TRBOnet
Digital Technologies

Radio-over-IP Gateway
TRBOnet A300

Technical Specification and Safety Information

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1. Product description

TRBOnet A300 radio-over-IP gateway (hereinafter referred to as "A300") is a hardware device designed to interface a TRBOnet Server with a MOTOTRBO or third-party control station, as well as a MOTOTRBO repeater operating in analog mode. The connected radio can transmit voice and data to one or multiple TRBOnet Servers over an IP network.

2. Features

- Gateway between a radio channel and an IP network (voice and data transmission without encryption)
- Support for up to 8 simultaneous TRBOnet Server connections
- Voice Activity Detection (VAD) enabling operation with radios that do not have a CSQ input
- Support for digital and analog radios
- Remote configuration of basic operational parameters
- 7 configurable digital input/output contacts
- Integrated OLED display

3. Scope of delivery

Item	Description	Quantity
A300	Radio-over-IP gateway unit	1
USB–Radio cable	Service cable for connecting a MOTOTRBO radio to A300	1
Audio cable	Audio cable (input/output) for connecting a third-party radio to A300	1
Micro-Fit connector system	Micro-Fit plug with wires for connection to radio, 12 V DC power supply, and external hardware	1
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4. Specification

General	
Dimensions	120 x 100 x 30 mm
Weight	320 g
Operation temperature range	-20 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
Ingress protection rating	IP30
Relative humidity, max	85% at +40 °C
Power input	10–16 V DC, 0.5 A max
Display	Monochrome OLED, 128 × 32 pixels, 0.91"
Clock battery	Internal supercapacitor
Interfaces	7 I/O, USB-C, RADIO (USB host), LAN, UART, Audio In/Out
Number of server connections, max	8

Network requirements	
Network connection	RJ45, Ethernet 10/100Base-T, 10/100 Mbit/s
Payload per server connection	160 kbps (PCM 8kHz)
Packet delay	< 3,000 ms
Packet jitter	< 1,200 ms
Packet loss	< 2 %
Radio connection interfaces	
MOTOTRBO	USB host (RADIO)
Non-MOTOTRBO	Audio in, Audio out, PTT out, CSQ detect input
Inputs/outputs	
Output type	Open collector
Output current, max	100 mA
Input voltage	configurable 1.8–12 V (maximum 16 V)
Audio input	
Nominal level	330 mV RMS
Impedance	10 kΩ
Audio output	
Nominal level	330 mV RMS
Impedance	600 Ω

5. General safety

The following are additional general safety precautions that must be observed:

- To continue compliance with any applicable regulations and maintain the safety of this equipment, do not install substitute parts or perform any unauthorized modifications.
- Servicing must be performed by qualified personnel only.
- When servicing the device with power applied, be aware of live circuits that may present a hazardous voltage.
- Do not operate the radio transmitters unless all RF connectors are secure and all connectors are properly terminated.
- All equipment must be properly grounded for safe operation.
- Slots and openings in the cabinet are provided for ventilation. Do not block or cover openings that protect the devices from overheating.
- Some components may become hot during operation. Disconnect power and allow the equipment to cool before servicing.
- Never store combustible materials in or near equipment racks. The combination of combustible material, heat and electrical energy increases the risk of a fire hazard.
- RF energy burn hazard. Disconnect power in the cabinet to prevent injury before disconnecting and connecting antennas.
- Shock hazard. The outer shields of RF cables must be properly grounded.
- Power off the radio before connecting it to A300 with the USB cable. Connecting or disconnecting the USB cable while the radio is powered on may result in damage to the USB interfaces of both the radio and the A300.

6. Transportation and storage

During transportation, the device shall not be exposed to precipitation.

The device shall be stored in the original delivery package in a dry place. Do not store acids, alkalis, or other corrosive substances near the device.

7. Warranty

The manufacturer warrants that A300 conforms to its current technical specifications for a period of 12 months from the delivery date, provided that the device has been properly transported, stored, installed, configured, and operated.

Any claim under this warranty must be submitted before the end of the warranty period to the reseller with a detailed description of the hardware defect.

The service life of the device is 5 years.

Manufacturer address:

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Country of origin: USA