



# keonn

Modular RFID  
Components

## Advantenna-SP12 <sup>TM</sup>

RFID UHF high gain fan  
beam antenna





### Benefits:

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

### Applications:

- RFID portals
- RFID tunnels
- Tracking systems

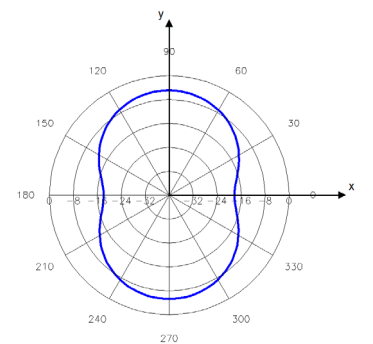
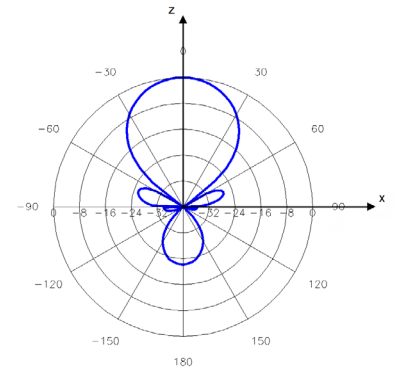
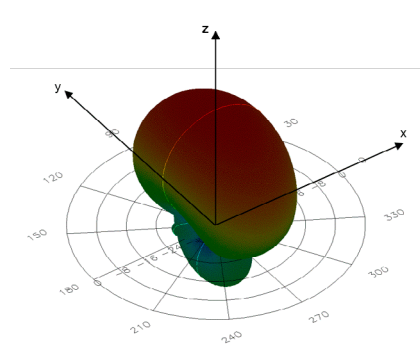
### Product overview

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



### Technical 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	<b>EU version</b> 9.5 dBiC (Max.), 9.3 dBiC (Typical) 6.6 dBiL*  <b>US version</b> 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	<b>EU version*</b> At Boresight 0.2 dB At 3dB Beamwidth 0.4 dB (Typical), 1.0 dB (Max)  <b>US version*</b> 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

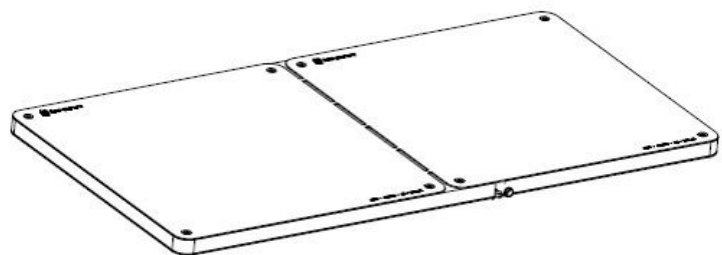
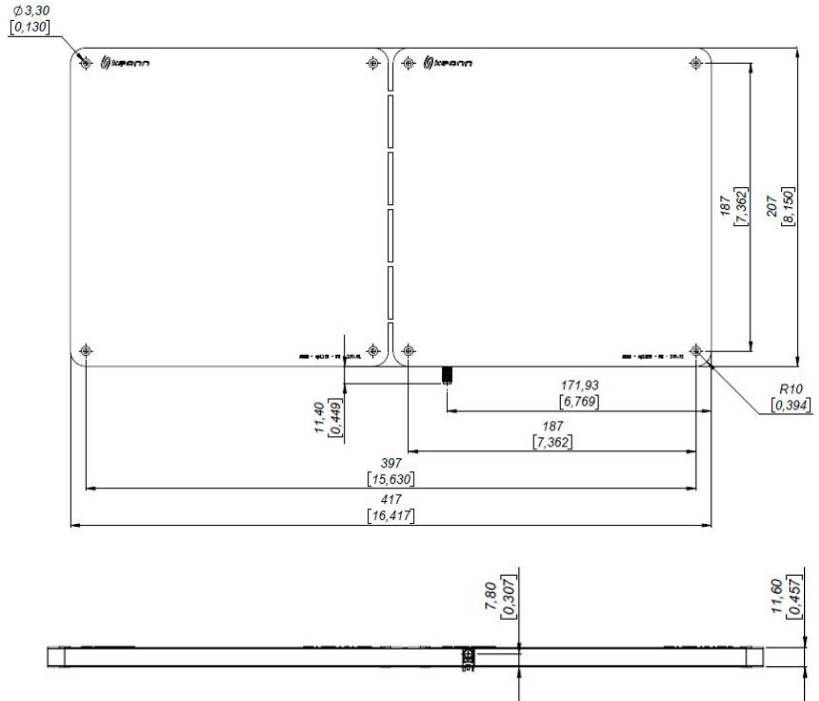
Size excluding connector	417 mm x 207 mm x 11.7 mm 16.4 inches x 8.1 inches x 0.5 inches
Antenna weight	385 g

