



keonn

Modular RFID
Components

AdvanReader-10™ USB RFID reader





Benefits:

- High-performance
- Small form factor
- Lightweight
- With optional embedded antenna
- Reduces time and cost of developing RFID systems

Applications:

- Access control
- Android-based systems
- IoT applications
- Embedded applications

Product overview

AdvanReader-10 is a **small form factor, lightweight, high performance USB reader** with an **integrated antenna** (optional).

AdvanReader-10 is perfect for **IoT applications** and other **embedded** uses where a controller hardware already exists.

AdvanReader-10 requires an external controller to be operated.

SDK available for:

- Java
- C#
- C/C++

AdvanReader-10 comes with **three models**:

- 1 port with embedded ceramic antenna
- 1 port with a SMA connector to operate with any antenna
- 2 ports with 2 corresponding SMA connectors



Specifications of 1 port with SMA connector

| | |
|-------------------------|--|
| RF connector | One 50 ohm SMA connector SMA connector can be ordered as: <ul style="list-style-type: none"> • flange • flange right angle • flange right angle 180 degrees rotation |
| Max tag read throughput | Up to 150 tags/second |
| RF Power | Programmable from 0 dBm to 27 dBm in 0.5 dBm steps |
| Power consumption | Idle consumption < 1 W Max RF consumption (@27 dBm) < 4.5 W |
| Dimensions | FL 68 mm x 68 mm x 21.5 mm (2.68 inches x 2.68 inches x 0.84 inches) FR 68 mm x 68 mm x 25 mm (2.68 inches x 2.68 inches x 0.98 inches) |
| Weight | 28 g (0.99 oz) |

Specifications of 1 port with embedded antenna



| | |
|-------------------------|---|
| Max tag read throughput | Up to 150 tags/second |
| RF Power | Programmable from 0 dBm to 27 dBm in 0.5 dBm steps |
| Power consumption | Idle consumption < 1 W Max RF consumption (@27 dBm) < 4.5 W |
| Dimensions | 68 mm x 68 mm x 10.7 mm (2.68 inches x 2.68 inches x 0.42 inches) |
| Weight | EU version 37 g (1.31 oz) US version 50 g (1.76 oz) |

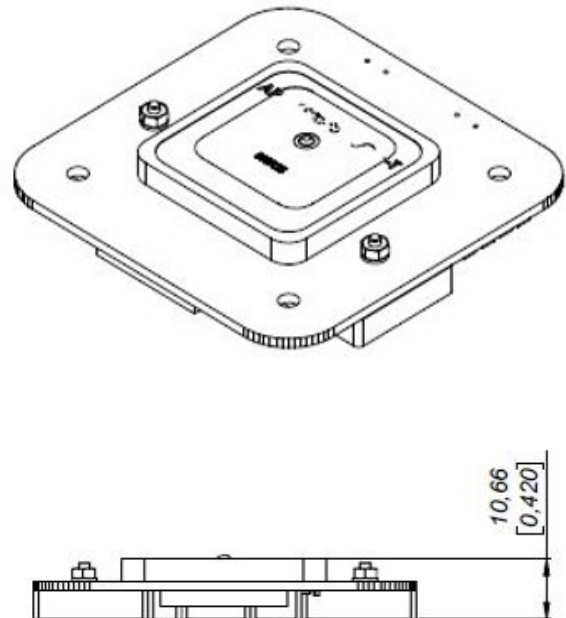
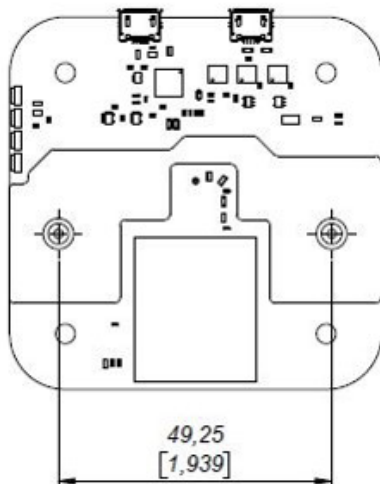
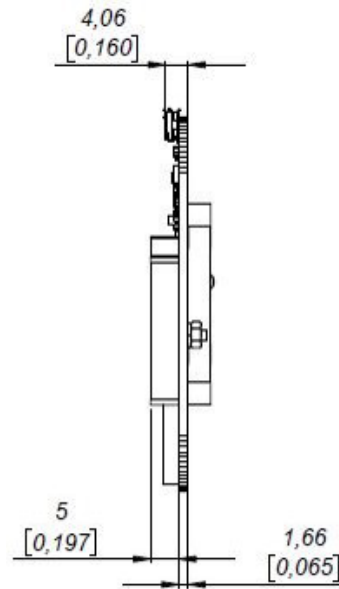
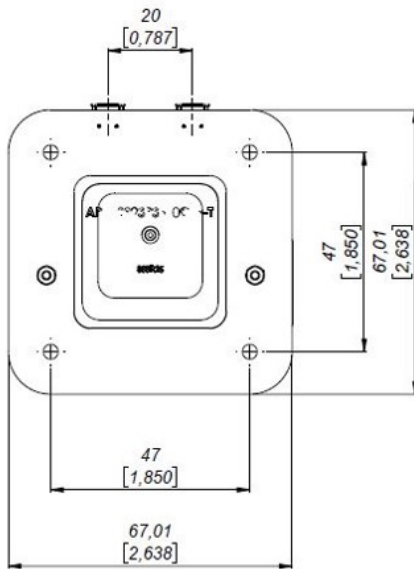
Specifications of 2 ports with two SMA connector

