SECUENTER
SAFE & SECURE

SPECIFICATIONS

Mobile

Mobile Module	5G Sub-6Ghz SA/NSA 2.1/3.3Gbps DL (4x4 MIMO), 900/600 Mbps UL (2x2); 4G (LTE) – LTE Cat 20 2.0Gbps DL, 200Mbps UL; 3G – 42 Mbps DL, 5.76Mbps UL
Status	Signal strength (RSSI), SINR, RSRP, RSRQ, EC/IO, RSCP Bytes sent/received, connected band, IMSI, ICCID.
SMS/Call	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, Call utilities
USSD	Supports sending and reading Unstructured Supplementary Service Data messages
Black/White List	Operator black/white list

RUTX50 Industrial 5G Router

Wireless

Wireless Mode	802.11b/g/n/ac Wave 2 (WiFi 5) with data transmission rates of up to 867 Mbps (Dual Band, MU-MIMO), 802.11r fast transition, Access Point (AP), Station (STA)
WiFi Security	WPA3-EAP, WPA3-SAE, WPA2-Enterprise-PEAP, WPA2-PSK, WEP; AES-CCMP, TKIP, Auto Cipher modes, client separation
ESSID	ESSID stealth mode
WiFi Users	Up to 150 simultaneous connections
Wireless Hotspot	Captive portal (Hotspot), internal/external Radius server, built in customizable landing page
ESSID	ESSID stealth mode

Ethernet

WAN	1 x WAN port (can be confifigured as LAN) 10/100/1000 Mbps, compliance with IEEE 802.3, IEEE 802.3u, 802.3az standards, supports auto MDI/MDIX crossover
ESSID	ESSID stealth mode

Network

Network Protocols	TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, SMTP, SSL v3, TLS, PPP, PPPoE, SSH, DHCP, SNMP, MQTT, Wake on LAN (WOL)
Routing	Static routing, Dynamic routing (BGP, OSPF v2, RIP v1/v2, EIGRP, NHRP)
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

Security

Authentication	Pre-shared key, digital certificates, X.509 certificates
Firewall	Pre-configured firewall rules can be enabled via the WebUI, unlimited firewall configuration via CLI; 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
Mobile Quota Control	Set up custom data limits for SIM card

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, supports up to 5 x VPN IPsec tunnels (instances), with 5 encryption methods (DES, 3DES, AES128, AES192, AES256)
GRE	GRE tunnel
PPTP, L2TP	Client/Server services can run simultaneously, L2TPv3 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 fifirst); 32 bit: flfloat, 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 the MQTT broker

DNP3

Supported Modes	TCP Master, DNP3 Outstation

Data to Server

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

IoT Platforms

Clouds of Things	Allows monitoring of: Device data, Mobile data, Network info, Availability

ThingWorx	Allows monitoring of: WAN Type, WAN IP, Mobile Operator Name, Mobile Signal Strength, Mobile Network Type
Cumulocity	Allows monitoring of: Device Model, Revision and Serial Number, Mobile Cell ID, ICCID, IMEI, Connection Type, Operator, Signal Strength, WAN Type and IP
Azure IoT Hub	Can send device IP, Number of bytes send/received, Mobile connection state, Network link state, IMEI, ICCID, Model, Manufacturer, Serial, Revision, IMSI, SIM State, PIN state, GSM signal, WCDMA RSCP, WCDMA EC/IO, LTE RSRP, LTE SINR, LTE RSRQ, CELL ID, Operator, Operator number, Connection type, Temperature, PIN count to Azure IoT Hub server

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)
SMS	SMS status, SMS configuration, send/read SMS via HTTP POST/GET
Call	Reboot, Status, Mobile data on/off, Output on/off

System Characteristics

CPU	Quad-core ARM Cortex A7, 717 MHz
RAM	256 MB (100 MB available for userspace)
FLASH Storage	256 MB (80 MB available for userspace)