#### 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)

### Mechanical specifications:

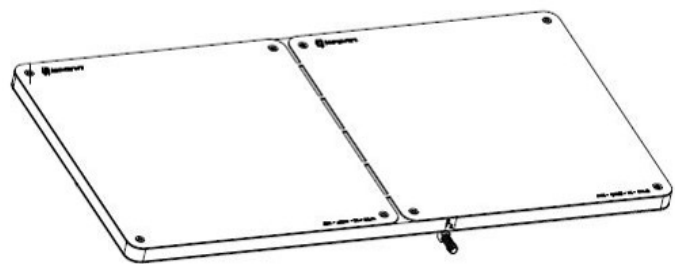
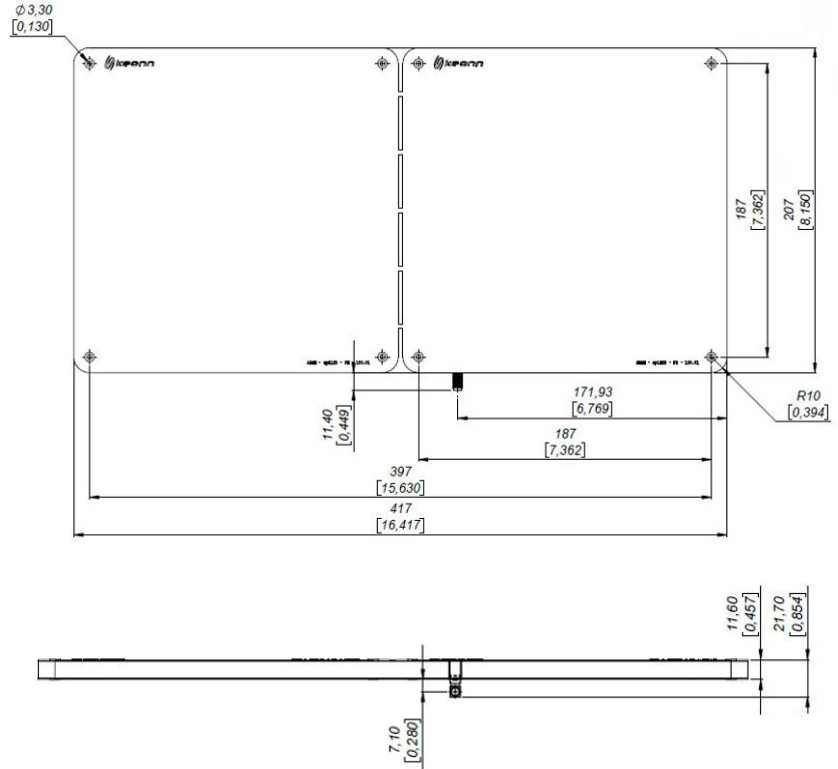
#### Connector between the layers of the antenna



Units in millimeters  
[Units in inches]

