



# keonn

Modular RFID  
Components

## Advantenna-p12 <sup>TM</sup>

RFID UHF fan beam antenna





### Benefits:

- Slightly narrow beam in the long edge
- Wide beam in the short edge
- Very thin form factor
- Cost effective

### Applications:

- Electronic Article Surveillance pedestals, that combine acousto-magnetic and RFID technologies
- Point of Sales systems

### Product overview

Advantenna-p12 is a compact RFID UHF 2 elements patch antenna with circular polarization and a radiation pattern characterized by a 60° beam width in the direction of the antenna long edge and 90° in the direction of the antenna short edge.

Advantenna-p12 has a very thin form factor. This allows to integrate the antenna inside thin objects.

Advantenna-p12 is ideal for loss-prevention systems at retail stores. Advantenna-p12 can be embedded inside pedestals of electronic article surveillance (EAS) based on acousto-magnetic technology, transforming such pedestals into hybrid systems that include two technologies simultaneously: acousto-magnetic and RFID.

### Connector options



Flange straight

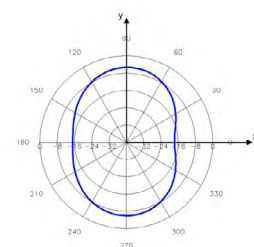
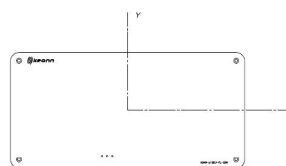
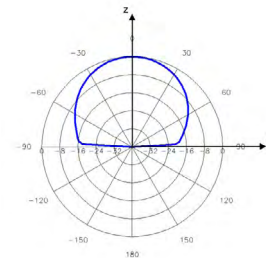
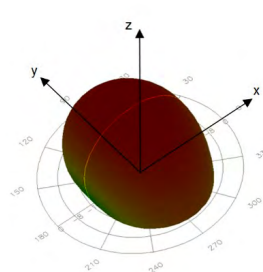


Flange right angle



Edge mount

### Flange straight



\*Front-to-back ratio not drawn

### Technical specifications

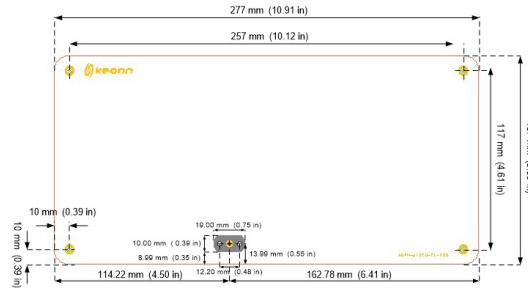


Operating Frequency EU Version	865 - 868 MHz (ETSI EN 302 208)
Operating Frequency US Version	902 - 928 MHz (FCC part 15)
Operating Detection distance	Up to 3.5 m
Antenna Technology	Patch
Radiation pattern	Wide beam in both directions in one hemisphere
Gain	<b>EU version</b> 5.4 dBiC (Typical), 5.5 dBiC (Max), 3.2 dBiL* <b>US version</b> 5.6 dBiC (Typical), 5.8 dBiC (Max), 3.5 dBiL*
VSWR	< 1.4:1
Beam width (AZ / EL)	60° / 90°
Front-to-Back Ratio	< -20 dB
Polarization	Circular - RHCP (Right Hand Circular Polarization)
Axial Ratio	<b>EU version*</b> At Boresight 0.9 dB At 3dB Beamwidth 0.6 dB (Typical), 4.7 (Max) <b>US version*</b> At Boresight 1.3 dB At 3dB Beamwidth 1.6 (Typical), 3.4 (Max)
Input Impedance	50 Ω
Connector	SMA or MCX Flange, flange right angle, or edge mount (on the long side of the antenna)
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	277 mm x 137 mm x 3.3 mm 10.8 inches x 5.4 inches x 0.13 inches
Size with edge mount connector	277 mm x 137 mm x 8 mm 10.8 inches x 5.4 inches x 0.3 inches
Size with flange connector	277 mm x 137 mm x 15 mm 10.8 inches x 5.4 inches x 0.6 inches
Antenna weight	230 g

\*Measured at the center of the band

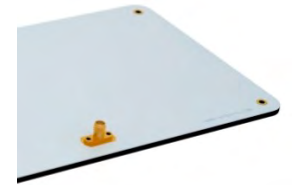
### Mechanical specifications

#### With flange straight or flange right angle connector

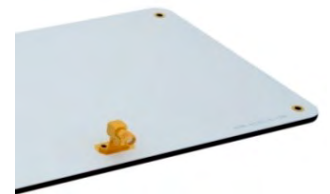


Antenna Board Thickness = 3.3 mm (0.13 in)  
Holes  $\varnothing$  = 3.3 mm (0.13 in)

View from the side that radiates

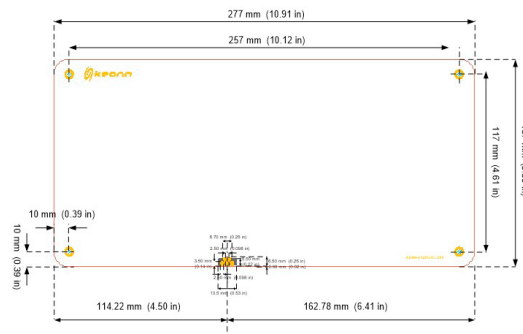


View from the side that does not radiate



View from the side that does not radiate

#### With edge mount connector



Antenna Board Thickness = 3.3 mm (0.13 in)

View from the side that radiates



View from the side that does not radiate

### Product codes for ordering

ADAN-p12	FF	-	CS	COR	CT	-	mmm	
								<b>FF = frequency band</b>
	EU							865,6 MHz - 867,6 MHz
	US							902,0 MHz - 928,0 MHz
								<b>Connector shape</b>
			EL					Edge mount at the long side of the antenna
			FL					Flange straight
			FR					Flange right angle
								<b>Connector orientation (only for right angle SMA connector)</b>
								Default orientation
				90				Rotated 90° counterclockwise
				180				Rotated 180° counterclockwise
				270				Rotated 270° counterclockwise
								<b>Connector type</b>
					SMA			SMA connector
					MCX			MCX connector (only available in edge mount and flange straight)
								<b>Model</b>
							200	Model number

Examples:

#### ADAN-p12EU-ELSMA-200:

- Advantenna-p12
- Frequency band : 865,6 MHz - 867,6 MHz
- **Edge mount** connector, placed at the long side of the antenna
- **SMA** connector
- Model **200**

#### ADAN-p12EU-FR270SMA-200:

- Advantenna-p12
- Frequency band : 865,6 MHz - 867,6 MHz
- **Flange right angle** connector
- Connector rotated 270° counterclockwise
- **SMA** connector
- Model **200**

#### ADAN-p12US-FRSMA-200:

- Advantenna-p12
- Frequency band : 902,0 MHz - 928,0 MHz
- **Flange right angle** connector
- Default connector orientation
- **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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