

SENCITY® OMNI-M

1399.99.0321

Properties

- 7-Port antenna for Cellular and Wi-Fi bands
- Supports 4x4 Cellular MIMO for 3G, 4G and 5G
- Supports 2x2 Wi-Fi MIMO in all Wi-Fi 6E bands
- Embedded GNSS with integrated LNA supports GPS L1+L2+L5, Galileo E1+E5a+E5b, BeiDou B1+B2+B3 and GLONASS G1+G2 bands
- 4 radiators for Cellular bands and 2 radiators for Wi-Fi/WiMAX bands
- Rugged design, meets EN 60068 Standard
- Single hole mounting on cabinet or roof

**Electrical data**

	Band 1	Band 2	Band 3	Band 4
Name	Cellular 1-4	Cellular 1-4	Cellular 1-4	Cellular 1-4
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	80 W	80 W	80 W	80 W

	Band 5	Band 6	Band 7	Band 8
Name	Wi-Fi 1-2	Wi-Fi 1-2	GNSS 1	GNSS 2
Frequency	2400 MHz ... 2500 MHz	4900 MHz ... 7125 MHz	1164 MHz ... 1279 MHz	1555 MHz ... 1610 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	2	2	1.5	1.5
Gain	6 dBi	6 dBi		
Isolation between Ports	24 dB	24 dB		
Ambient Temperature	25 °C	25 °C		

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	Band 5	Band 6	Band 7	Band 8
Composite Power max	80 W	80 W		

Electrical remarks

Remarks	Ground plane: Indicated VSWR values are also valid for installations on non-metallic surfaces (no specific ground plane requirements). Indicated gain values will be achieved on a metallic ground plane of 500 x 500 mm or larger. Please refer to the outline drawing to read the cable pigtail length of each port.
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Ports

	Port 1 to 4	Port 5 to 6	Port 7
Port name	Cellular 1-4	Wi-Fi 1-2	GNSS
Connector	N, jack (female)	N, jack (female)	TNC, plug (male)
Cable type	ENVIROFLEX_316_D	ENVIROFLEX_316_D	ENVIROFLEX_316_D
Polarization	vertical	vertical	circular right
DC grounded	Yes	Yes	

Connections

	Port 1 to 4	Port 5 to 6	Port 7
Port name	Cellular 1-4	Wi-Fi 1-2	GNSS
Band 1	✓		
Band 2	✓		
Band 3	✓		
Band 4	✓		
Band 5		✓	
Band 6		✓	
Band 7			✓
Band 8			✓

Electrical data LNA

LNA is connected to	Port 7
Input voltage	3 V ... 5 V
Current consumption	40 mA
Noise figure	1.6 dB
Total gain @90° elevation	30 dBic
Remarks	Values for LNA power consumption, noise figure and gain are given for a 5V operating voltage and may differ slightly for a lower voltage.

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Mechanical data	
Weight	1.2 kg
Dimensions	62.5 mm x 211.5 mm (Height x Diameter)
Remarks	Corrosion: Low corrosion design according to MIL-F-14072(E), 96 hours Salt Spray test. Mounting: Shall be installed in longitudinal position to the wind/driving direction. Suitable for installation on vehicles with a maximum speed of 160 km/hr.

Material data	
Radome material	PC (Polycarbonate)
Radome colour	RAL 7044 (light grey)
Back plate/base plate material	Aluminum

Environmental data	
Operation temperature	-40 °C ... 85 °C
Storage temperature	-55 °C ... 85 °C
Transport temperature	-40 °C ... 85 °C
Environment (application)	Outdoor
Ingress protection (IP Rating)	Mated / IP69
Solar radiation	UL 746C, FI

Environmental remarks	
Environmental tests: EN 60068 EN 60068-2-1 Cold temperature test Ad, -55°C, 16h EN 60068-2-2 Dry heat test Bd +85°C, 16h EN 60068-2-30 Damp heat cyclic test Db, +25/55°C, 2 cycles EN 60068-2-11 Salt Mist test Ka, 96h EN 61373 § 9 Mechanical Vibration test, Cat. 2 EN 61373 § 10 Mechanical shock test, Cat. 2 EN 60529 Ingress protection test, IP69	

Additional Information	
This Antenna is compliant with the Radio Equipment Directive 2014/53/EU ETSI EN 303 413 V1.1.1 (2017-06) ETSI EN 301 489-1 V2.2.3 (2019-03) ETSI EN 301 489-19 V2.1.1 (2019-04)	

Ordering information		
Item description	Item number	Product name
1399.99.0321	85185317	SENCITY® OMNI-M

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