keonn Modular RFID Components

Advantenna-SP12 ™

RFID UHF high gain fan beam antenna

Keonn Technologies S.L.

Tel: +34 931 814 477
info@keonn.com

Barcelona
London
Los Angeles

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Benefits:

- High gain
- Very thin form factor (compared to other high gain antennas available inn the market)
- Very light weight
- Cost effective

Applications:

- RFID portals
- RFID tunnels
- Tracking systems

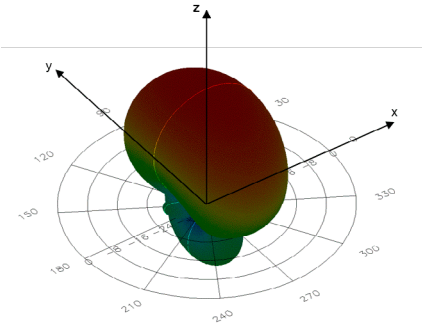
Product overview

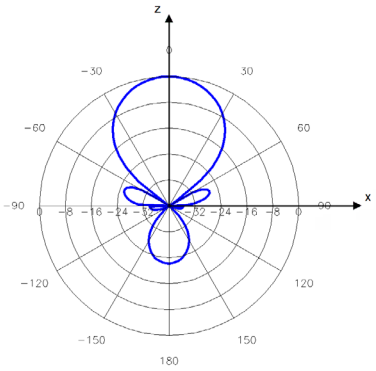
Advantenna-SP12 is an ultra-light RFID UHF Antenna with a very high gain, circular polarization and a radiation pattern characterized by a 70° beam width in one plane and a 40° beam in the other plane.

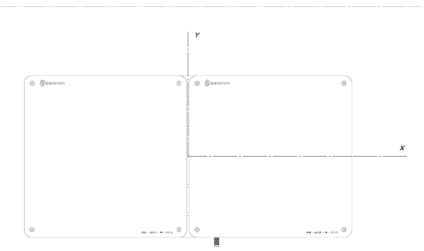
The combination of a high gain, thin form factor and ultra-light design make this antenna ideal for many RFID applications such as RFID portals, RFID tunnels, tracking systems, etc.

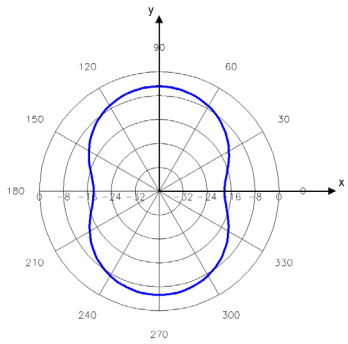
Holder available specially designed for this model of antenna: **AdvanHolder-SP12**

Radiation pattern









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Tecnical specifications

Operating Frequency ETSI Version	865 - 868 MHz (ETSI EN 302 208)
Operating Frequency FCC Version	902,0 MHz - 928,0 Mhz
Antenna Technology	Patch
Radiation pattern	Curtain beam
Gain	**EU version** 9.5 dBiC (Max.), 9.3 dBiC (Typical) 6.6 dBiL* **US version** 9.6 dBiC (Max.), 9.2 dBiC (Typical) 6.8 dBiL*
VSWR	< 1.4:1
Beam width (AZ / EL)	40° / 70°
Front-to-Back Ratio	< -15 dB
Sidelobe level	< -20 dB
Polarization	Circular
Axial Ratio	**EU version*** At Boresight 0.2 dB At 3dB Beamwidth 0.4 dB (Typical), 1.0 dB (Max) **US version*** At Boresight 0.04 dB At 3dB Beamwidth 0.5 dB (Typical), 1.2 dB (Max)
Input Impedance	50 Ω
Connector	SMA Interior right angle, exterior right angle
Regulation	ROHS - EU Directive 2015/863 WEEE - EU Directive 2012/19/EU REACH - EC No 1907/2006 ETSI EN 302 208
IP rating (with enclosure)	IP67
Temperature range	-20°C to +60°C

*Measured at the center of the band

Mechanical specifications

Without enclosure

Size excluding connector	417 mm x 207 mm x 11.7 mm 16.4 inches x 8.1 inches x 0.5 inches
Antenna weight	385 g

With enclosure

Size excluding connector	480 mm x 290 mm x 72 mm 18.9 inches x 11.4 inches x 2.9 inches
Antenna weight	2315 g 3385 g (with packaging and ceiling ball joint)

