

SENCITY® Tram MULTI Antenna

1399.99.0243

Properties

- Rugged vehicle rooftop multi-band antenna for Light Rail
- Supports TETRA, LTE450, 2G/3G/4G/5G cellular, Wifi 2.4/5 GHz, Wifi 6E and Dual Band GNSS (Beidou, Galileo, GPS, Glonass)
- 5 separate ports for 1x TETRA/cellular and 3x3 Wifi MIMO plus GNSS
- Meets EN50155 railway standard
- Fire retardant acc. to EN45545-2 and NFPA-130
- Single hole mounting, easy cabling feed-through



Electrical data				
	Band 1	Band 2	Band 3	Band 4
Name	TETRA/LTE450	Cellular	Cellular	Cellular
Frequency	380 MHz ... 470 MHz	617 MHz ... 960 MHz	1350 MHz ... 2700 MHz	3300 MHz ... 4200 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	2.5	2.1	2.1	2.1
Gain	3 dBi	2 dBi	4 dBi	4 dBi
Isolation between Ports				
Ambient Temperature	25 °C	25 °C	25 °C	25 °C
Composite Power max	40 W	40 W	40 W	40 W

	Band 5	Band 6	Band 7	Band 8
Name	Cellular	WiFi	WiFi	GNSS
Frequency	4900 MHz ... 7125 MHz	2400 MHz ... 2500 MHz	4900 MHz ... 7125 MHz	1164 MHz ... 1279 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	2.1	2.1	2.1	1.5
Gain	5 dBi	6 dBi	6 dBi	
Isolation between Ports		20 dB	20 dB	
Ambient Temperature	25 °C	25 °C	25 °C	

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	Band 5	Band 6	Band 7	Band 8
Composite Power max	40 W	30 W	30 W	

	Band 9
Name	GNSS
Frequency	1559 MHz ... 1610 MHz
Impedance	50 Ω
VSWR	1.8
Gain	
Isolation between Ports	
Ambient Temperature	
Composite Power max	

Electrical remarks

Remarks	Ground plane: Indicated VSWR values are valid for a metallic ground plane of 0.5 x 0.5m or larger and Isolation is provided as typical values. Indicated VSWR values are mostly valid for installations on non-metallic surfaces also (no specific ground plane requirements). Indicated gain values will be achieved on a metallic ground plane of 1 x 1 m or larger.
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Ports			
	Port 1	Port 2 to 4	Port 5
Port name	Tetra 1 (yellow)	WiFi 1-3 (blue)	GNSS (black)
Connector	SMA, plug (male)	SMA, plug (male)	TNC, plug (male)
Cable type	RADOX_RF_316_D	RADOX_RF_316_D	RADOX_RF_316_D
Cable length	0.3 m	0.3 m	0.3 m
Polarization	vertical	vertical	circular right
DC grounded	Yes	Yes	No

Connections

	Port 1	Port 2 to 4	Port 5
Port name	Tetra 1 (yellow)	WiFi 1-3 (blue)	GNSS (black)
Band 1	✓		
Band 2	✓		
Band 3	✓		
Band 4	✓		
Band 5	✓		
Band 6		✓	
Band 7		✓	
Band 8			✓
Band 9			✓

Electrical data LNA

LNA is connected to	Port 5
Input voltage	3 V ... 5 V
Current consumption	45 mA
Noise figure	2 dB

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Electrical data LNA	
Total gain @90° elevation	42 dBic

Mechanical data	
Weight	1.1 kg
Dimensions	60 mm x 210 mm (Height x Diameter)
Mounting breakthrough	Ø 30 mm

Material data	
Radome material	PC (Polycarbonate)
Radome colour	RAL 9017 (black)
Back plate/base plate material	Aluminum

Environmental data	
Operation temperature	-40 °C ... 85 °C
Storage temperature	-40 °C ... 85 °C
Transport temperature	-40 °C ... 85 °C
Environment (application)	Outdoor
Ingress protection (IP Rating)	IP68, IP69k
Flammability rating	EN 45545-2 NFPA-130
Solar radiation	DIN 75220

Environmental remarks	
Environmental tests: EN50155:2018-05	
High-voltage protection: EN50124-1:2017-03	
Low corrosion designed acc. to MIL-F-14072D	

Ordering information		
Item description	Item number	Product name
1399.99.0243	85185523	SENCITY® Tram MULTI Antenna

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