



# keonn

Modular RFID  
Components

## Advantenna-SP11™

RFID UHF high gain  
wide 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:

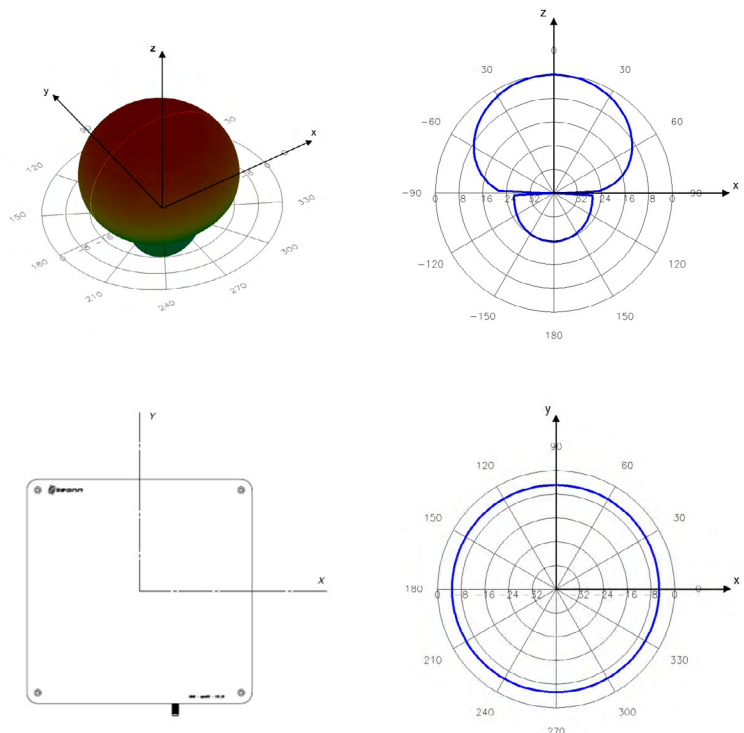
- RFID portals
- RFID tunnels
- RFID-enabled drones
- Ceiling inventory systems
- Smart shelves
- Smart panels
- Smart tables
- Smart surfaces in general

### Product overview

Advantenna-SP11 is a compact RFID UHF Antenna with a very high gain, circular polarization and a radiation pattern characterized by a wide beam in all directions in one hemisphere.

The combination of a high gain, light weight, thin form factor and compact size (compared to other high gain antennas available on the market) make this antenna ideal for many RFID applications such as RFID portals, RFID tunnels, RFID-enabled drones, ceiling inventory systems, smart shelves, smart displays, smart panels and smart tables or other surfaces.

### Radiation pattern



### Technical specifications

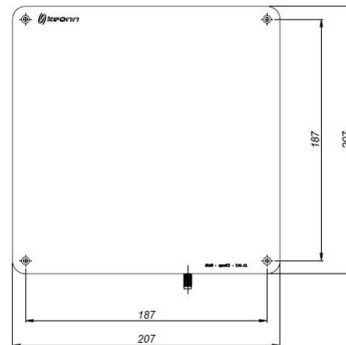
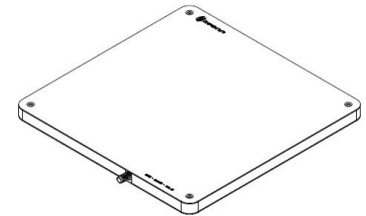
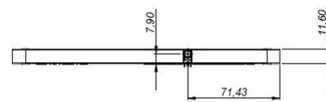


Operating Frequency EU Version	865 - 868 MHz (ETSI EN 302 208)
Operating Frequency US Version	902 - 928 MHz (FCC part 15)
Operating Detection distance	Up to 9 m
Antenna Technology	Patch
Radiation pattern	Wide beam in both directions in one hemisphere
Gain	<b>EU version</b> 8.0 dBiC (Max), 7.7 dBiC (Typical) 5.1 dBiL*  <b>US version</b> 7.8 dBiC (Max), 7.4 dBiC (Typical) 4.8 dBiL*
VSWR	< 1.4:1
Beam width (AZ / EL)	70° / 70°
Front-to-Back Ratio	< -15 dB
Polarization	Circular
Axial Ratio	<b>EU version*</b> At Boresight 0.1 dB At 3dB Beamwidth 0.6 dB (Typical), 1.2 dB (Max)  <b>US version*</b> At Boresight 0.02 dB At 3dB Beamwidth 0.6 dB (Typical), 1.3 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	Indoor antenna IP60 Dust resistant, even in high concentration
Temperature range	-20°C to +60°C
Size excluding connector	207 mm x 207 mm x 11.7 mm 8.1 inches x 8.1 inches x 0.5 inches
Size with interior right angle connector	207 mm x 220 mm x 11.7 mm 8.1 inches x 8.7 inches x 0.5 inches
Size with exterior right angle connector	207 mm x 220 mm x 21.8 mm 8.1 inches x 8.7 inches x 0.9 inches
Size with enclosure	250 mm x 250 mm x 45 mm 9.84 inches x 9.84 inches x 1.77 inches
Antenna weight	200 g
Weight with enclosure	1055 g