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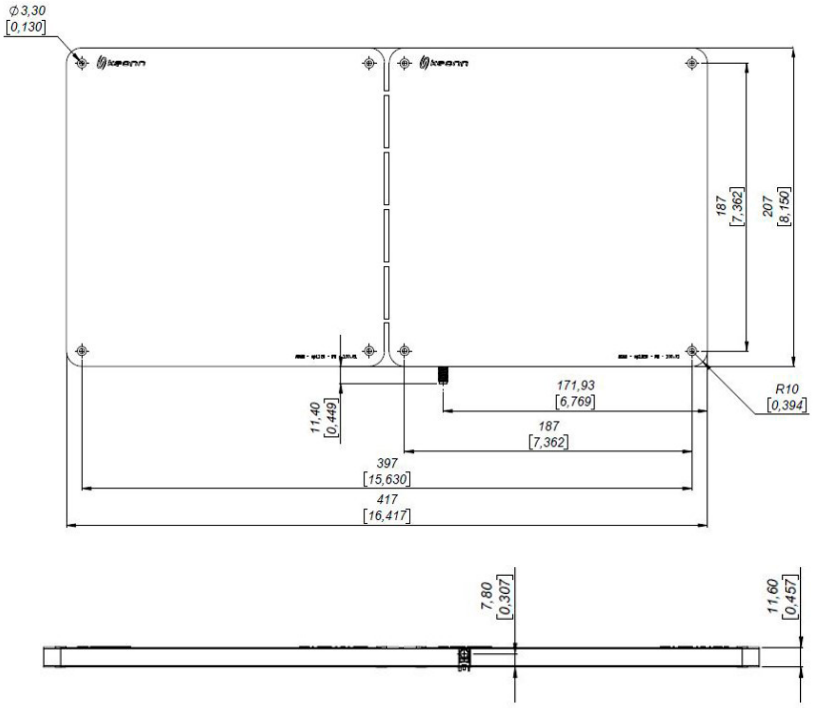
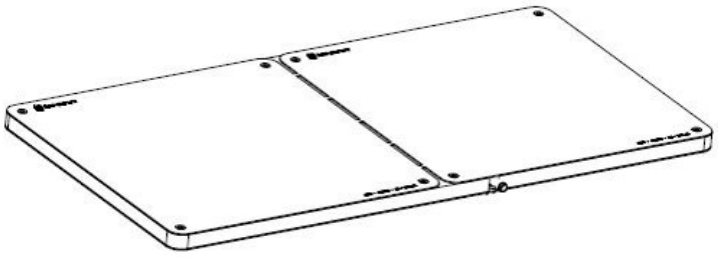
Mechanical specifications:

Connector between the layers of the antenna





Units in millimeters
[Units in inches]

Advantenna-SP12 ™

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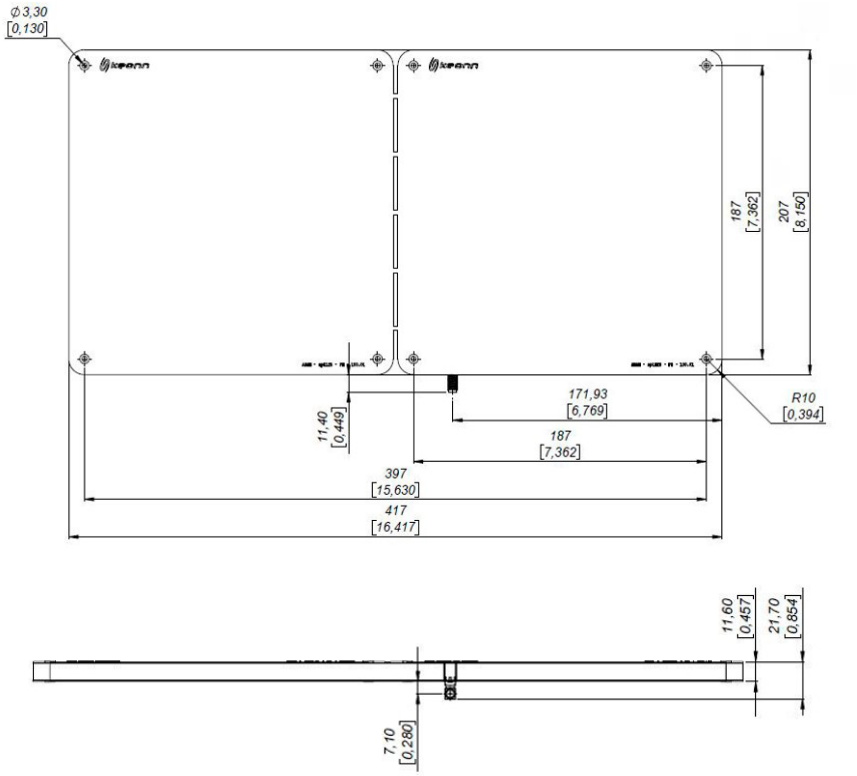
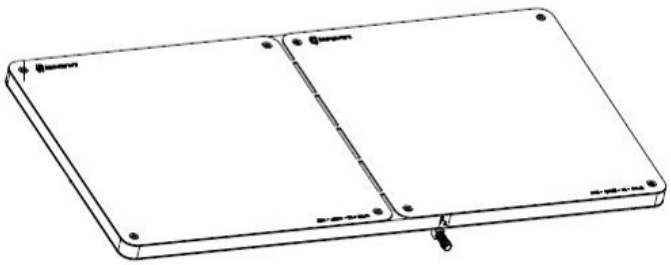
Mechanical specifications:

Right angle connector over the non-radiating side of the antenna





Units in millimeters
[Units in inches]

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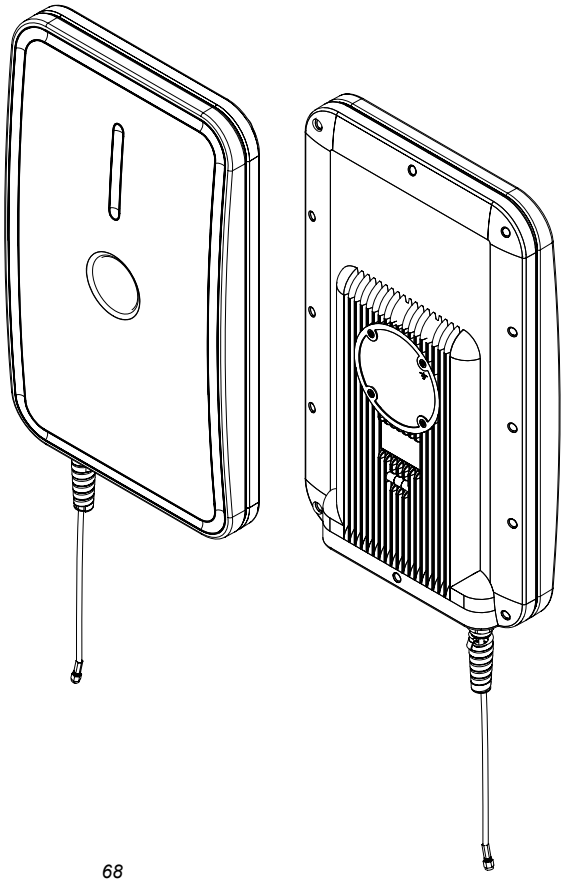
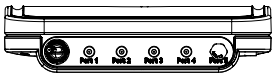
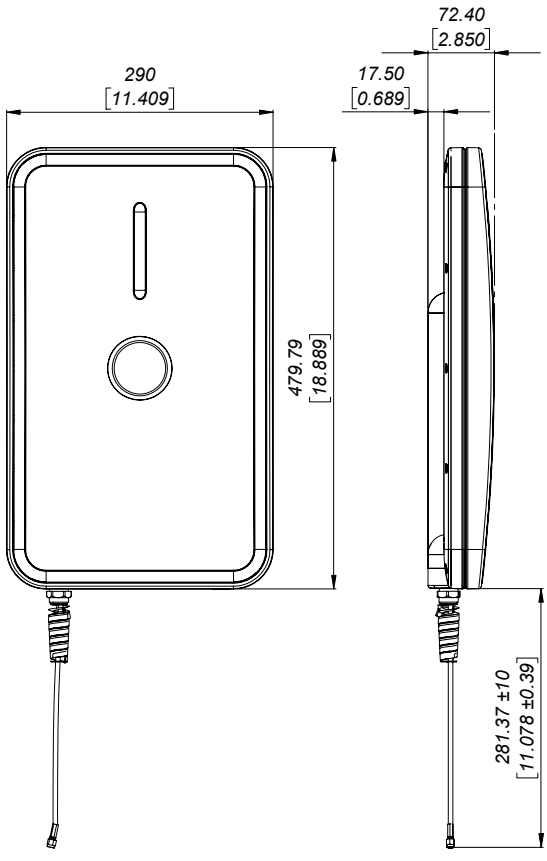
Mechanical specifications:

Antenna with enclosure (articulated bracket included)







Units in millimeters
[Units in inches]

Product codes for ordering

ADAN-SP12	FF	-	E	-	CP	CT	-	N	-	mmm	
											FF = frequency band
	EU										865,6 MHz - 867,6 MHz
	US										902,0 MHz - 928,0 MHz
											Enclosure
			-								No enclosure
			E67								With enclosure
											Connector position
					PRM						Edge mount connector between the layers of the antenna
					PRO						Right angle connector over the non-radiating side of the antenna
					-						Version with enclosure
											Connector type
						SMA					SMA connector
											Number of antennas in one board
								1			Number of radiating elements
								-			Version with enclosure
											Model
										100	Model number

Examples:

ADAN-SP12EU-PRMSMA-1-100:

- Advantenna-**SP12**
- ETSI frequency band, 865,6 MHz - 867,6 MHz
- **Edge mount connector** (inside the layers of the antenna)
- **One** single antenna
- Model **100**

ADAN-SP12US-E67-SMA-100

- Advantenna-**SP12**
- FCC frequency band, 902,0 MHz - 928,0 Mhz
- With enclosure
- Flange straight SMA connector
- Model **100**

Information in this publication supersedes all earlier versions. Specifications subject to change without notice.

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