

## Sencity Rail Antenna 87010003

### Description

Railway rooftop antenna for sub-2700 MHz 2G/3G/4G cellular and Wi-Fi 1/ Wi-Fi 3 bands.

Embedded GPS antenna (requires separate LNA such as 86010142).

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)          | 790 - 960 | 960 - 1710 | 1710 - 2200 | 2200 - 2700 |
| VSWR                     | 2         | 1.5        | 1.5         | 1.8         |
| Impedance (Ohm)          | 50        | 50         | 50          | 50          |
| Gain (dBi)               | 4.5       | 5.5        | 7.5         | 7           |
| Ambient temperature (°C) | 25        | 25         | 25          | 25          |

  

|                          | Band 5          |
|--------------------------|-----------------|
| Band Name                | GPS             |
| Frequency (MHz)          | 1574.4 - 1576.6 |
| VSWR                     | 2               |
| Impedance (Ohm)          | 50              |
| Gain (dBi)               | 5.5             |
| Ambient temperature (°C) | 25              |

#### Ports

|              | Port 1           | Port 2           |
|--------------|------------------|------------------|
| Port name    | Cell / WiFi      | GPS              |
| Connector    | N, jack (female) | TNC, plug (male) |
| Polarization | vertical         | circular right   |
| DC grounded  | Yes              | Yes              |

#### Connections

|        | Band 1 | Band 2 | Band 3 | Band 4 | Band 5 |
|--------|--------|--------|--------|--------|--------|
| Port 1 | 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.

Low noise amplifier GPS 86010142 (please order separately).

#### Mechanical Data

|                 |                                                                                     |
|-----------------|-------------------------------------------------------------------------------------|
| Dimensions (mm) | 81 x 145 x 85 (Height x Width x Depth)                                              |
| Weight (kg)     | 0.5                                                                                 |
| Windload        | frontal: 0.5 N at 600 km/h, lateral: 0.05 N at 600 km/h , Wind speed survival: km/h |

## Sencity Rail Antenna 87010003

Radiator: Copper and brass.  
Flange: Anodized Aluminum.  
Radome: Fiberglass.  
All screws and nuts: Stainless steel.  
Colour: Grey.  
Sealing: Neoprene and silicon.

Packaging size (outside): 152 x 91 x 125 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 Products

86010142 Low Noise Amplifier GNSS (GPS, GLONASS, BEIDOU, GALILEO)

### Related Documents

|                      |                |
|----------------------|----------------|
| Mounting instruction | DOC-0000862989 |
| Painting instruction | DOC-0000256180 |
| Security instruction | DOC-0000278984 |
| Outline drawing      | DOU-00388992   |
| 3D-model             | DOC-0000863405 |

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