# **Multi-Frequency Band Vehicle Antenna**



# EV288

### **Description**

EV288 is a full frequency vehicle antenna supporting GPS,BDS,GLONASS,GALILEO,which can be widely used in automated agricultural equipment, high precision UAVs, vehicles-mounted etc. it is especially suitable for many applications of high-precision automated agricultural machines, such as high-precision tractors, plant protection machines, cultivators, and harvesters.

#### **Technical Features**

- 1. Passive antenna with high gain, wide beam width, low elevation angle signal reception effect is good, can receive satellite signal in serious blocking environment;
- 2. Passive antenna with wide working band can support multi-system & multi-frequency well, such as L5、B3、LBand and other frequency points, greatly improving the stability of the system;
- 3. Small size, light weight, reliable structure, protection level up to IP68, greatly improving the reliability of the machine, such as waterproof, vibration, and so on;
- 4. Strong anti-interference performance, antenna out-of-band suppression is high, can effectively avoid base station and other signal interference caused by system instability.

## Application

Unmanned delivery vehicle

- Self-drive bus
- Unmanned & unpiloted

- Self-driving truck
- Self-driving cab
- •Plant protection drone

# **Technical parameters**

Ρ	assive	antenna	characte	eristics

Frequency Range	BDS:B1/B2/B3	Polarization	RHCP				
	GPS:L1/L2/L5	Antenna axis ratio	≤3dB				
	GLONASS:L1/L2/L3	Azimuth coverage	0°~360°				
	GALILEO:E1/E5a/E5b/E6	VSWR	≤1.5				
	L-Band	Maximum gain	3.5dBi				
Antenna Impedance	50Ω	Phase center error	±3mm				
Low Noise Amplifier Characteristics							
LNA Gain	33±2dB	Passband ripple	±2dB				
Noise figure	≤1.3dB	Operating voltage	DC3.3~12V				
VSWR	≤2.0	Operating current	≤50mA				
Structural and environmental adaptability							
Dimensions	107*43mm	Waterproof rating	IP67				
Weight	?	Salt spray	Meet GB/T 2423.18(Note 1)72h				
Connector	SMA-K	Dropping	Single unit free fall 3 meters (Note 1)				
Mounting	5/8"×11 thread (inch)	Operating TEMP	<b>-40</b> °C∼ <b>+85</b> °C				
Vibratory	Meet GB/T 2423.100	Storage TEMP	<b>-55</b> ℃ <b>~+85</b> ℃				
Impact	Meet GB/T 2423.5(Note 1)	Storage humidity	95% non-condensing				

#### Structural drawing (dimensional tolerances ± 0.3 mm not noted)



#### Note 1:

Vibration test description: the external antenna should be able to maintain structural integrity and work normally after undergoing vibration test with frequency (1-30) Hz and single amplitude of 0,75mm for 50 min on three mutually perpendicular axes, it should be able to maintain structural integrity and work normally after undergoing vibration test with frequency (30-55) Hz and single amplitude of 0.25mm for 25 min on three mutually perpendicular axes.

Impact test description: the external antenna should be able to maintain structural integrity and work normally after being subjected to the impact test with acceleration of 50m/2 and duration of 18ms for 18 times.

Salt spray test description: Salt solution mass percentage concentration:(5±1)%, salt solution PH value: 6.5-7.2%, spray duration: 2h, spray interval storage time:22h, the number of times of the cycle of 3 times, the surface of appearance of the surface is not corroded, the antenna can work normally.

Waterproof test description: Single antenna bare machine random dropped 3 times, any direction, should keep the structure of the shell without obvious damage, work normally.