Firmware / Configuration

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

Firmware / Customization

Operating System	RutOS (OpenWrt based Linux OS)
Supported Languages	Busybox shell, Lua, C, C++
Development Tools	SDK package with build environment provided

Location Tracking

GNSS	GPS, GLONASS, BeiDou, Galileo
Coordinates	GNSS coordinates via WebUI, SMS, TAVL, RMS
NMEA	NMEA 0183
Server Software	Supports server software: TAVL, RMS
Geofencing	Multiple configurable geofence zones

USB

Data Rate	USB 2.0
Applications	Samba share, USB-to-serial, Modbus gateway
External Devices	Possibility to connect external HDD, flash drive, additional modem, printer
Storage Formats	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	SMS, Email, RMS
I/O Juggler	Allows setting certain I/O conditions to initiate event

Power

Connector	4-pin industrial DC power socket
Input Voltage Range	9 – 50 VDC, reverse polarity protection, surge protection >51 VDC 10us max
PoE (passive)	Passive PoE. Possibility to power up through LAN1 port , not compatible with IEEE802.3af, 802.3at and 802.3bt standards
Power Consumption	Idle: <4 W, Max: <18 W

Physical Interfaces (Ports, LED, Antennas, Buttons & SIM)

Ethernet	5 x RJ45 ports, 10/100/1000 Mbps
I/Os	1 x Digital Input, 1 x Digital Output on 4-pin power connector
Status LEDs	3 x connection status LEDs, 3 x connection strength LEDs, 10 x Ethernet port status LEDs, 4 x WAN status LEDs, 1x Power LED, 2 x 2.4G and 5G WiFi LEDs

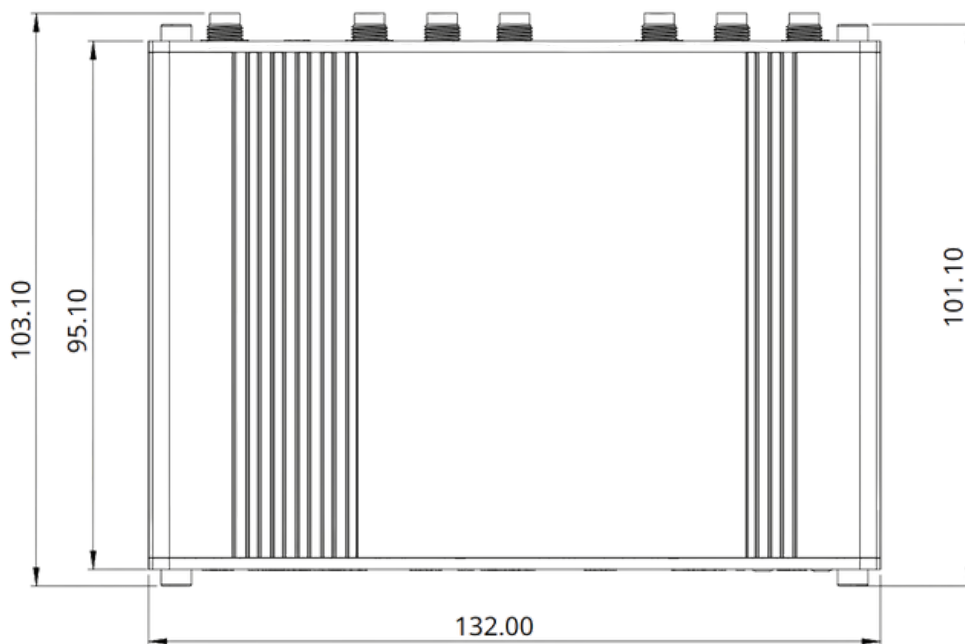| SIM | 2 x SIM slot (Mini SIM – 2FF), 1.8 V/3 V |
| Power | 1 x 4-pin DC power connector |