| | |
|-------------------------|--|
| RF connector | Two 50 ohm SMA connector SMA connector can be ordered as: <ul style="list-style-type: none"> • flange • flange right angle • flange right angle 180 degrees rotation |
| Max tag read throughput | Up to 50 tags/second |
| RF Power | Programmable from 0 dBm to 30 dBm in 0.5 dBm steps |
| Power consumption | Idle consumption < 3.5 W Max consumption (@30 dBm) < 9.5 W |
| Dimensions | 82 mm x 68 mm x 15.1 mm (3.23 inches x 2.68 inches x 0.59 inches) |
| Weight | 42 g (1.48 oz) |

RF Common Specifications

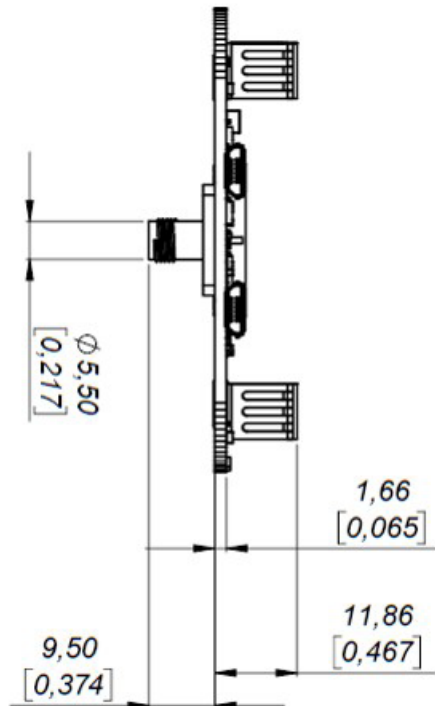
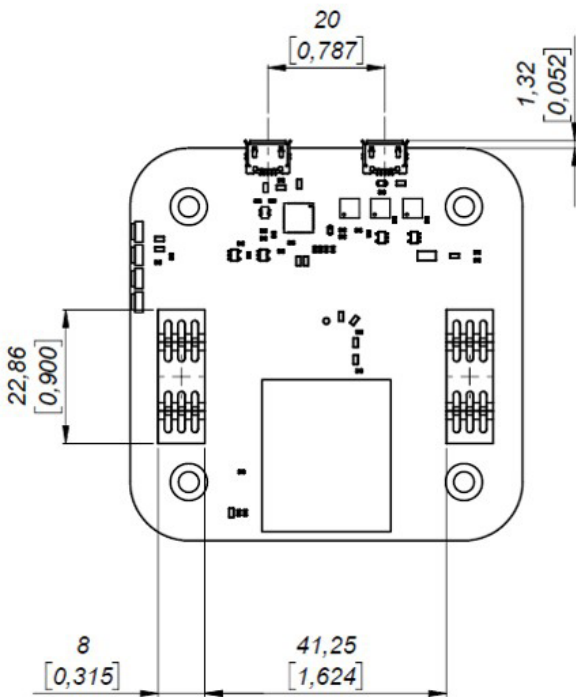
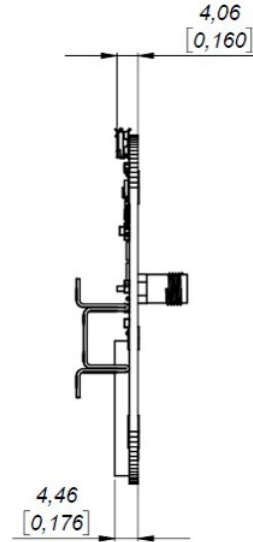
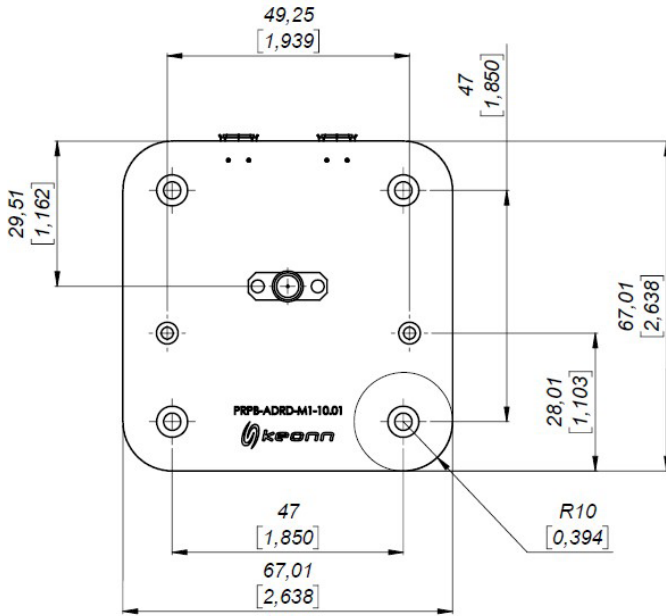
| | |
|--------------------------------|---|
| Air Protocol Interface | EPC global UHF Class 1 Gen 2 / ISO 18000-6C |
| Supported regions | FCC (NA, SA) (917.4 – 927.2) MHz ETSI (EU) (865.6 - 867.6) MHz TRAI (India) (865 - 867) MHz KCC (Korea) (917 – 923.5) MHz MIC (Japan) (916.8 – 920.8) MHz ACMA (AU) (920 – 926) MHz NZ (New Zealand) (922 – 927.5) MHz SRRC-MII (P.R.China) (920.125 – 924.875) MHz Brazil (917.4 – 927.2) MHz by using channel selection Chile (917.4 – 927.2) MHz by using channel selection Peru (917.4 – 927.2) MHz by using channel selection Taiwan (922 – 928) MHz by using channel selection Open Region (865 – 869) MHz and (917.4 – 927.2) MHz (by using channel selection) |
| Data communications | USB power connector (micro-B) Communications uses RS232 over USB (FTDI chip) |
| Power supply | USB power connector (micro-B) The USB data connector is the primary power supply source (USB 2.0 host devices should offer a maximum of 500 mA, and 500 mA it is not enough to conduct RF power higher than 18 dBm / 20 dBm. However, some hardware USB ports may supply more than 500 mA, and whenever that available current is 1 A or higher, this is enough to conduct the maximum RF power -27 dBm-.) Avoid cables with high losses: <ul style="list-style-type: none"> • Very long cables • Cables with very high AWG USB power connector (micro-B) In case the USB data connector does not provide enough power for the reader to work, the USB power connector can be used. When the USB power connector is used, the available power of the reader is only due to the available power at the USB power connector. When using the USB power connector, make sure to supply all required power on the USB power connector. |
| On-board sensors and actuators | RF amplifier temperature sensor (available through the reader API) |
| Temperature | -20 °C to +50 °C |
| Humidity | 20 % to 85 % without condensation |

Mechanical specifications
(1 port with integrated antenna):

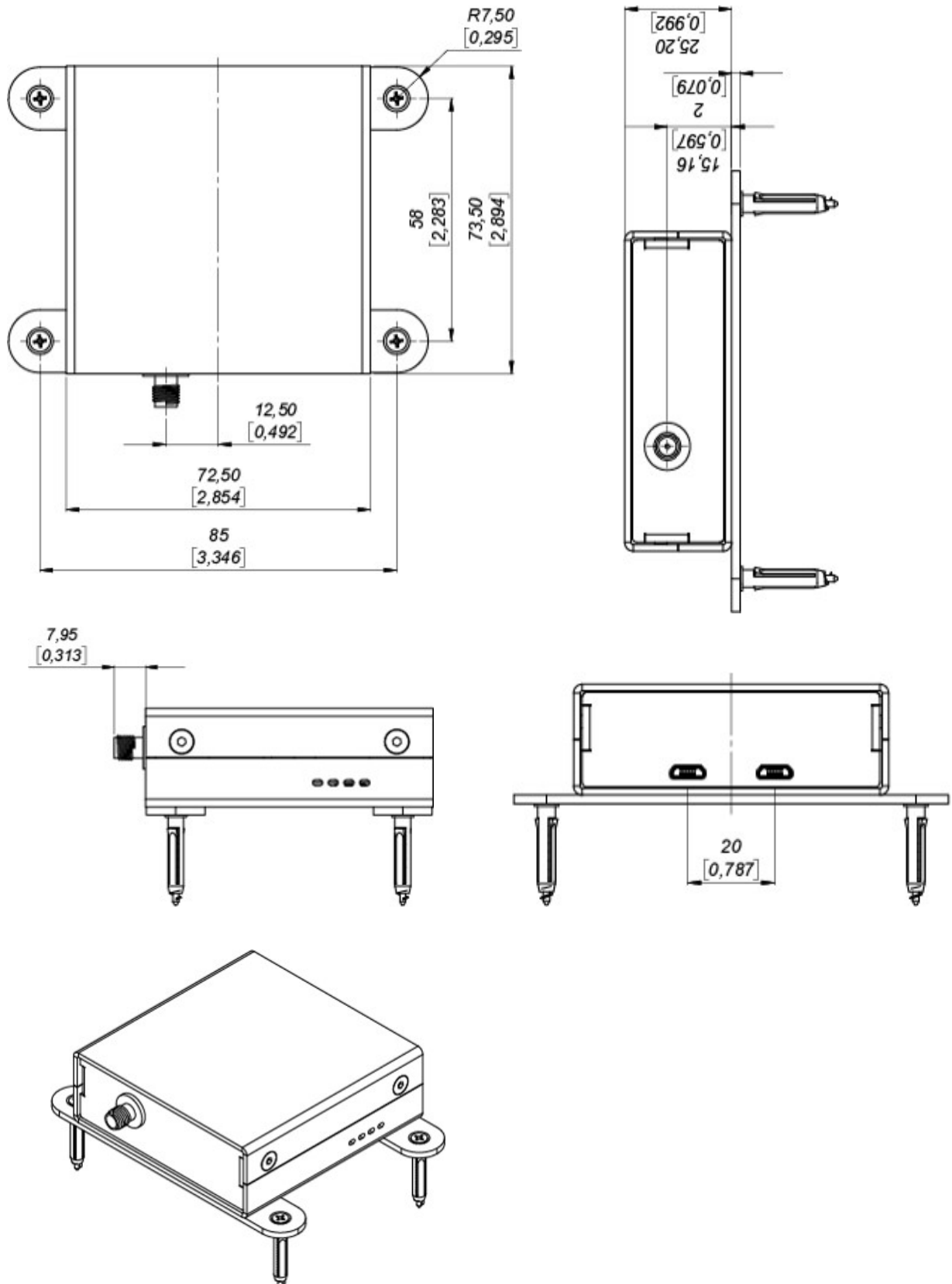


Units in millimeters and [inches]

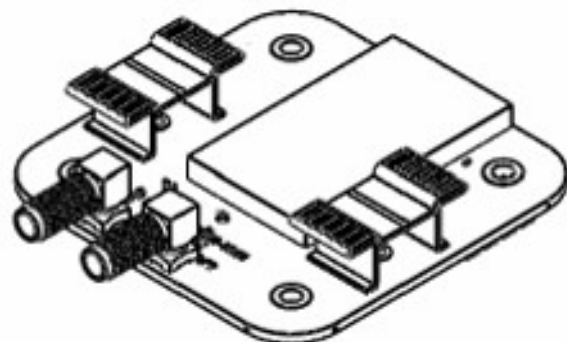
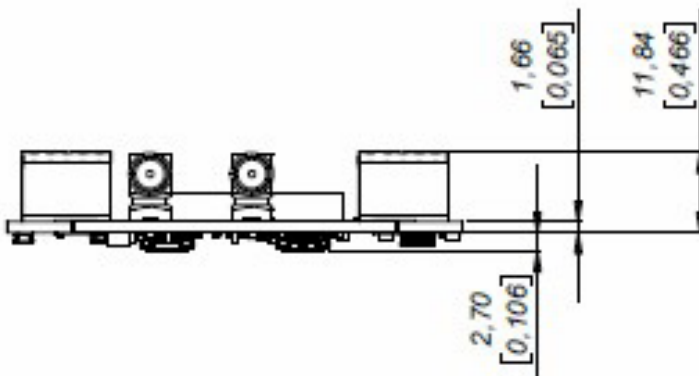
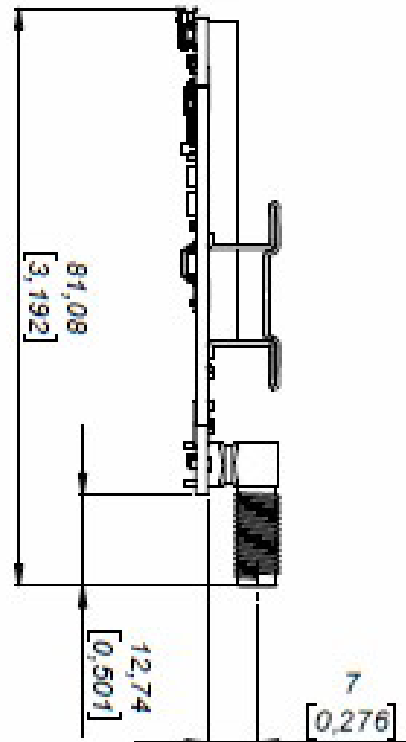
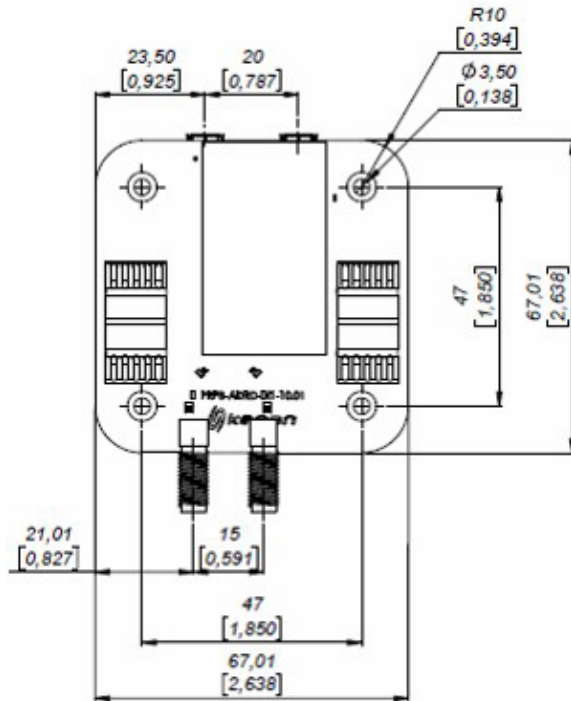
Mechanical specifications
(1 port, external antenna):



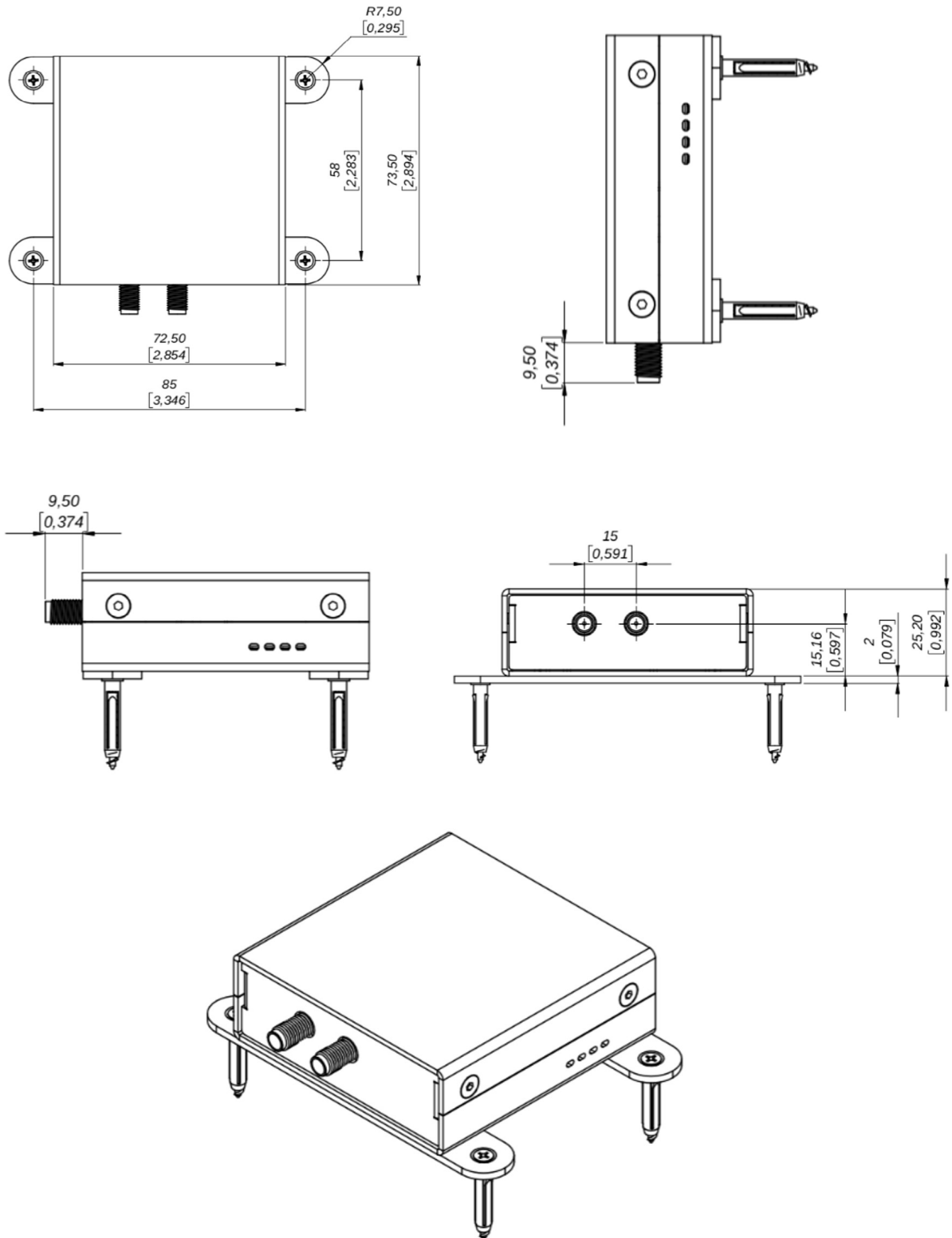
Mechanical specifications
(1 port with enclosure, external antenna):



Mechanical specifications
(2 ports without enclosure):



Mechanical specifications
(2 ports with enclosure):



Product codes for ordering

| ADRD | - | MX | - | CT | - | FF | - | SC |
|-----------------------------|---|----|---|----------|---|----|---|--|
| MX = number of ports | | | | | | | | |
| | | M1 | | | | | | 1 port |
| | | M2 | | | | | | 2 ports |
| CT = connector type | | | | | | | | |
| | | | | | | | | For 1 port: |
| | | | | - | | | | No connector, embedded antenna |
| | | | | FLSMA | | | | Flange, SMA version |
| | | | | FRSMA | | | | Flange right angle, SMA version |
| | | | | FR180SMA | | | | Flange right angle, 180 rotated SMA version |
| | | | | eSMA | | | | SMA connector, with enclosure |
| | | | | | | | | For 2 port: |
| | | | | SMA | | | | Flange right angle SMA version |
| | | | | eSMA | | | | Flange right angle SMA version, with enclosure |
| FF = frequency band | | | | | | | | |
| | | | | | | EU | | With embedded ETSI antenna (865,6 MHz - 867,6 MHz) |
| | | | | | | US | | With embedded FCC antenna (902,0 MHz - 928,0 Mhz) |
| | | | | | | - | | With connector, multiple bands |
| SC = series code | | | | | | | | |
| | | | | | | | | 10 Series 10 |

Note: CT and FF options are exclusive, either one or the other exists in one product model

Examples:

ADRD-m1-EU-10:

- AdvanReader
- 1 port
- With embedded antenna
- EU frequency band
- Model **10**

ADRD-m1-FLSMA-10:

- AdvanReader
- 1 port
- With flange straight SMA connector
- Model **10**

ADRD-m2-eSMA-10:

- AdvanReader
- 2 port
- With enclosure
- Model **10**



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