\*Measured at the center of the band

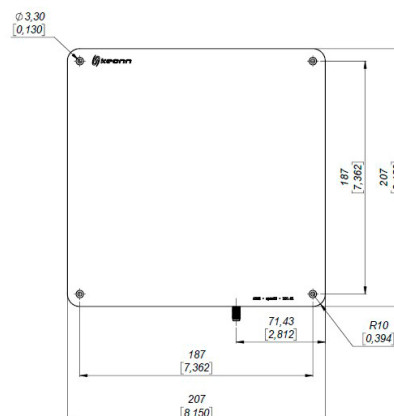
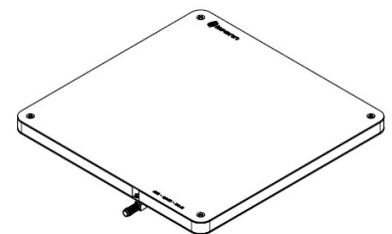
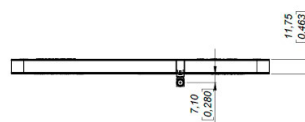
### Mechanical specifications:

#### Connector between the layers of the antenna



### Mechanical specifications:

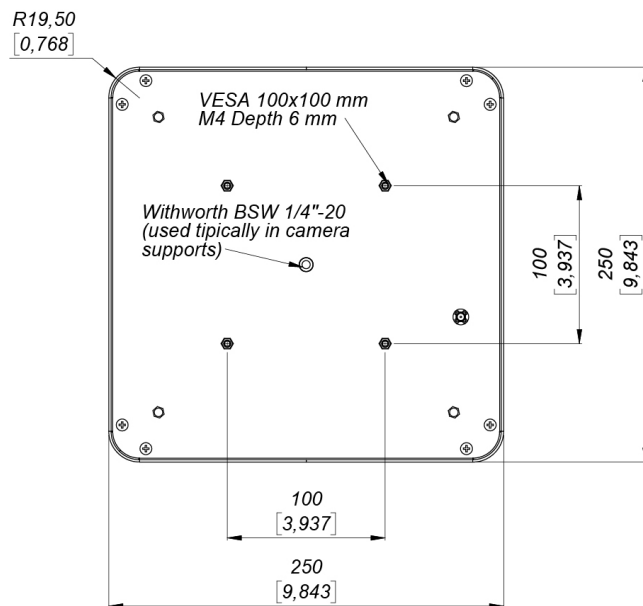
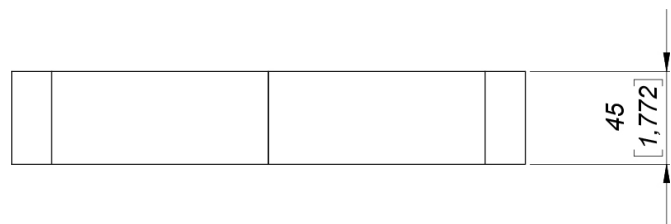
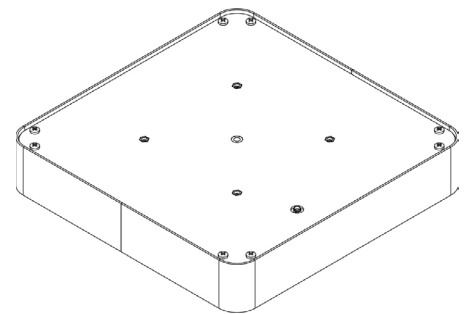
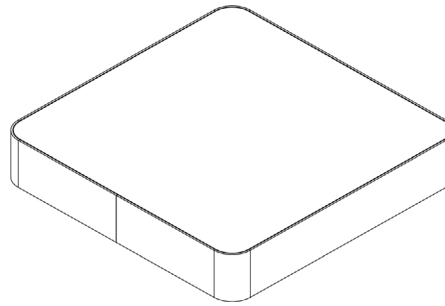
#### Right angle connector over the non-radiating side of the antenna



Units in millimeters  
[Units in inches]

### Mechanical specifications:

With enclosure



Units in millimeters  
[Units in inches]

### Product codes for ordering

ADAN-SP11	FF	-	CS	CT	-	N	mmm	
								<b>FF = frequency band</b>
	EU							865,6 MHz - 867,6 MHz
	US							902,0 MHz - 928,0 MHz
								<b>Connector shape</b>
			PRM					Edge mount connector between the layers of the antenna
			PRO					Right angle connector over the non-radiating side of the antenna
								<b>Connector type</b>
				SMA				SMA connector
								<b>Number of antennas in one board</b>
						1		Number of antennas
								<b>Model</b>
							100	Model number

Examples:

#### ADAN-SP11EU-PRMSMA-1-100:

- Advantenna-**SP11**
- European frequency band, 865,6 MHz - 867,6 MHz
- **Edge mount connector** (inside the layers of the antenna)
- **One** single antenna
- Model **100**



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