

Product overview

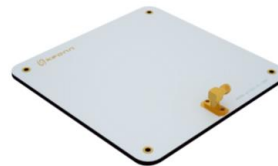
Advantenna-p11 is a compact RFID UHF patch antenna, with a very thin form factor, circular polarization and a radiation pattern characterized by a wide beam in all directions in one hemisphere.

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.

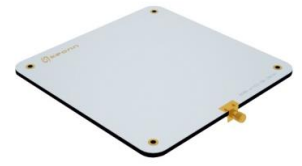
Connector options



Flange straight

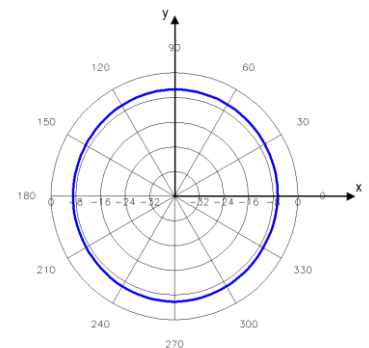
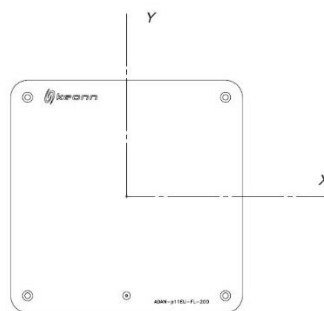
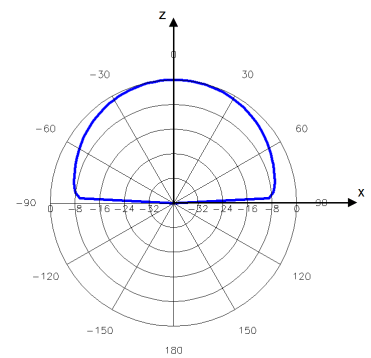
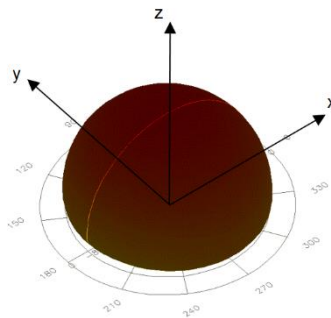


Flange right angle



Edge mount

Antenna radiation pattern



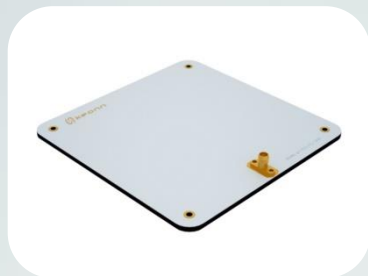
Benefits:

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

Applications:

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

*Front-to-back ratio not drawn



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 IP68 Dust resistant, even in high concentration Immersion resistant (up to 1 m for up to 30 minutes)
Temperature range	-20°C to +80°C
Size excluding connector	137 mm x 137 mm x 3.3 mm 5.4 inches x 5.4 inches x 0.13 inches
Size with flange connector	137 mm x 137 mm x 15 mm 5.4 inches x 5.4 inches x 0.6 inches
Size with edge mount connector	137 mm x 137 mm x 8 mm 5.4 inches x 5.4 inches x 0.3 inches
Antenna weight	115 g

*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 $P_C = P_{erp} - G_{IC} + 5.15 + C_L$ (dBm)

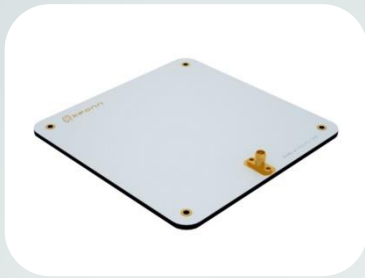
Where

P_C = Interrogator conducted transmit power (dBm)

G_{IC} = Antenna gain of a circular antenna (dBiC)

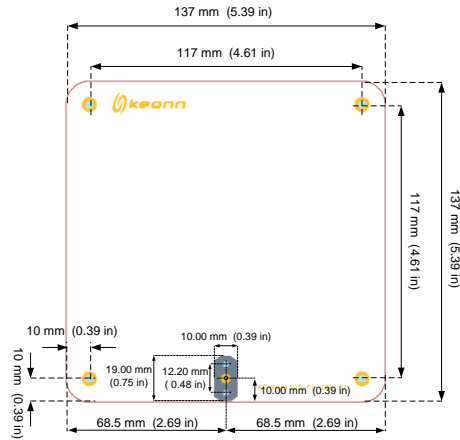
C_L = Total cable loss (dB)

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



Mechanical specifications

With flange straight or flange right angle connector

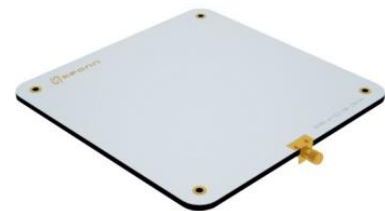
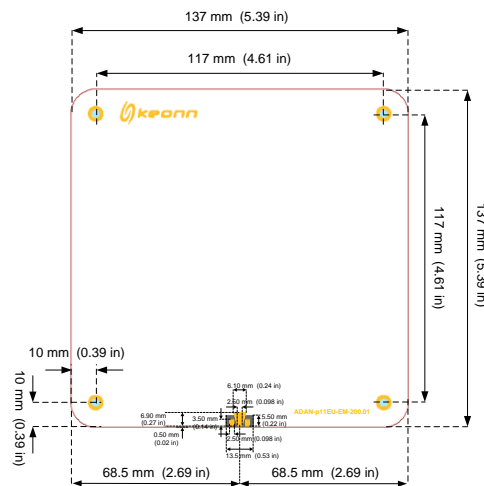


View from the side that radiates

Antenna Board Thickness = 3.3 mm (0.130 in)

Holes \varnothing = 3.3 mm (0.13 in)

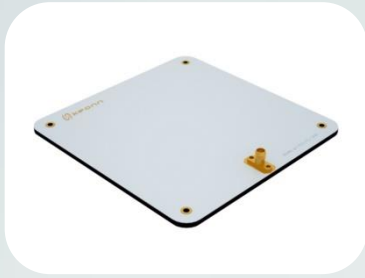
With edge mount connector



View from the side that radiates

Antenna Board Thickness = 3.3 mm (0.130 in)

Holes \varnothing = 3.3 mm (0.13 in)



Product codes for ordering

ADAN-p11	FF	-	CS	COR	CT	-	mmm	
								FF = frequency band
	EU							865,6 MHz - 867,6 MHz
	US							902,0 MHz - 928,0 MHz
								Connector shape
			EM					Edge mount
			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
						MCX		MCX connector (only available in edge mount and flange straight)
								Model
							200	Model number

Examples:

- **ADAN-p11EU-EMSMA-200:**
 - Advantenna-p11
 - Frequency band : 865,6 MHz - 867,6 MHz
 - **Edge mount** connector
 - **SMA** connector
 - Model **200**
- **ADAN-p11US-FRSMA-200:**
 - Advantenna-p11
 - Frequency band : 902,0 MHz - 928,0 Mhz
 - **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
 - **Flange right angle** connector
 - Connector rotated 270° counterclockwise
 - **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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