

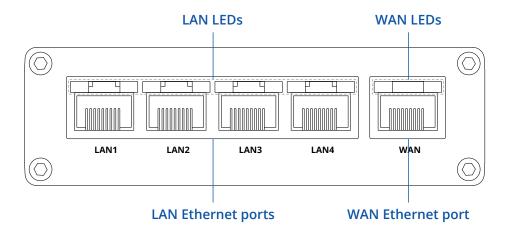
RUT301



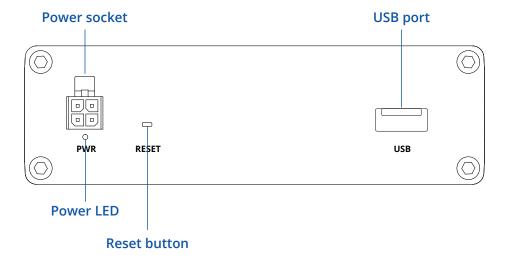


HARDWARE

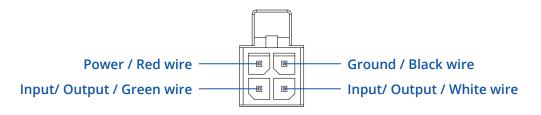
FRONT VIEW



BACK VIEW



POWER SOCKET PINOUT



I/O (PIN 3 and 4): Configurable digital Input/Output pins. Open collector output, max output 30 V, 300 mA or Digital input where 0-6 V detected as logic low and 8-30 V – logic high



FEATURES

WAN	1 x WAN port 10/100 Mbps, compliance IEEE 802.3, IEEE 802.3u, 802.3az standards, supports auto MDI/MDIX	
LAN	4 x LAN ports, 10/100 Mbps, compliance with IEEE 802.3, IEEE 802.3u, 802.3az standards, supports auto MDI/MDIX crossover	
NETWORK		
Routing	Static routing, Dynamic routing (BGP, OSPF v2, RIP v1/v2, EIGRP, NHRP), Policy based routing	
Network protocols	TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSL v3, TLS, ARP, VRRP, PPP, PPPoE, UPNP, SSH, DHCP, Telner SMPP, SNMP, MQTT, Wake On Lan (WOL)	
VoIP passthrough support	H.323 and SIP-alg protocol NAT helpers, allowing proper routing of VoIP packets	
Connection monitoring	Ping Reboot, Wget Reboot, Periodic Reboot, LCP and ICMP for link inspection	
Firewall	Port forward, traffic rules, custom rules	
Firewall status page	View all your Firewall statistics, rules, and rule counters	
Ports management	View device ports, enable and disable each of them, turn auto-configuration on or off, change their transmission speed, and so	
Network topology	Visual representation of your network, showing which devices are connected to which other devices	
DHCP	Static and dynamic IP allocation, DHCP relay, DHCP server configuration, status, static leases: MAC with wildcards	
QoS / Smart Queue Management (SQM)	Traffic priority queuing by source/destination, service, protocol or port, WMM, 802.11e	
DDNS	Supported >25 service providers, others can be configured manually	
Network backup	VRRP, Wired options, each of which can be used as an automatic Failover	
Load balancing	Balance Internet traffic over multiple WAN connections	
Hotspot	Captive portal (hotspot), internal/external Radius server, Radius MAC authentication, SMS authorisation, internal/external landing page, walled garden, user scripts, URL parameters, user groups, individual user or group limitations, user management, 9 default customisable themes and optionality to upload and download customised hotspot themes	
SSHFS	Possibility to mount remote file system via SSH protocol	
SECURITY		
Authentication	Pre-shared key, digital certificates, X.509 certificates, TACACS+, Radius, IP & login attempts block, time-based login blocking, built-in random password generator	
Firewall	Pre-configured firewall rules can be enabled via WebUI, unlimited firewall configuration via CLI; DMZ; NAT; NAT-T	
Attack prevention	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)	
VLAN	Port and tag-based VLAN separation	
WEB filter	Blacklist for blocking out unwanted websites, Whitelist for specifying allowed sites only	
Access control	Flexible access control of SSH, Web interface, CLI and Telnet	
VPN		
OpenVPN	Multiple clients and a server can run simultaneously, 27 encryption methods	
OpenVPN Encryption	DES-CBC 64, RC2-CBC 128, DES-EDE-CBC 128, DES-EDE3-CBC 192, DESX-CBC 192, BF-CBC 128, RC2-40-CBC 40, CAST5-CBC 128, RC2-64-CBC 64, AES-128-CBC 128, AES-128-CFB 128, AES-128-CFB1 128, AES-128-CFB1 128, AES-128-CFB3 128, AES-128-C	
IPsec	IKEv1, IKEv2, with 14 encryption methods for IPsec (3DES, DES, AES128, AES192, AES256, AES128GCM8, AES192GCM8, AES256GCM8, AES128GCM12, AES256GCM12, AES256GCM16, AES192GCM16, AES256GCM16)	
GRE	GRE tunnel, GRE tunnel over IPsec support	
PPTP, L2TP	Client/Server instances can run simultaneously, L2TPv3, L2TP over IPsec support	
Stunnel	Proxy designed to add TLS encryption functionality to existing clients and servers without any changes in the program's code	
DMVPN	Method of building scalable IPsec VPNs	
SSTP	SSTP client instance support	
ZeroTier	ZeroTier VPN client support	
WireGuard	WireGuard VPN client and server support	
Tinc	Tinc offers encryption, authentication and compression in it's tunnels. Client and server support	
Tailscale	Tailscale offers speed, stability, and simplicity over traditional VPNs. Encrypted point-to-point connections using the open source WireGuard protocol	



OPC UA		
Supported modes	Client, Server	
Supported connection types	TCP	
MODBUS		
Supported modes	Server, Client	
Supported connection types	TCP, USB	
Custom registers	MODBUS TCP custom register block requests, which read/write to a file inside the router, and can be used to extend MODBUTCP Client functionality	
Supported data formats	8-bit: INT, UINT; 16-bit: INT, UINT (MSB or LSB first); 32-bit: float, INT, UINT (ABCD (big-endian), DCBA (little-endian), CDAB, BADC), HEX, ASCII	
DATA TO SERVER		
Protocol	HTTP(S), MQTT, Azure MQTT	
Data to server	Extract parameters from multiple sources and different protocols, and send them all to a single server	
MODBUS MQTT GATEWAY		
Modbus MQTT Gateway	Allows sending commands and receiving data from MODBUS Server through MQTT broker	
DNP3		
Supported modes	Station, Outstation	
Supported connection	TCP, USB	
DLMS		
DLMS Support	DLMS - standard protocol for utility meter data exchange	
Supported modes	Client	
Supported connection types	TCP, USB	
API		
Teltonika Networks Web API (beta) support	Expand your device's possibilities by using a set of configurable API endpoints to retrieve or change data. For more information, please refer to this documentation: https://developers.teltonika-networks.com	
MONITORING & MANAGEM	ENT	
WEB UI	HTTP/HTTPS, status, configuration, FW update, CLI, troubleshoot, multiple event log servers, firmware update availability notifications, event log, system log, kernel log, Internet status	
FOTA	Firmware update from server, automatic notification	
SSH	SSH (v1, v2)	
TR-069	OpenACS, EasyCwmp, ACSLite, tGem, LibreACS, GenieACS, FreeACS, LibCWMP, Friendly tech, AVSystem	
MQTT	MQTT Broker, MQTT publisher	
SNMP	SNMP (v1, v2, v3), SNMP Trap	
JSON-RPC	Management API over HTTP/HTTPS	
RMS	Teltonika Remote Management System (RMS)	
IOT PLATFORMS		
Cloud of Things	Allows monitoring of: Device data, Mobile data, Network info, Availability	
Cumulocity	Allows monitoring of: Device Model, Revision and Serial Number, WAN Type and IP	
Azure IoT Hub	Allows monitoring of: Wan IP, Number of bytes send/received, Model, Manufacturer, Serial, Revision, FW version and collected data of industrial devices	
SYSTEM CHARACTERISTICS		
CPU	Mediatek, 580 MHz, MIPS 24KEc	
RAM	128 MB, DDR2	
FLASH storage	16 MB serial NOR flash	
FIRMWARE / CONFIGURATION	DN	
WEB UI	Update FW from file, check FW on server, configuration profiles, configuration backup	
FOTA	Update FW	
RMS	Update FW/configuration for multiple devices at once	
Keep settings	Update FW without losing current configuration	
	A full factory reset restores all system settings, including the IP address, PIN, and user data to the default manufacturer's	
Keep settings	configuration	



