

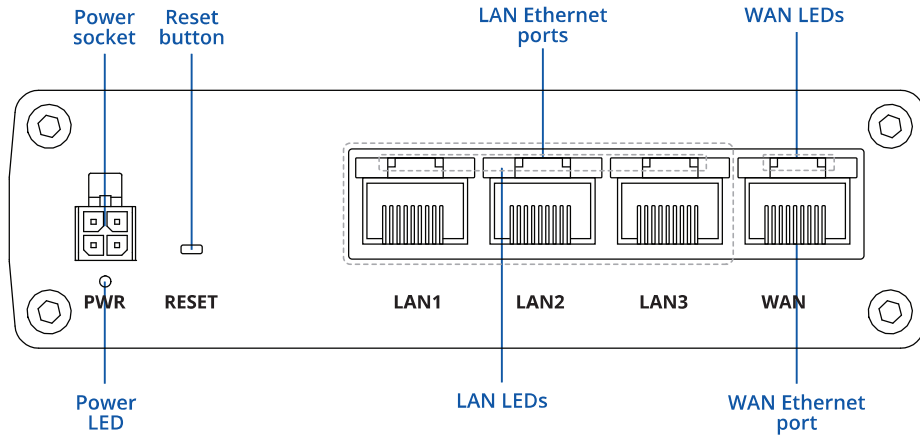


RUTX08

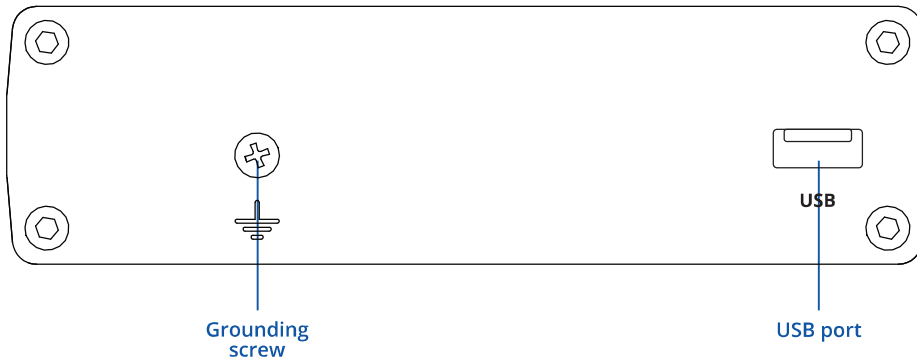


HARDWARE

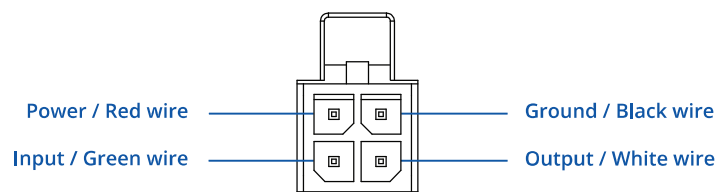
FRONT VIEW



BACK VIEW



POWER SOCKET PINOUT



FEATURES

ETHERNET

| | |
|-----|--|
| WAN | 1 x WAN port (can be configured as LAN) 10/100/1000 Mbps, compliance with IEEE 802.3, IEEE 802.3u, 802.3az standards, supports auto MDI/MDIX crossover |
| LAN | 3 x LAN ports, 10/100/1000 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) |
| Network protocols | TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSL v3, TLS, ARP, VRRP, PPP, PPPoE, UPNP, SSH, DHCP, Telnet, SNMP, MQTT, Wake on LAN (WOL), DLNA |
| 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 forwards, traffic rules, custom rules |
| DHCP | Static and dynamic IP allocation, DHCP Relay, Relayd |
| QoS / Smart Queue Management (SQM) | Traffic priority queuing by source/destination, service, protocol or port |
| DDNS | Supported >25 service providers, others can be configured manually |
| Network backup | VRRP |
| Hotspot | Internal/external Radius server, captive portal, built in customizable landing page |
| SSHFS | Possibility to mount remote file system via SSH protocol |

SECURITY

| | |
|-------------------|---|
| Authentication | Pre-shared key, digital certificates, X.509 certificates |
| 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 TCP, UDP, ICMP packets, MAC address filter |

