code: 003R-00252	•	•	•	•	•	•	•	•		•	•	•		•		•	•	•

	TRB140	TRB141	TRB142	TRB145	TRB245	TRB255	RUT230	RUT240	RUT850	RUT900	RUT950	RUT955	RUTX08	RUTX09	RUTX10	RUTX11	RUTX12	RUTXR1
COMBO SISO MOBILE/GNSS/WIFI ROOF SMA ANTENNA Order code: 003R-00254							•	•		•	•	•						
GNSS ADHESIVE SMA ANTENNA Order code: 003R-00250					•	•						•		•		•	•	
GNSS ADHESIVE FAKRA ANTENNA Order code: 003R-00235									•									
MOBILE ADHESIVE SMA ANTENNA Order code: 003R-00263	•	•	•	•	•	•	•	•		•	•	•		•		•	•	•
MOBILE ADHESIVE FAKRA ANTENNA Order code: 003R-00177									•									
MOBILE MAGNETIC SMA ANTENNA Order code: 003R-00229	•	•	•	•	•	•	•	•		•	•	•		•		•	•	•
MOBILE SMA ANTENNA Order code: 003R-00225	•	•	•	•	•	•	•	•		•	•	•		•		•	•	•
WIFI MAGNETIC SMA ANTENNA Order code: 003R-00230							•	•		•	•	•						
WIFI SMA ANTENNA Order code: 003R-00224							•	•		•	•	•						
WIFI DUAL BAND MAGNETIC SMA ANTENNA Order code: 003R-00247															•	•	•	•
WIFI DUAL BAND SMA ANTENNA Order code: 003R-00249															•	•	•	•
BLUETOOTH SMA ANTENNA Order code: 003R-00256															•	•	•	
COMPACT MOBILE ANTENNA Order code: 003R-00279	•	•	•	•	•	•	•	•		•	•	•		•		•	•	•
STRAIGHT COMPACT MOBILE ANTENNA Order code: 003R-00281	•	•	•	•	•	•	•	•		•	•	•		•		•	•	
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	•	•	•	•														

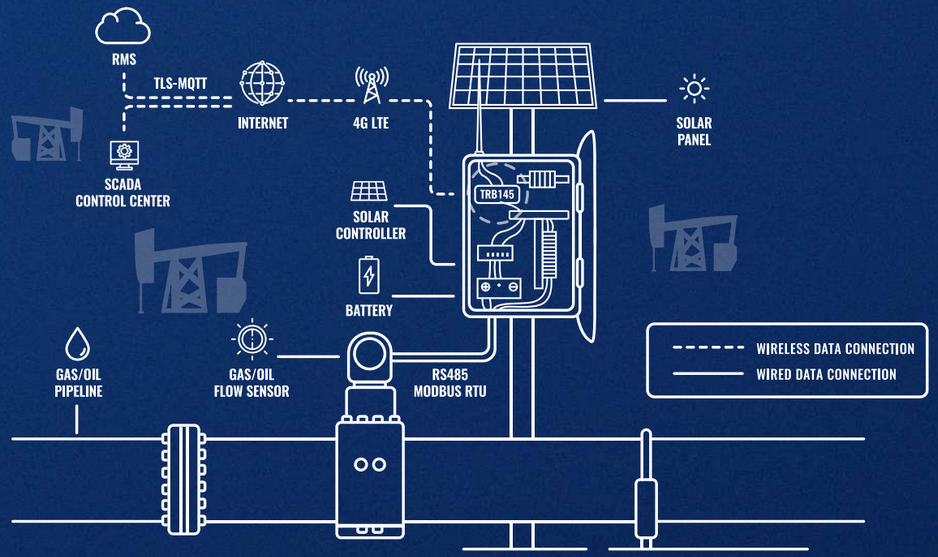
OIL & GAS PIPELINE MONITORING

ENERGY & UTILITIES

Our lives depend on energy and while many countries are working towards more sustainable future with development focused on renewable energy sources, oil & gas remain the most popular sources of energy today. Combined, oil & gas account to 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 Cat1 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