FIRMWARE CUSTOMISATION

Operating system	RutOS (OpenWrt based Linux OS)
Supported languages	Busybox shell, Lua, C, C++
Development tools	SDK package with build environment provided
GPL customization	You can create your own custom, branded firmware and web page application by changing colours, logos, and other elements in our firmware to fit your or your clients' needs
USB	
Data rate	USB 2.0
Applications	Samba share, USB-to-serial
External devices	Possibility to connect external HDD, flash drive, additional modem, printer, USB-serial adapter
Storage formats	FAT, FAT32, exFAT, NTFS (read-only), ext2, ext3, ext4
INPUT / OUTPUT	
Input	2 x Digital Input, 0 - 6 V detected as logic low, 8 - 30 V detected as logic high
Output	2 x Digital Output, Open collector output, max output 40 V, 400 mA
Events	Email, RMS
I/O juggler	Allows to set certain I/O conditions to initiate event
POWER	
Connector	4-pin industrial DC power socket
Input voltage range	9 - 30 VDC, reverse polarity protection, voltage surge/transient protection
PoE (passive)	Passive PoE can be installed upon request
Power consumption	Idle: < 0.8 W, Max: < 3.8 W
PHYSICAL INTERFACES	
Ethernet	5 x RJ45 ports, 10/100 Mbps
I/O's	2 x Digital Input, 2 x Digital Output on 4-pin power connector
Status LEDs	1 x WAN type LED, 4 x LAN status LEDs, 1 x Power LED
Power	1 x 4-pin power connector
USB	1 x USB A port for external devices
Reset	Reboot/User default reset/Factory reset button
PHYSICAL SPECIFICATION	
Casing material	Aluminium housing
Dimensions (W x H x D)	100 x 30 x 85 mm
Weight	233 g
Mounting options	DIN rail, wall mount, flat surface (all require additional kit)
OPERATING ENVIRONMENT	
Operating temperature	-40 °C to 75 °C
Operating humidity	10% to 90% non-condensing
Ingress Protection Rating	IP30



STANDARD PACKAGE*

- Router RUT301
- 9 W PSU
- Ethernet cable (1.5 m)
- QSG (Quick Start Guide)
- Packaging box



ROUTER RUT301



9 W PSU



ETHERNET CABLE (1.5 M)



QSG

CLASSIFICATION CODES

HS Code: 851762 HTS: 8517.62.00

For more information on all available packaging options – please contact us directly.

AVAILABLE VERSIONS

HARDWARE VERSION

SUPPORTED FREQUENCIES

STANDARD ORDER CODE / PACKAGE CONTAINS

RUT301 *****

N/A

RUT301000000 / Standard package with EU PSU RUT301000500 / Standard package with AU PSU RUT301000600 / Standard package with Universal PSU

 $[\]mbox{\ensuremath{\star}}$ Standard package contents may differ based on standard order codes.



RUT301 SPATIAL MEASUREMENTS

MAIN MEASUREMENTS

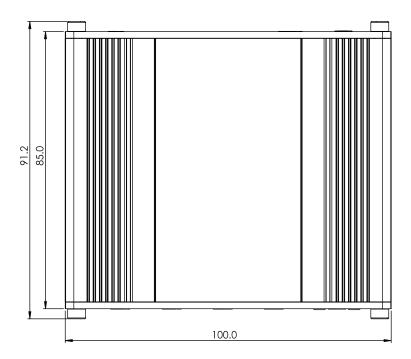
W x H x D dimensions for RUT301:

Device housing*: 100 x 30 x 85 mm Box: 173 x 71 x 148 mm

*Housing measurements are presented without screws; for measurements of other device elements look to the sections below.

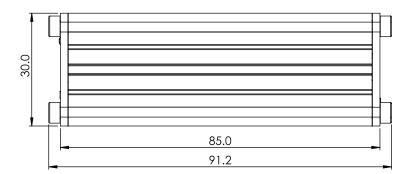
TOP VIEW

The figure below depicts the measurements of RUT301 and its components as seen from the top:



RIGHT VIEW

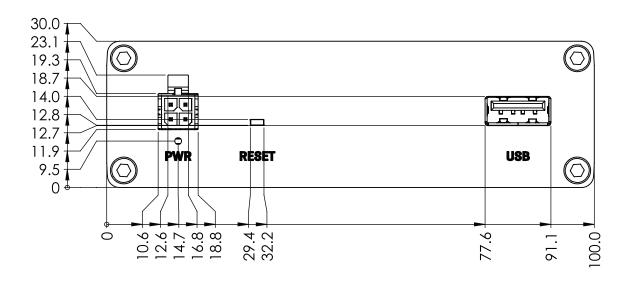
The figure below depicts the measurements of RUT301 and its components as seen from the right side: $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{1}$





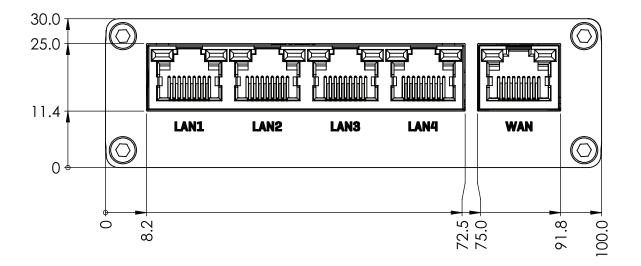
FRONT VIEW

The figure below depicts the measurements of RUT301 and its components as seen from the front panel side:



REAR VIEW

The figure below depicts the measurements of RUT301 and its components as seen from the back panel side: $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left($





MOUNTING SPACE REQUIREMENTS

 $The figure \ below \ depicts \ an \ approximation \ of the \ device's \ dimensions \ when \ cables \ and \ antennas \ are \ attached:$