VPN

| | |
|--------------------|---|
| OpenVPN | Multiple clients and a server can run simultaneously, 12 encryption methods |
| OpenVPN Encryption | DES-CBC, RC2-CBC, DES-EDE-CBC, DES-EDE3-CBC, DESX-CBC, BF-CBC, RC2-40-CBC, CAST5-CBC, RC2-64-CBC, AES-128-CBC, AES-192-CBC, AES-256-CBC |
| IPsec | IKEv1, IKEv2, with 5 encryption methods for IPsec (DES, 3DES, AES128, AES192, AES256) |
| GRE | GRE tunnel |
| PPTP, L2TP | Client/Server instances can run simultaneously, L2TPv3 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 |

MODBUS TCP SLAVE

| | |
|---------------------|--|
| ID filtering | Respond to one ID in range [1;255] or any |
| Allow remote access | Allow access through WAN |
| Custom registers | Modbus TCP custom register block, which allows to read/write to a file inside the router, and can be used to extend Modbus TCP slave functionality |

MODBUS TCP MASTER

| | |
|------------------------|--|
| Supported functions | 01, 02, 03, 04, 05, 06, 15, 16 |
| 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 |

MQTT GATEWAY

| | |
|---------|---|
| Gateway | Allows sending commands and receiving data from Modbus Master through MQTT broker |
|---------|---|

DATA TO SERVER

| | |
|-----------|------------------------------------|
| Protocols | HTTP(S), MQTT, Azure MQTT, Kinesis |
|-----------|------------------------------------|

MONITORING & MANAGEMENT

| | |
|----------|--|
| WEB UI | HTTP/HTTPS, status, configuration, FW update, CLI, troubleshoot, event log, system log, kernel log |
| 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 |
| MODBUS | MODBUS TCP status/control |
| RMS | Teltonika Remote Management System (RMS) |

SYSTEM CHARACTERISTICS

| | |
|---------------|----------------------------------|
| CPU | Quad-core ARM Cortex A7, 717 MHz |
| RAM | 256 MB, DDR3 |
| FLASH storage | 256 MB, SPI Flash |

FIRMWARE / CONFIGURATION

| | |
|---------------|---|
| WEB UI | Update FW from file, check FW on server, configuration profiles, configuration backup |
| FOTA | Update FW/configuration from server |
| RMS | Update FW/configuration for multiple devices at once |
| Keep settings | Update FW without losing current configuration |

FIRMWARE CUSTOMIZATION

| | |
|---------------------|---|
| Operating system | RutOS (OpenWrt based Linux OS) |
| Supported languages | Busybox shell, Lua, C, C++ |
| Development tools | SDK package with build environment provided |

USB

| | |
|------------------|---|
| Data rate | USB 2.0 |
| Applications | Samba share, USB-to-serial |
| External devices | Possibility to connect external HDD, flash drive, additional modem, printer |
| External devices | FAT, FAT32, NTFS |

INPUT/OUTPUT

| | |
|-------------|---|
| Input | 1 x Digital Input, 0 - 6 V detected as logic low, 8 - 30 V detected as logic high |
| Output | 1 x Digital Output, Open collector output, max output 30 V, 300 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 - 50 VDC, reverse polarity protection, voltage surge/transient protection |
| PoE (passive) | Passive PoE. Possibility to power up through LAN port, not compatible with IEEE 802.3af, 802.3at and 802.3bt standards |
| Power consumption | 6 W Max |

PHYSICAL INTERFACES (PORTS, LEDES, BUTTONS)

| | |
|-------------|--|
| Ethernet | 4 x RJ45 ports, 10/100/1000 Mbps |
| I/Os | 1 x Digital Input, 1 x Digital Output on 4 pin power connector |
| Status LEDs | 8 x LAN status LEDs, 1 x Power LED |
| Power | 1 x 4 pin DC connector |
| USB | 1 x USB A port for external devices |
| Reset | Reboot/User default reset/Factory reset button |
| Other | 1 x Grounding screw |

PHYSICAL SPECIFICATION

| | |
|------------------------|---|
| Casing material | Aluminium housing with DIN tail mounting option |
| Dimensions (W x H x D) | 115 x 32.2 x 95.2 mm |
| Weight | 345 g |
| Mounting options | DIN rail, flat surface placement |

OPERATING ENVIRONMENT

| | |
|---------------------------|-----------------------------|
| Operating temperature | -40 C to 75 C |
| Operating humidity | 10 % to 90 % non-condensing |
| Ingress Protection Rating | IP30 |

