



keonn

Modular RFID
Components

Advantenna-p11™

RFID UHF wide beam antenna





Benefits:

- Very thin form factor (15 mm with flange connector)
- Good performance
- Cost effective
- Compact enclosure available

Applications:

- Smart shelves
- Smart panels
- Smart tables
- Smart surfaces in general

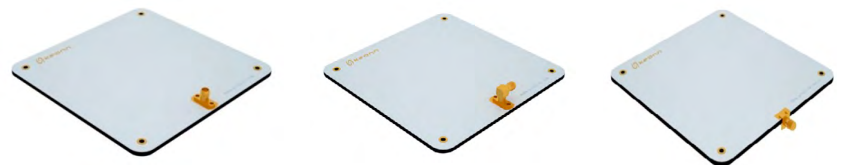
Product overview

Advantenna-p11 is a compact RFID UHF patch antenna, with a very thin form factor, circular polarization and a radiation pattern characterized by a wide beam in all directions in one hemisphere.

This radiation pattern and its thin form factor make this antenna ideal for many RFID applications such as smart shelves, smart displays, smart panels and smart tables or other surfaces.

Advantenna-p11 is also available with an enclosure. The enclosure is made from a metallic structure with a plastic cover.

Connector options

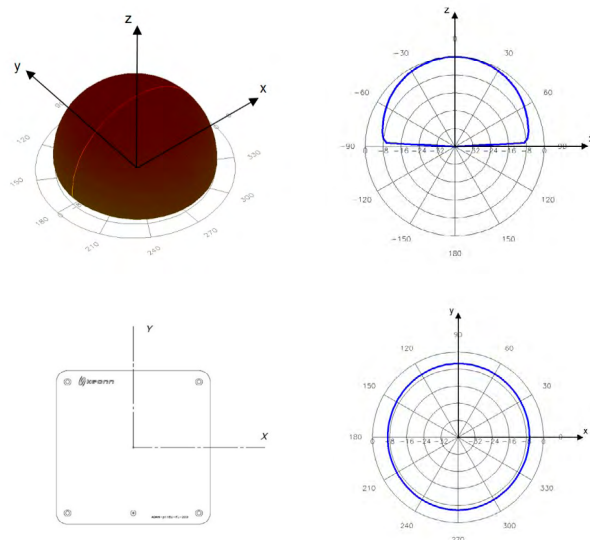


Flange straight

Flange right angle

Edge mount*

Antenna radiation pattern



Tecnical specifications



| | |
|--------------------------------|--|
| Operating Frequency EU Version | 865 - 868 MHz (ETSI EN 302 208) |
| Operating Frequency US Version | 902 - 928 MHz (FCC part 15) |
| Operating Detection distance | Up to 3 m |
| Antenna Technology | Patch |
| Radiation pattern | Wide beam in both directions in one hemisphere |
| Gain | EU version 3.2 dBiC (Typical), 3.4 dBiC (Max) 0.8 dBiL* US version 3.4 dBiC (Typical), 3.6 dBiC (Max) 1.1 dBiL* |
| VSWR | < 1.4:1 |
| Beam width (AZ / EL) | 100° / 100° |
| Front-to-Back Ratio | < -15 dB |
| Polarization | Circular - RHCP (Right Hand Circular Polarization) |
| Axial Ratio | EU version* At Boresight 0.9 dB At 3dB Beamwidth 1.2 dB (Typical), 3.8 dB (Max) US version* At Boresight 1.5 dB At 3dB Beamwidth 2.1 dB (Typical), 4.5 dB (Max) |
| Input Impedance | 50 Ω |
| Connector | SMA or MCX Flange straight, flange right angle or edge mount |
| Regulation | ROHS - EU Directive 2015/863 WEEE - EU Directive 2012/19/EU REACH - EC No 1907/2006 ETSI EN 302 208** |
| IP rating | Indoor antenna IP62 Dust resistant, even in high concentration |
| Temperature range | -20°C to + 80°C |

*Measured at the center of the band

** In this case, P11 model, the beam width of the antenna is 100° and therefore the 1000 mW e.r.p limitation applies for the ETSI lower band (865 MHz to 868 MHz)

According to the formula $PC = \text{Perp} - \text{GIC} + 5.15 + \text{CL}$ (dBm)

Where

PC = Interrogator conducted transmit power (dBm)

GIC = Antenna gain of a circular antenna (dBiC)

CL = Total cable loss (dB)

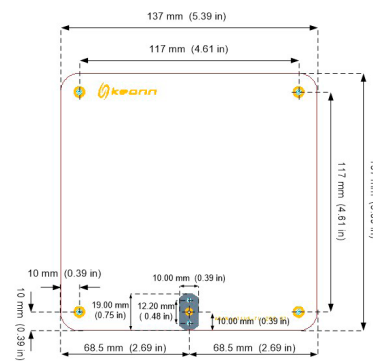
The maximum conducted power PC will be = 31.35 dBm + CL

Mechanical specifications without enclosure

| | |
|--------------------------------|--|
| Size excluding connector | 137 mm x 137 mm x 3.3 mm (5.4 in x 5.4 in x 0.13 in) |
| Size with flange connector | 137 mm x 137 mm x 15 mm (5.4 in x 5.4 in x 0.6 in) |
| Size with edge mount connector | 137 mm x 137 mm x 8 mm (5.4 in x 5.4 in x 0.3 in) |
| Antenna weight | 115 g |