### Mechanical specifications:

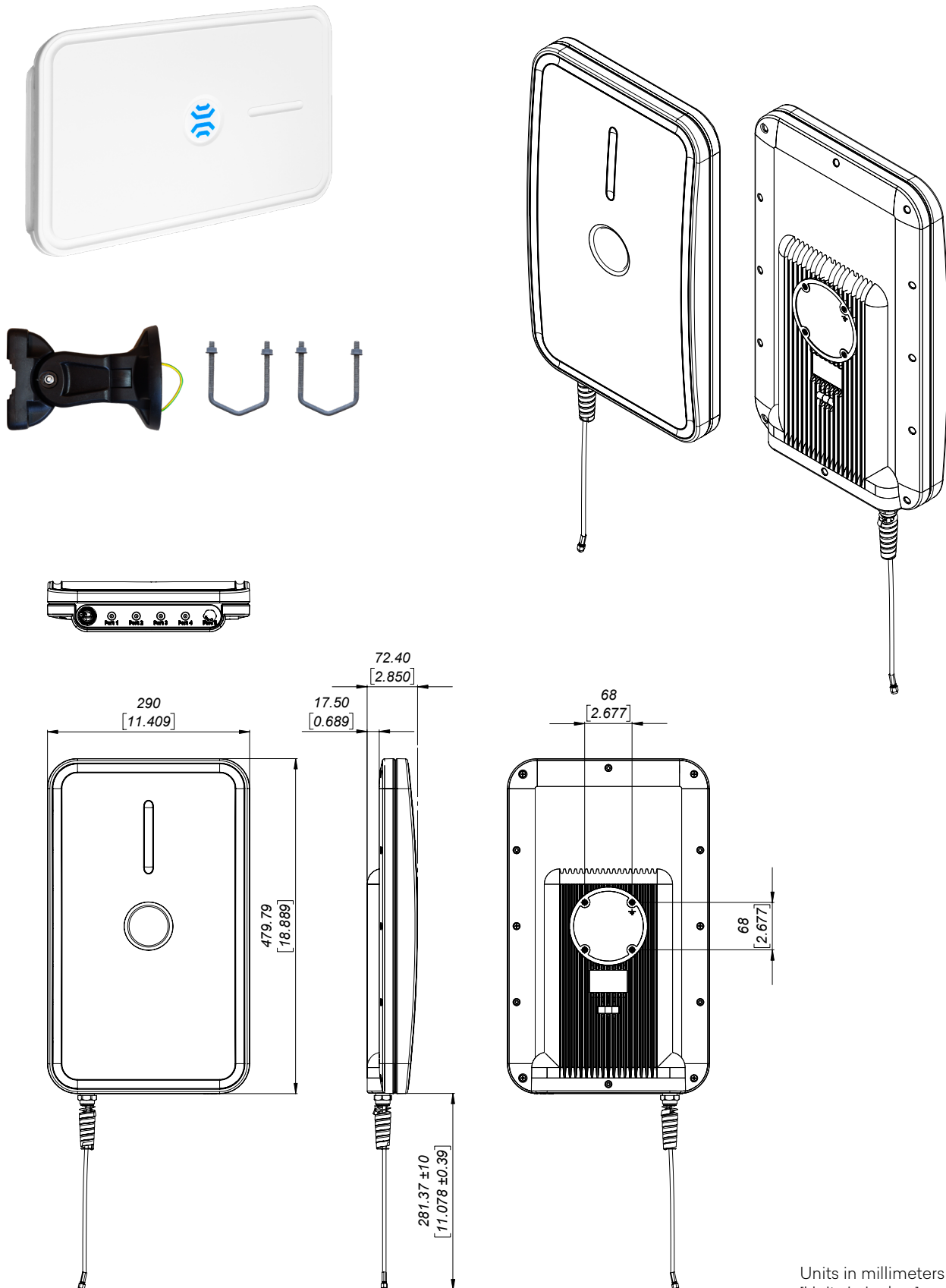
Right angle connector over the non-radiating side of the antenna



Units in millimeters  
[Units in inches]

### 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	
											<b>FF = frequency band</b>
	EU										865,6 MHz - 867,6 MHz
	US										902,0 MHz - 928,0 MHz
											<b>Enclosure</b>
			-								No enclosure
			E67								With enclosure
											<b>Connector position</b>
					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
											<b>Connector type</b>
						SMA					SMA connector
											<b>Number of antennas in one board</b>
								1			Number of radiating elements
								-			Version with enclosure
											<b>Model</b>
										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**



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