

SENCITY® Tram MULTI Antenna

1399.99.0233

Properties

- Supports 2G/3G/4G/5G cellular, Wifi 2.4/5 GHz, Wifi 6E and Dual Band GNSS (Beidou, Galileo, GPS, Glonass)
- 9 separate ports for 4x4 cellular MIMO and 4x4 Wifi MIMO plus GNSS
- Fire retardant acc. to EN45545-2 and NFPA-130
- Meets EN50155 railway standard
- Single hole mounting, easy cabling feed-through



Electrical data

	Band 1	Band 2	Band 3	Band 4
Name	Cellular	Cellular	Cellular	Cellular
Frequency	617 MHz ... 960 MHz	1350 MHz ... 2700 MHz	3300 MHz ... 4200 MHz	4900 MHz ... 7125 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	2	2.1	2	2
Gain	2 dBi	4 dBi	4 dBi	5 dBi
Isolation between Ports	9 dB	18 dB	15 dB	18 dB
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	WiFi	WiFi	GNSS	GNSS
Frequency	2400 MHz ... 2500 MHz	4900 MHz ... 7125 MHz	1164 MHz ... 1279 MHz	1559 MHz ... 1610 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	2	2	1.5	1.8
Gain	6 dBi	6 dBi		
Isolation between Ports	24 dB	24 dB		
Ambient Temperature	25 °C	25 °C		
Composite Power max	30 W	30 W		

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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.

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

Electrical data LNA	
Input voltage	3 V ... 5 V
Current consumption	45 mA
Noise figure	2 dB
Total gain @90° elevation	42 dBic
Remarks	LNA is connected to Port 9

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	Aluminium

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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)	Mated / 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 (tested without stick antenna)
 Low corrosion designed acc. to MIL-F-14072D
 This Antenna is compliant with the Radio Equipment Directive 2014/53/EU
 CE-Mark

Ordering information

Item description	Item number	Product name
1399.99.0233	85185407	SENCITY® Tram MULTI Antenna

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 DOCUMENT PIM-P35293 / Date of publication: 18.07.2025 / uncontrolled copy