With flange straight or flange right angle connector



Antenna Board Thickness = 3.3 mm (0.130 in)
Holes \varnothing = 3.3 mm (0.13 in)

View from the side that radiates

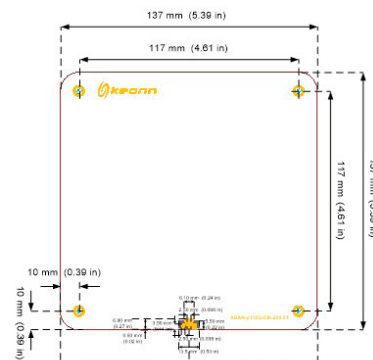


View from the side that does not radiate



View from the side that does not radiate

With edge mount connector



Antenna Board Thickness = 3.3 mm (0.130 in)
Holes \varnothing = 3.3 mm (0.13 in)

View from the side that radiates



View from the side that does not radiate

Product operation (version with enclosure)

It is intended for indoor operation.

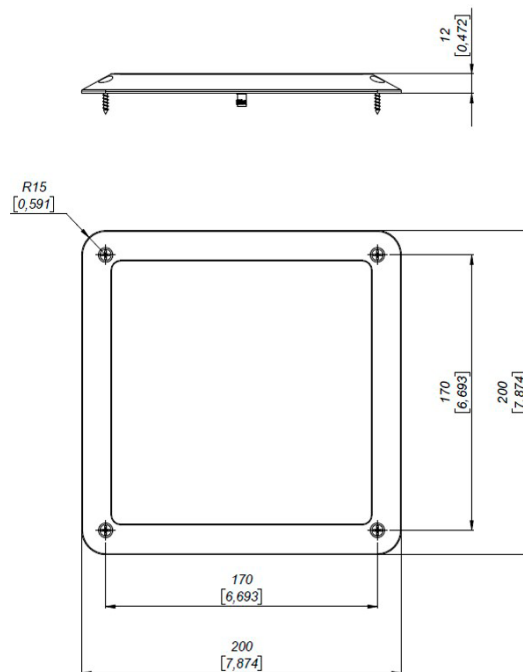
It can be installed onto the most common surfaces: wood, concrete, metal, ...
All mounting components are included.
Check the Installation Guide for a detailed overview of the installation steps.

Connect the antenna to any RFID 50 ohm system.



Mechanical specifications with enclosure

| | |
|--------------------------|--|
| Size excluding connector | 230 mm x 230 mm x 25 mm (9.1 in x 9.1 in x 1.0 in) |
| Antenna weight | 545 g |



Please use only the screws provided with the equipment

The equipment shall be fixed using 4 screws M3 x 15 mm for wood and M3 x 25 mm for other surfaces

The equipment shall be use in indoor location only

Product codes for ordering

| ADAN-p11 | FF | - | EM | - | CS | COR | CT | - | mmm | |
|----------|----|---|----|---|----|-----|-----|---|-----|---|
| | | | | | | | | | | FF = frequency band |
| | EU | | | | | | | | | 865,6 MHz - 867,6 MHz |
| | US | | | | | | | | | 902,0 MHz - 928,0 MHz |
| | | | | | | | | | | Enclosure and mount |
| | | | EF | | | | | | | With flush mount enclosure |
| | | | | | | | | | | Connector shape |
| | | | | | EM | | | | | Edge mount (only without enclosure) |
| | | | | | FL | | | | | Flange straight |
| | | | | | FR | | | | | Flange right angle |
| | | | | | | | | | | Connector orientation (only for right angle SMA connector) |
| | | | | | | | | | | Default orientation |
| | | | | | | 90 | | | | Rotated 90° counterclockwise |
| | | | | | | 180 | | | | Rotated 180° counterclockwise |
| | | | | | | 270 | | | | Rotated 270° counterclockwise |
| | | | | | | | | | | Connector type |
| | | | | | | | SMA | | | SMA connector |
| | | | | | | | | | | Model |
| | | | | | | | | | 200 | Model number |

Examples:

ADAN-p11EU-EMSMA-200:

- Advantenna-p11
- Frequency band : 865,6 MHz - 867,6 MHz
- Without enclosure
- **Edge mount** connector
- **SMA** connector
- Model **200**

ADAN-p11US-FRSMA-200:

- Advantenna-p11
- Frequency band : 902,0 MHz - 928,0 MHz
- Without enclosure
- **Flange right angle** connector
- Default connector orientation
- **SMA** connector
- Model **200**

ADAN-p11EU-FR270SMA-200:

- Advantenna-p11
- Frequency band : 865,6 MHz - 867,6 MHz
- Without enclosure
- **Flange right angle** connector
- Connector rotated 270° counterclockwise
- **SMA** connector
- Model **200**

ADAN-P11EU-EF-FLSMA-200:

- Advantenna-p11
- Frequency band : 865,6 MHz - 867,6 MHz
- **Flush mount enclosure**
- **Flange straight** connector
- **SMA** connector
- Model **200**

Disposal of the product

Do not dispose the product in municipal or household waste. Please check your local regulations for disposal/ recycle of electronic products.





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