

## SENCITY® OMNI-M Antenna

1399.99.0324

### Description

9-Port antenna.  
 Supports 4x4 Cellular MIMO for 3G, 4G and 5G  
 Supports 4x4 Wi-Fi MIMO in all Wi-Fi 6E bands.  
 Embedded GNSS with integrated LNA supports GPS L1, Galileo E1, BeiDou B1 and GLONASS G1 bands.  
 4 radiators for Cellular bands.  
 4 radiators for Wi-Fi/WiMAX bands.  
 Rugged design, meets EN 60068 Standard.  
 Single hole mount on cabinet or roof.



### Product Configuration

#### Technical Data

##### Electrical Data

	Band 1	Band 2	Band 3	Band 4
Band Name	Cellular 1-4	Cellular 1-4	Cellular 1-4	Cellular 1-4
Frequency (MHz)	617 - 960	1350 - 2700	3300 - 4200	4900 - 7125
VSWR	2.0	2.1	2.0	2.0
Impedance (Ohm)	50	50	50	50
Gain (dBi)	2	4	4	5
Composite power max (W)	80	80	80	80
Ambient temperature (°C)	25	25	25	25
Port Isolation (dB)	9	18	15	18

  

	Band 5	Band 6	Band 7
Band Name	Wi-Fi 1-4	Wi-Fi 1-4	GNSS
Frequency (MHz)	2400 – 2500	4900 – 7125	1559 - 1610
VSWR	2.0	2.0	1.5
Impedance (Ohm)	50	50	50
Gain (dBi)	6	6	
Composite power max (W)	80	80	
Ambient temperature (°C)	25	25	
Port Isolation (dB)	24	24	

##### Ports

	Port 1 to 4	Port 5 to 8	Port 9
Port name	Cellular 1-4	Wi-Fi 1-4	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

	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7
Port 1 to 4	X	X	X	X			
Port 5 to 8					X	X	
Port 9							X

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### General Data

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.

### Electrical Data LNA

LNA noise figure dB	1.6
LNA current consumption (mA)	20
LNA is connected to	Port 9

This Antenna is compliant with the Radio Equipment Directive 2014/53/EU

ETSI EN 303 413 V.1.1.1 (2017-06)

ETSI EN 301 489-1 V2.2.3 (2019-03)

ETSI EN 301 489-19 V2.1.1 (2019-04)

LNA input voltage range: 3...5V

Total gain @90° elevation: 30 dBiC

Values for LNA power consumption, noise figure and gain are given for a 5V operating voltage and may differ slightly for a lower voltage.

### Mechanical Data

Dimensions (mm)	211.5 x 62.5 (Diameter x Height)
Weight (kg)	1.2

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.

### Environmental Data

Environmental conditions	outdoor
Operation temperature (°C)	-40 to 85
Storage temperature (°C)	-55 to 85
Transport temperature (°C)	-40 to 85
IP rating	IP69
Solar radiation	UL 746C, F1
2011/65/EU (RoHS -including 2015/863 and 2017/2102)	compliant acc. Annex III
Lead-free soldered	yes
WEEE 2012/19/EU	no special marking needed
ELV 2000/53/EC	compliant
REACH 1907/2006/EC	compliant

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

### Material Data

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