Physical Specification

Casing Material	Aluminum Housing
Dimensions (W x H x D)	132 x 44.2 x 95.1 mm
Weight	533 g
Mounting Options	DIN rail (can be mounted on two sides), flat surface placement

Operating Environment

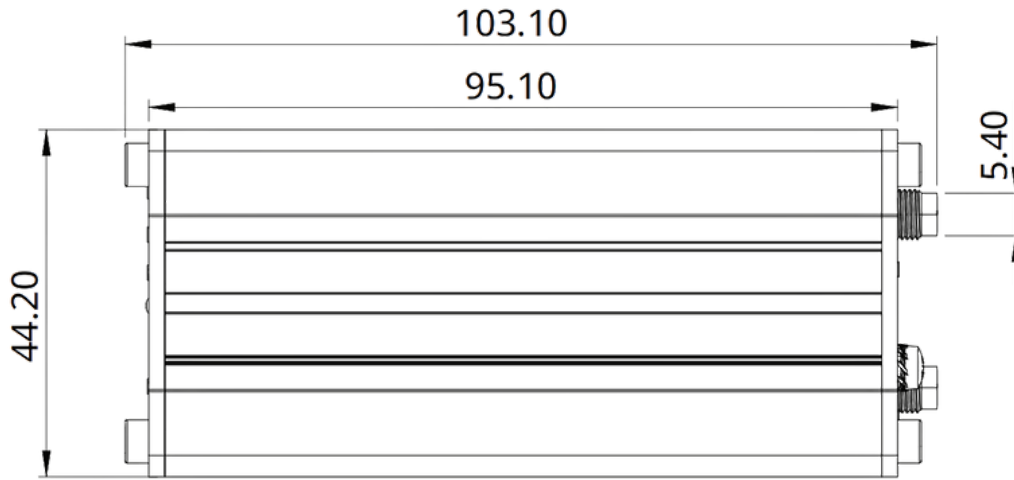| Operating Temperature | -40 °C to 75 °C |
| Operating Humidity | 10 % to 90 % non-condensing |
| Ingress Protection Rating | IP30 |

DIMENSIONS (MM) & DIAGRAMS

Top View

Right View
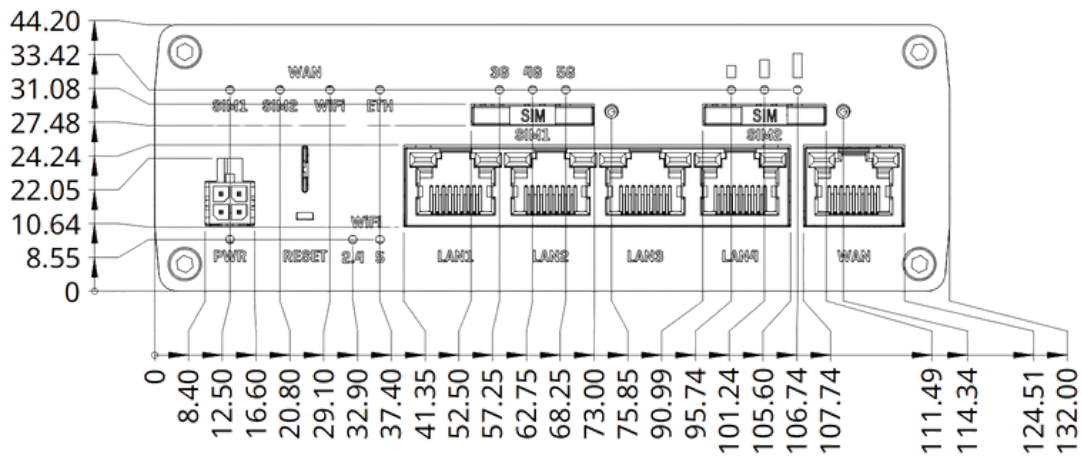
Front View
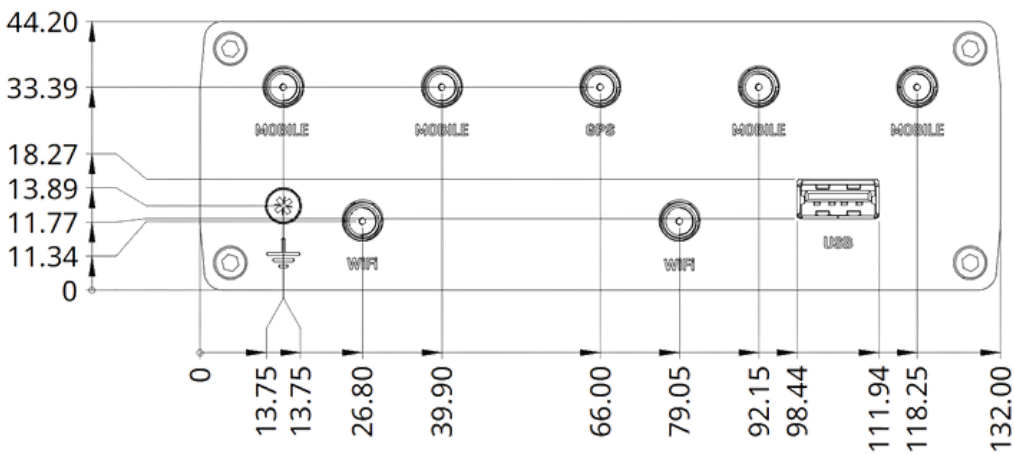
Rear View
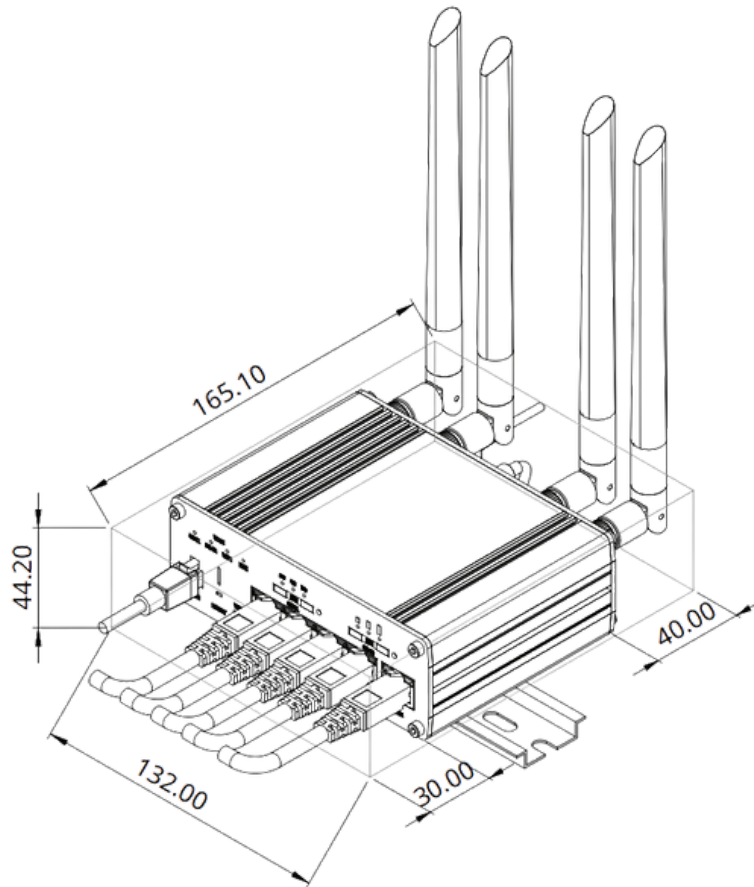
Mounting Space Requirement

Dimensions: 165.10, 44.20, 40.00, 132.00, 30.00

DIN Rail

Dimensions: 199.19, 44.20, 16.64