

## Sencity Rail Antenna 87010012

### Description

Railway rooftop antenna for 2G/3G/4G/5G cellular and Wi-Fi 4/Wi-Fi 6 bands.  
Multi-band GNSS (GPS, GLONASS, BEIDOU, GALILEO) with integrated LNA.  
Multiple Antenna installations support Cellular and Wi-Fi MIMO.  
Rugged design, meets EN 50155 railway standard.  
Fire retardant acc. to EN 45545-2.  
Works also on non-metallic surfaces.



### Product Configuration

#### Technical Data

##### Electrical Data

	Band 1	Band 2	Band 3	Band 4
Frequency (MHz)	694 - 960	960 - 2200	2200 - 2700	2700 - 3300
VSWR	1.5	2	2	2
Impedance (Ohm)	50	50	50	50
Gain (dBi)	5	6	7.5	7
Ambient temperature (°C)	25	25	25	25

  

	Band 5	Band 6	Band 7
Frequency (MHz)	3300 - 4900	4900 - 6425	1559 - 1620
VSWR	1.5	1.7	2
Impedance (Ohm)	50	50	50
Gain (dBi)	6.5	7.5	28
Ambient temperature (°C)	25	25	25

##### Ports

	Port 1	Port 2
Port name	Cell / WiFi	GNSS
Connector	N, jack (female)	SMA, jack (female)
Polarization	vertical	circular right
DC grounded	Yes	Yes

##### Connections

	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7
Port 1	X	X	X	X	X	X	
Port 2							X

##### General Data

Indicated VSWR values are valid for a metallic ground plane of 1M x 1M or larger.

##### Electrical Data LNA

LNA gain (dB)	28
LNA noise figure dB	2
LNA operating voltage (V)	5
LNA current consumption (mA)	7
LNA is connected to	Port 2

## Sencity Rail Antenna 87010012

87010012 is in compliance with Directive 2014/53/EU.

EMC: EN 50121-3-2:2016

LNA input voltage range: 2.5...5.5V

Values for LNA power consumption, noise figure and gain are given for a 5V operating voltage and may differ slightly for a lower voltage

### Mechanical Data

Dimensions (mm) 93 x 146 x 86 (Height x Width x Depth)  
Weight (kg) 0.63

Radiator: Aluminum

Flange: Aluminum.

Radome: Fiberglass.

All screws and nuts: Stainless steel.

Colour: Grey.

Sealing: Polyurethan and silicone.

This antenna, tested by an independent institute is DC grounded to protect against lightning and short circuit from high-tension lines.

Packaging size (outside): 170 x 120 x 100 mm

### Environmental Data

Environmental conditions outdoor  
Operation temperature (°C) -40 to 85  
Storage temperature (°C) -40 to 85  
IP rating IP66  
Flammability rating EN 45545-2  
2011/65/EU (RoHS - including 2015/863 and 2017/2102) compliant  
Lead-free soldered yes  
WEEE 2012/19/EU no special marking needed  
REACH 1907/2006/EC compliant

Environmental tests: EN 50155:2018-05

Flammability rating: EN 45545-2.

### Material Data

Radome colour grey  
Back plate/base plate colour black  
Back plate/base plate material Aluminium

### Related Documents

Mounting instruction DOC-0000862842  
Painting instruction DOC-0000256180  
Security instruction DOC-0000278984  
Outline drawing DOU-00393791  
3D-model DOC-0000863442  
CE compliancy DOC-0000874794

### Additional Information

Protected by Patents No.: D871,377 S / USD801,320 S / US10,355,345 B2