

## Sencity Rail Antenna 87010006

### Description

Railway rooftop multi-band antenna for 430-470 MHz, 870-960 MHz.  
Embedded GPS antenna (requires separate LNA such as 86010142).  
The antenna can be operated in all frequency ranges simultaneously.  
Multiple Antenna installations support Cellular 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 Name                |           |           | GPS             |
| Frequency (MHz)          | 430 - 470 | 870 - 960 | 1574.4 - 1576.4 |
| VSWR                     | 1.5       | 1.5       | 2               |
| Impedance (Ohm)          | 50        | 50        | 50              |
| Gain (dBi)               | 3.5       | 4.5       | 6.5             |
| Ambient temperature (°C) | 25        | 25        |                 |

#### Ports

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

#### Connections

|        | Band 1 | Band 2 | Band 3 |
|--------|--------|--------|--------|
| Port 1 | X      | X      |        |
| Port 2 |        |        | X      |

#### General Data

Indicated VSWR values are valid for a metallic ground plane of 1M x 2M or larger

Low noise amplifier GPS 86010142 (please order separately).

#### Mechanical Data

|                 |                                         |
|-----------------|-----------------------------------------|
| Dimensions (mm) | 150 x 145 x 85 (Height x Width x Depth) |
| Weight (kg)     | 0.5                                     |

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

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

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Packaging size (outside): 150 x 90 x 190 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)

2501.17.0091 Diplexer 80 - 520 / 694 - 2700 MHz can be used to operate both frequencies simultaneously.

### Related Documents

|                      |                |
|----------------------|----------------|
| Mounting instruction | DOC-0000864304 |
| Painting instruction | DOC-0000256180 |
| Security instruction | DOC-0000278984 |
| Outline drawing      | DOU-00389224   |
| 3D-model             | DOC-0000864308 |

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