REGULATORY & TYPE APPROVALS

| | |
|-----------------------------|-----------------|
| Regulatory & Type Approvals | CE, RoHS, REACH |
|-----------------------------|-----------------|

EMI IMMUNITY

| | |
|------------------|-----------------------------------|
| Standards | EN 55032:2015, EN 55035:2017 |
| ESD | EN 61000-4-2:2009 |
| RS | EN 61000-4-3:2006+A1:2008+A2:2010 |
| EFT | EN 61000-4-4:2012 |
| Surge protection | EN 61000-4-5:2014 |
| CS | EN 61000-4-6:2014 |
| DIP | EN 61000-4-11:2004 |

SAFETY

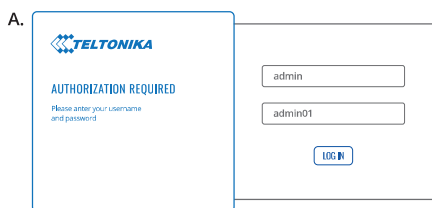
| | |
|-----------|---|
| Standards | IEC 62368-1:2014 EN 62368-1:2014+A11:2017 |
|-----------|---|

HARDWARE INSTALLATION

1. Connect the power adapter to the socket on the front of the device. Then plug the other end of the power adapter into a power outlet.
2. Connect to the device via an Ethernet cable connected to LAN port.

LOGIN TO DEVICE

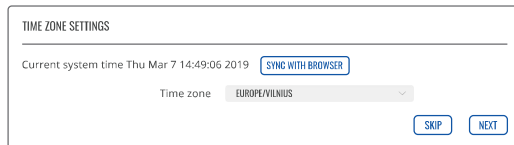
1. To enter the router's Web interface (WebUI), type <http://192.168.1.1> into the URL field of your Internet browser.
2. Use login information shown in image A when prompted for authentication.
3. After you log in, you will be prompted to change your password for security reasons. The new password must contain at least 8 characters, including at least one uppercase letter, one lowercase letter, and one digit. This step is mandatory, and you will not be able to interact with the router's WebUI before you change the password.
4. When you change the router's password, the **Configuration Wizard** will start. The **Configuration Wizard** is a tool used to set up some of the router's main operating parameters.



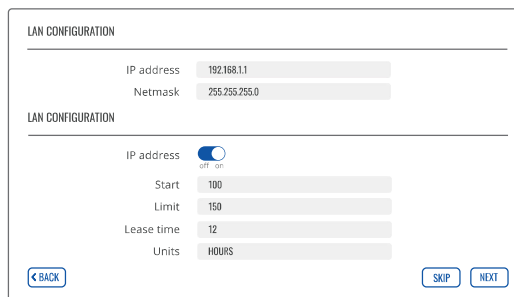
TECHNICAL INFORMATION

After logging in to the router's WebUI, you will be prompted to change the default password and the Setup Wizard will start:

1. Choose your time zone and sync the router's time with the browser if needed.



2. Default LAN settings are recommended unless you have specific requirements for your LAN network.



TECHNICAL INFORMATION

| Bundled accessories specifications* | |
|-------------------------------------|---|
| Power adapter | Input: 0.6A@100-240VAC, Output: 12VDC, 1.5A, 4-pin plug |

*Order code dependent.

WHAT'S IN THE BOX?

STANDARD PACKAGE CONTAINS*

- Router RUTX08
- 18 W PSU
- Ethernet cable (1.5 m)
- QSG (Quick Start Guide)
- RMS Flyer
- Packaging box



* For all standard order codes standard package contents are the same, except for PSU.

STANDARD ORDER CODES

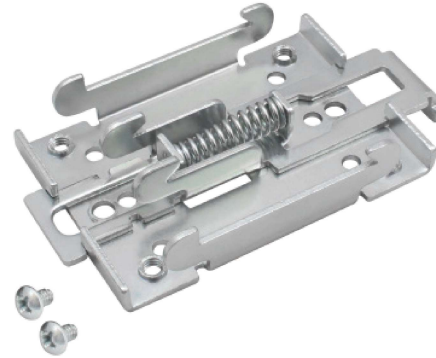
| PRODUCT CODE | HS CODE | HTS CODE | PACKAGE CONTAINS |
|--------------|---------|------------|------------------|
| RUTX08000000 | 851762 | 8517.62.00 | Standard package |