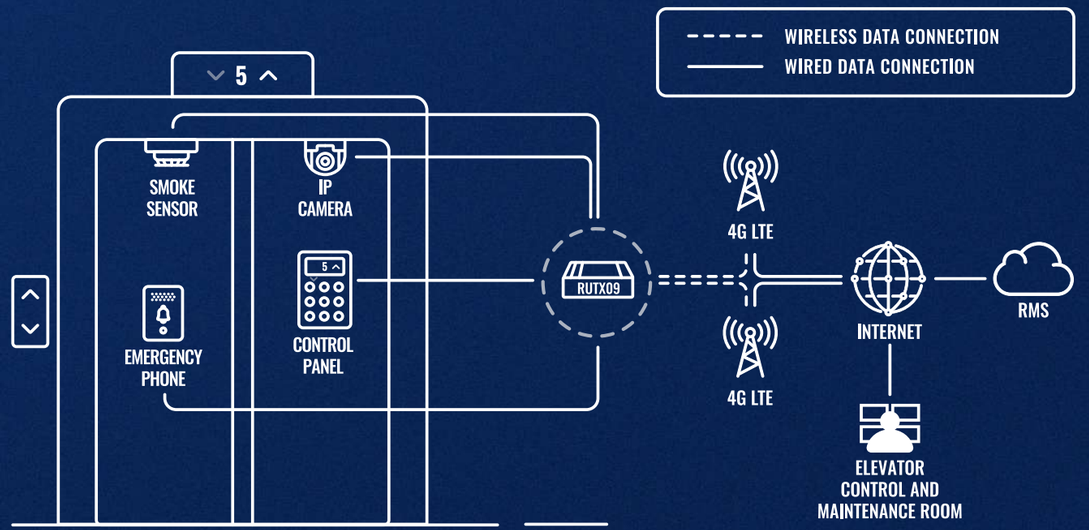
ELEVATOR CONNECTIVITY

SMART CITY

Today, we see massive growth in urban development. New shopping malls, skyscrapers, hospitals, offices are built all over the world. All these buildings have many things in common, but the most important one is an elevator. According to Statista, the elevator market size in 2018 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 optimize 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 VPN's, 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.



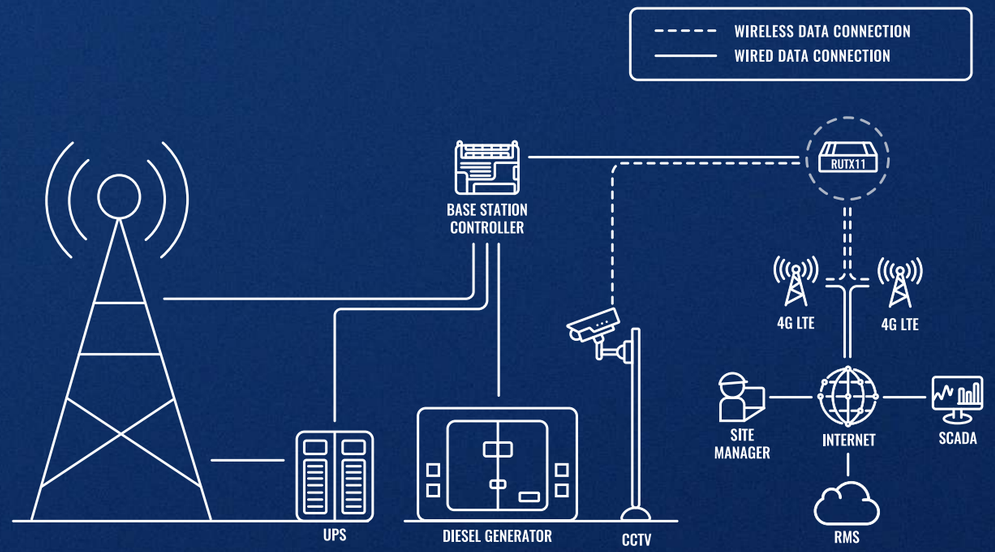
REMOTE TOWER SITE MANAGEMENT

ENERGY&UTILITIES

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 site 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.

BENEFITS
/Reliability – our RUTX11 has two SIM card slots, meaning that you can use two different operators for the best internet connection reliability.
/Wireless interfaces – RUTX11 has 2.4 & 5 GHz Wi-Fi included, which enables integrators to provide internet to various devices without additional cabling.
/Remote control – our product can act as a gateway between the controller and software system for control and management.
/Remote configuration – having thousands of sites can be a nightmare; however, with RMS, it is possible to configure all Teltonika routers remotely at once!



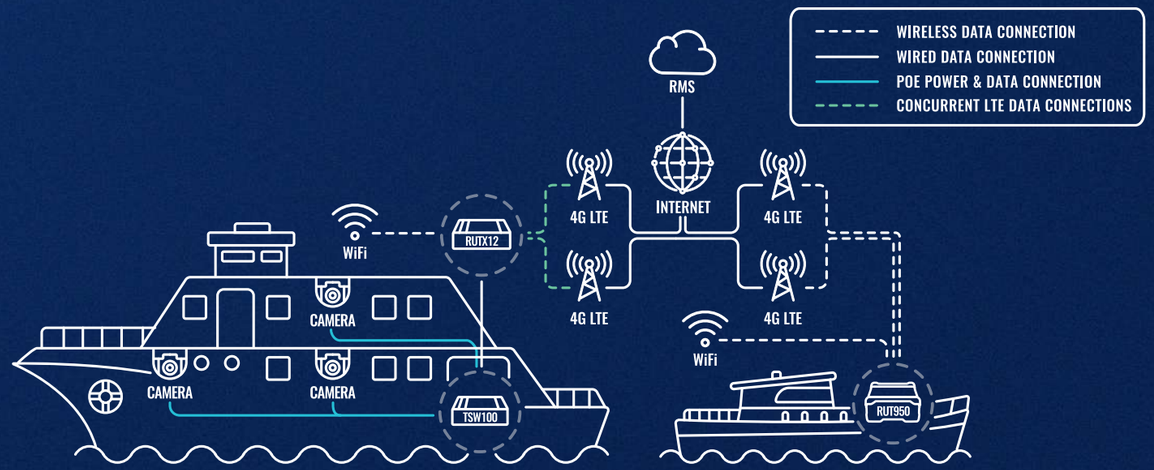
BOAT AND YACHT CONNECTIVITY

TRANSPORTATION

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 48-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 an estimated 6 million boats kept in European waters.

SOLUTION
As we can see in the topology, there are possibilities to use different products form 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 ensure that you are always connected to your property remotely, 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

ENTERPRISE

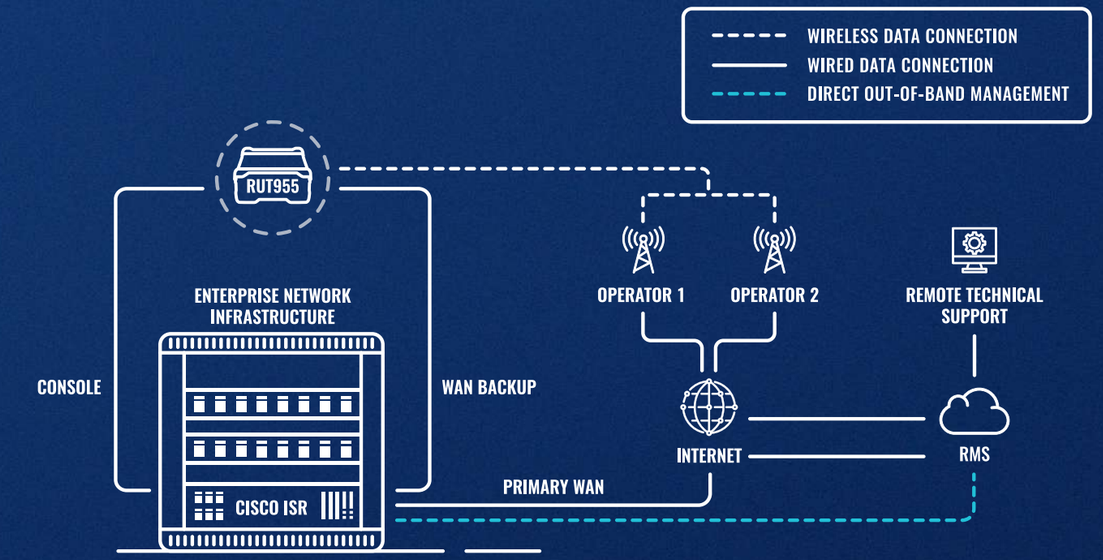
Out-of-band management has long been used to access a remote site or device, as a way to monitor, restore service or determine an issue affecting service. In the past, the most popular method of out-of-band access was the PSTN (Public Switched Telephone Network), via analog POTS lines (Plain Old Telephone 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

RETAIL

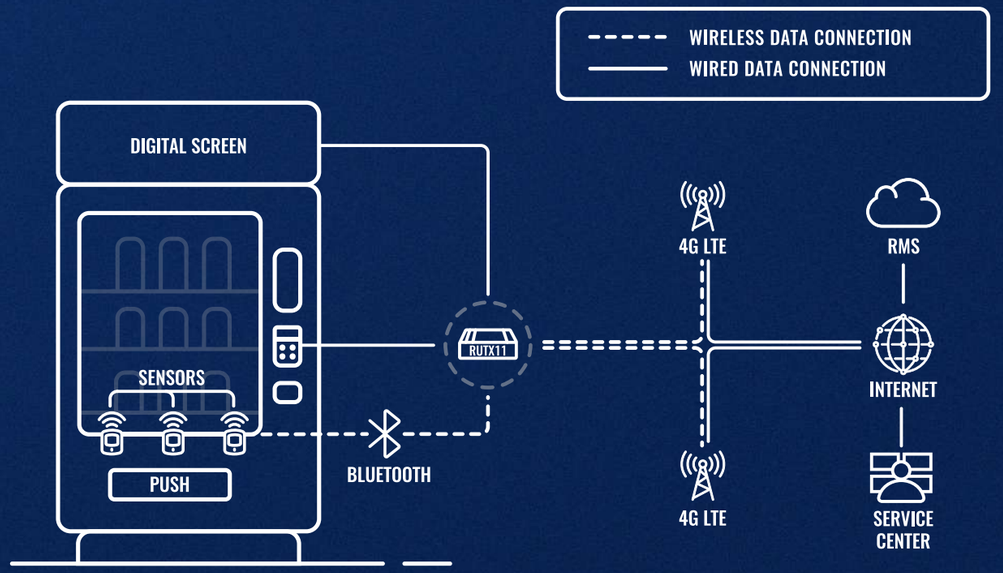
The worldwide vending machine market is valued more than 5.8 billion USD and will grow to nearly 7 billion USD in 2024, according to the MarketWatch. The habits of the people are changing. Due to the faster pace of life, everybody is trying to save as much time as possible. This leads to a shift in buyer behaviour; more and more customers buy drinks, food, and other products from vending machines since 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 and integrators can connect all parts of the vending solution to a single device and have internet backup because RUTX11 is equipped with 4G 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/

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