AVILOO Box Manual

ENGLISH

MANUFACTURER

AVILOO GmbH
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TYPE AVILOO Box

DESCRIPTION

The AVILOO Box is a cloud based datalogger that requests and monitors data from a car's OBD-2-port or any CAN bus and transmits it to the AVILOO Battery Cloud.

TECHNICAL DATA AND ENVIRONMENTAL INFORMATION

- Power Supply via OBD, 12 VDC or 24 VDC, Power consumtion <15 W

- Do not disassemble, crush, bend, deform, puncture, or shred the AVILOO Box.

- Do not use it in a humid, wet and/ or corrosive environment.

- Do not put, store or leave the device in high temperature location, in direct sunlight, in or near a heat source, in a microwave oven or in a pressurised container, and do not expose it to temperatures over 85 °C or below - 40 °C.

- Please note that exceeding these limits below may permanently damage the device!

- Avoid dropping the device. If the device is dropped and you suspect damage, please contact AVILOO Customer Support.

- In case you have received a damaged device, contact AVILOO Customer Support.

PRODUCT OVERVIEW

TECHNICAL DATA AND ENVIRONMENTAL INFORMATION

Dimensions: 145 x 60 x 38 mm
Weight: ~ 131g
Rated supply voltage: 12 V or 24 V
Supply voltage ext. range: 9 – 28 V
Power consumption:
RMS: 5 W; peak: 25 W
Ambient temperature: 0 °C – 50 °C

Only used at altitude not exceeding 2000 m.

Only used in non-tropical climate regions.

THE AVILOO BOX CONSISTS OF THE FOLLOWING MAIN COMPONENTS

VENDOR	MPN	DESCRIPTION
DH electronics GmbH	DHCOM STM32MP1	System-on-a-Module (SoM) based on a STM32MP157C
Quectel Wireless Solutions Co., Ltd	Quectel EG-25GGB-MINI-PCI-S	GSM/LTE modem in a Mini-PCIe form factor
AVILOO	AVILOO Box mainboard	Interconnection unit between SoM, modem and connectors
Molex	2125700100	LTE-cellular-antennas (2)
Molex	2065600100	GPS-antenna

NETWORK SPECIFICATIONS

Antenna: Internal only;
Molex 2125700100; Maximum gain: 824–960 MHz 0,45 dBi;
1710–2170 MHz 1,76 dBi

Frequencies: LTE Bands:
1, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 25, 26, 28, 38, 39, 40, 41;
WCDMA Bands: 1, 2, 4, 5, 6, 8, 19

LTE Features:
LTE-FDD: Max. 150 Mbit/s (DL)/
Max. 50 Mbit/s (UL);
LTE-TDD: Max. 130 Mbit/s (DL)/
Max. 30 Mbit/s (UL)

OTHER SPECIFICATIONS

- **Processor:**
  ARM Dual Cortex-A7 800 MHz with embedded ARM Cortex M4 209 MHzRAM

- **RAM:**
  1 GB DDR3 + 708 KByte SRAM

- **Storage:**
  - 16 GB eMMC
  - 2 MByte SPI NOR Flash
  - internal MicroSD-slot

- **Integrated modem for global operation:**
  - LTE Cat 4 (150 MBit/s Download and 50 MBit/s Upload)

- **Regulative Compliance:** GCF, CE, FCC, PTCRB, IC, Anatel, IFETEL, SRRC, NAL, CCC, KC, NCC, JATE, TELEC, RCM, IMDA, ICASA, NBTC

- **Carrier Compliance:** Deutsche Telekom, Verizon, AT&T, Sprint, US Cellular, Telus, T-Mobile, Rogers

- **Global positioning:** GPS, Glonass, BeiDou, Galileo, QZSS

- **RTC** with independend power supply

INTERFACE DESCRIPTION

OBD-2-INTERFACE

The OBD-2-connector is used for communication between the AVILOO Box and the vehicle. The AVILOO Box is also supplied with voltage via this plug. The mechanical design and the pin assignment of the connector correspond to the SAE J1962 standard.

ETHERNET INTERFACE

The RJ-45 socket is not used during operation in vehicles and is only used for functional tests at the end of production line and for reprocessing of the devices. In customer operation, this interface is closed by a blind plug and is not accessible to any consumer.

INSTALLATION & OPERATION

- Connect the AVILOO Box to your car's OBD-2-port with the provided cable and mount the AVILOO Box in a safe and secure position. Avoid twisting of the cable.

- The AVILOO Box will automatically start requesting data from the vehicle and connect to the AVILOO Cloud Service to upload the data.

- This is a mobile device and the user must ensure that they maintain a distance of 20 cm during operation.

- Changes or modifications not expressly approved by AVILOO could void the user's authority to operate the equipment.

- Operation not permitted within US territories.