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

MOUNTING OPTIONS

DIN RAIL KIT

| Parameter | Value |
|-------------------|---|
| Mounting standard | 35mm DIN Rail |
| Material | Low carbon steel |
| Weight | 57g |
| Screws included | Philips Pan Head screw #6-32x3/16, 2pcs |
| Dimensions | 82 mm x 46 mm x 20 mm |
| RoHS Compliant | V |



DIN RAIL KIT

- DIN Rail adapter
- Philips Pan Head screw #6-32x3/16, 2pcs for RUT2xx/RUT9xx

ORDER CODE

PR5MEC00

HS CODE

73269098

HTS CODE

7326.90.98

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

COMPACT DIN RAIL KIT

| Parameter | Value |
|-------------------|---|
| Mounting standard | 35mm DIN Rail |
| Material | ABS + PC plastic |
| Weight | 6.5 g |
| Screws included | Philips Pan Head screw #6-32x3/16, 2pcs |
| Dimensions | 70 mm x 25 mm x 14,5 mm |
| RoHS Compliant | V |



DIN RAIL KIT

- Compact plastic DIN Rail adapter (70x25x14,5mm)
- Philips Pan Head screw #6-32x3/16, 2pcs

ORDER CODE

PR5MEC11

HS CODE

73269098

HTS CODE

7326.90.98

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

SURFACE MOUNTING KIT

| Parameter | Value |
|-------------------|---|
| Mounting standard | Flat surface mount |
| Material | ABS + PC plastic |
| Weight | 2x5 g |
| Screws included | Philips Pan Head screw #6-32x3/16, 2pcs |
| Dimensions | 25 mm x 48 mm x 7.5 mm |
| RoHS Compliant | V |



DIN RAIL KIT

- Surface mounting kit
- Philips Pan Head screw #6-32x3/16, 2pcs

ORDER CODE

PR5MEC12

HS CODE

73269098

HTS CODE

7326.90.98

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

RUTX08 SPATIAL MEASUREMENTS & WEIGHT

MAIN MEASUREMENTS

W x H x D dimensions for RUTX08:

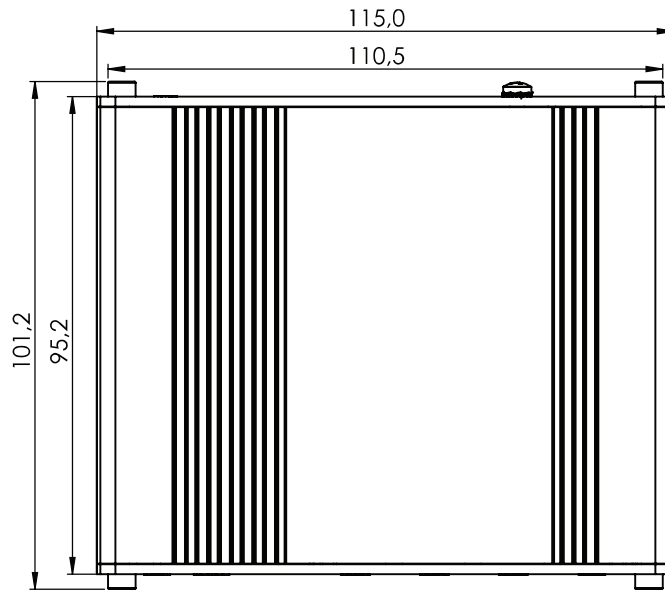
Device housing*: 115 x 32.2 x 95.2

Box: 173 x 71 x 148

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

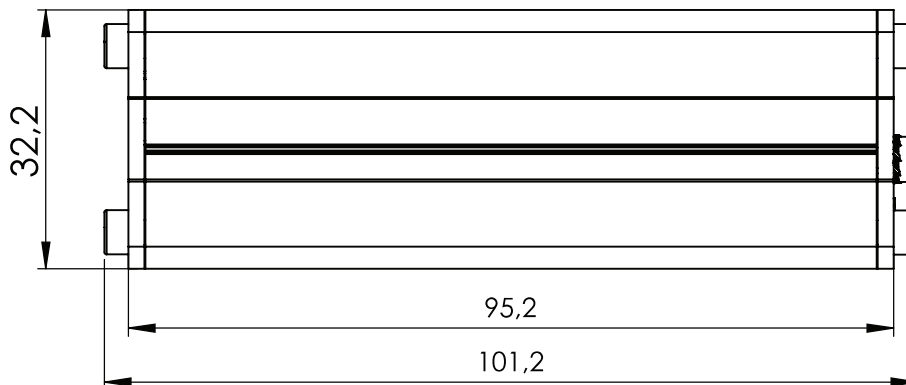
TOP VIEW

The figure below depicts the measurements of RUTX08 and its components as seen from the top:



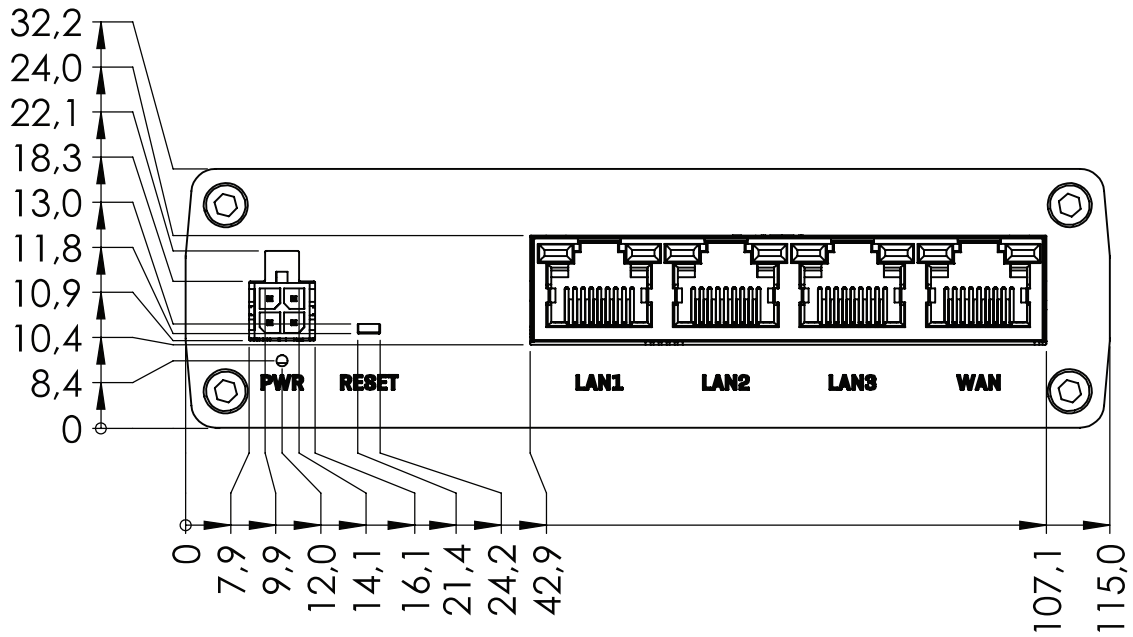
RIGHT VIEW

The figure below depicts the measurements of RUTX08 and its components as seen from the right side:



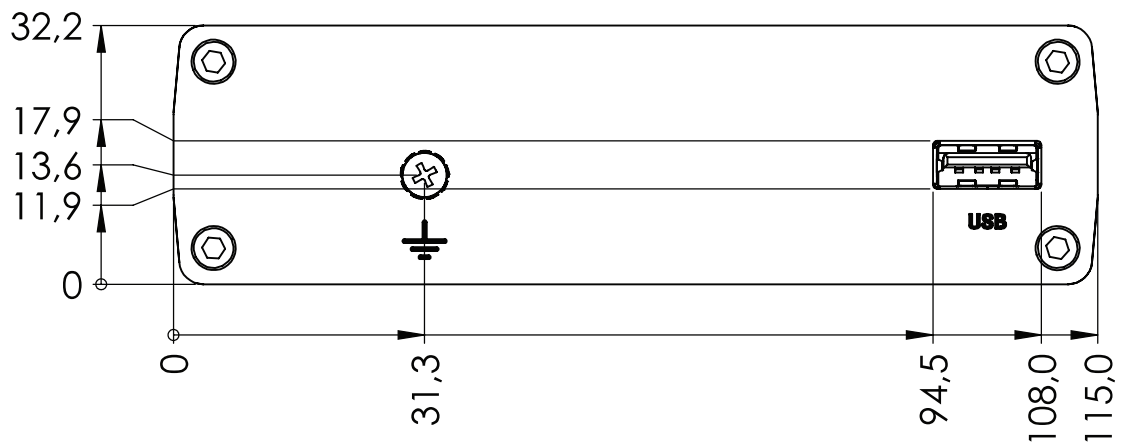
FRONT VIEW

The figure below depicts the measurements of RUTX08 and its components as seen from the front panel side:



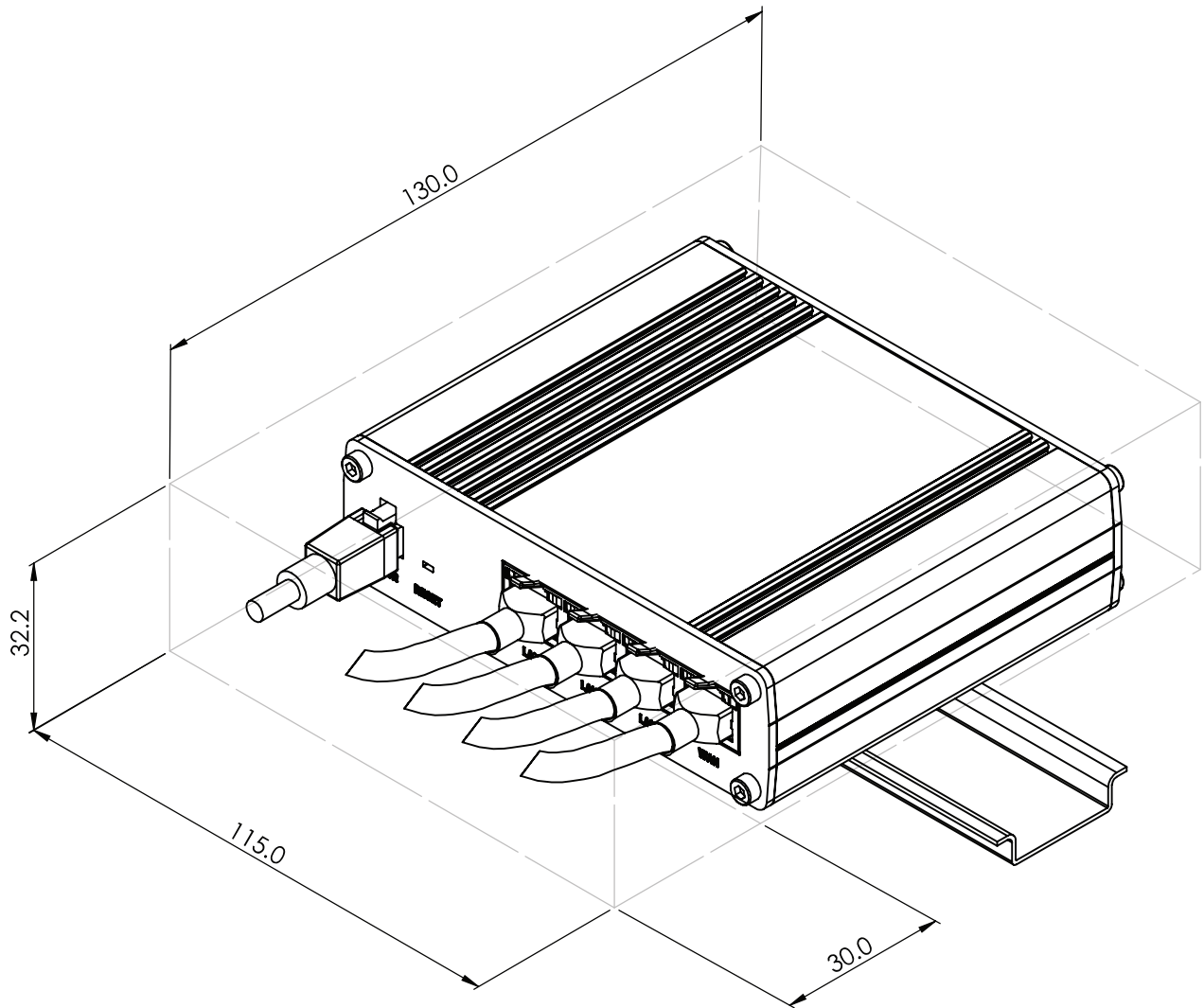
REAR VIEW

The figure below depicts the measurements of RUTX08 and its components as seen from the back panel side:



MOUNTING SPACE REQUIREMENTS

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



DIN RAIL

The scheme below depicts protrusion measurements of an attached DIN Rail:

