

SENCITY® Rail Low Profile Antenna with GPS

1399.99.0032

Properties

- Railway rooftop antenna for 2G/3G/4G cellular and Wi-Fi 4/Wi-Fi 6 bands
- Multiple Antenna installations support Cellular and Wi-Fi MIMO
- Includes embedded passive GPS antenna (requires separate LNA such as 86010142)
- Rugged design, meets EN 50155 Railway Standard
- Fire retardant according to EN 45545-2
- Extremely low profile (40mm)



Electrical data				
	Band 1	Band 2	Band 3	Band 4
Name				
Frequency	790 MHz ... 806 MHz	806 MHz ... 870 MHz	870 MHz ... 960 MHz	1350 MHz ... 2700 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	2.2	1.8	1.5	2
Gain	5 dBi	5 dBi	5 dBi	5 dBi
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite Power max	200 W	192 W	183 W	123 W

	Band 5	Band 6
Name		GPS
Frequency	4900 MHz ... 6425 MHz	1574.397 MHz ... 1576.443 MHz
Impedance	50 Ω	50 Ω
VSWR	2.1	1.5
Gain	8 dBi	
Ambient Temperature	25 °C	
Composite Power max	67 W	

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Electrical remarks	
Remarks	Indicated VSWR values are valid for a metallic ground plane of 0.2 x 0.2m or larger. Indicated gain values will be achieved on a metallic ground plane of 1 x 1 m or larger. High-voltage-protection: no voltage on RF port, if catenary line touches antenna (EN 50124-1, 24 kVAC/1min). High-current-protection: Designed acc. to UIC 533, DC-grounded antenna element protection against lightning and short circuit with catenary lines (EN50388, EN 50122-1, 40kA/0.1sec)

Ports		
	Port 1	Port 2
Connector	N, jack (female)	TNC, plug (male)
Polarization	vertical	circular right
DC grounded	Yes	No

Connections		
	Port 1	Port 2
Band 1	✓	
Band 2	✓	
Band 3	✓	
Band 4	✓	
Band 5	✓	
Band 6		✓

Mechanical data	
Weight	0.527 kg
Dimensions	40 mm x 100 mm x 145 mm (Height x Width x Depth)
Windload	Wind Speed survival: 500 km/h
Remarks	Corrosion Low corrosion design acc. to MIL-F-14072(E). Mounting Shall be installed in longitudinal position to the wind/driving direction. Suitable for installation on high speed trains with a maximum speed of 500 km/hr. 4x composite sealing washers included for silicone-free sealing of the mounting screws

Material data	
Radome material	ASA (acrylic ester-styrene-acrylonitrile)
Radome colour	RAL 7043 (dark grey)
Back plate/base plate material	Aluminum
Back plate/base plate plating	Passivated (Plating)
Back plate/base plate colour	Grey

Environmental data	
Operation temperature	-40 °C ... 85 °C
Storage temperature	-55 °C ... 85 °C
Environment (application)	Outdoor
Ingress protection (IP Rating)	Mated / IP67, IP69
Flammability rating	EN 45545-2

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Environmental data	
Solar radiation	DIN 75220

Environmental remarks
Environmental tests: EN 50155:2007

Additional Information
This product meets the Deutsche Bahn specifications for rolling stock equipment. There is no applicable EU directive nor related harmonized standard for passive antennas. Consequently, there is no CE marking on these antennas and no EU Declaration of Conformity can be issued.

Antenna accessories		
Item description	Item number	Product name
9091.99.0257	85068234	Sencity Rail - M10 sealing washer kit
9090.99.0062	84098894	Sencity Rail mounting plate
86010142	84460305	SENCITY® Low Noise Amplifier GNSS (GPS, GLONASS, BeiDou, Galileo)

Antenna accessories remarks
9090.99.0062 Sencity Rail Mounting plate xxxCustomer specificxxx 9091.99.0257 Sencity Rail - M10 sealing washer kit 86010142 Low Noise Amplifier GNSS (GPS, GLONASS, BEIDOU, GALILEO)

Ordering information		
Item description	Item number	Product name
1399.99.0032	84076252	SENCITY® Rail Low Profile Antenna with GPS

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