



# MULTIBAND ROOFTOP 2 PORTS MIMO ANTENNA

T01811828

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TRANSPORT

## Electrical Specifications

Frequency bands		
700MHz, band	694 ÷ 790 MHz	
800MHz, band	790 ÷ 870 MHz	
900MHz, band	870 ÷ 960 MHz	
1800/2100MHz, band	1710 ÷ 2170 MHz	
Wi-Fi band	2400 ÷ 2500 MHz	
	2500 ÷ 2700 MHz	
	3300 ÷ 4900 MHz	
	4900 ÷ 5935 MHz	

### GENERAL DATA

Impedance ( $\Omega$ )	50
VSWR	< 1.7:1
Continuous Max. Composite Power (W)	10
Polarization	linear vertical
Gain (dBi)	5 for 700/800/900 MHz
	7 for 1800/2100 MHz
	7 for 2400 ÷ 2500 MHz
	7 for 2500 ÷ 2700 MHz
	7.5 for 3300 ÷ 4900 MHz
8.5 for 4900 ÷ 5935 MHz	
Isolation between ports (dB)	> 15 for frequency < 1000 MHz > 25 for frequency > 1700 MHz
Operation Temp. Range ( $^{\circ}\text{C}$ )	-40 ÷ +85

### NAVIGATION AND GEOLOCALIZATION BANDS

Frequency band (MHz)	1574 ÷ 1610
Impedance ( $\Omega$ )	50
VSWR	≤ 2.0:1
Polarization	RHCP
Total gain (dBic) @ 90° of elevation	30, @ $T_0=25^{\circ}\text{C}$ , $V_{dc}=5\text{V}$
LNA noise figure (dB)	≤ 2.5, @ $T_0=25^{\circ}\text{C}$ , $V_{dc}=5\text{V}$
LNA current consumption (mA)	< 50, @ $T_0=25^{\circ}\text{C}$ , $V_{dc}=5\text{V}$
LNA input voltage (V)	3 ÷ 5
Satellite navigation and geolocalization supported systems	GPS, GALILEO and GLONASS
Operation Temp. Range ( $^{\circ}\text{C}$ )	-40 ÷ +85



## DESCRIPTION

Railway multiband rooftop 2 ports MIMO antenna for 2G/3G/4G cellular, Wi-Fi 2.4 GHz and 5 GHz bands, with embedded GPS, Galileo and Glonass antenna with integrated LNA.

Supports 2x2 cellular and Wi-Fi MIMO.

Works also on non-metallic surfaces.

## Mechanical Specifications

Connectors	2G/3G/4G and Wi-Fi bands NAVIGATION AND GEOLOCALIZATION bands	2 x N f 1 x 200mm of low loss RF coaxial cable pigtail with N f connector (cable length and connectors could be tailored on customer needs)
Dimensions (Height from installation surface x Width x Depth, mm)		80 x 125 x 380
Weight (kg)		abt. 3.3
Materials	Base Radome	Aluminum with SURTEC 650 galvanic treatment High impact polycarbonate
Mounting		the antenna needs to be installed in longitudinal position with respect to the wind/driving direction
Ground plane requirement	the above indicated VSWR values are also valid for installations on non-metallic surfaces, but in order to obtain the above indicated gain values it is necessary to install the antenna at the center of a metallic conductive groundplane of minimum dimensions 1000x1000mm; it's advisable to keep the mounting metallic conductive surface clean and free from paint for an optimal electrical contact.	

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## Environmental Specifications

### ATMOSPHERIC and CLIMATIC CONDITIONS according to EN 50155:2007 and NF EN 60068

Temperature conditions	-40°C, +85°C
Atmospheric pressure	-40°C, +85°C, 95% HR at 2000 m
Rain, hail, snow, frost	1000 mm/h, 1 J impact, 0.5 m, 3 cm
Combined wind and train speed	530 km/h

### MECHANICAL CONDITIONS according to EN 50155:2007 and NF EN 60068, 61373 and 15-818

Free falls	1 m
Hits (vertical, cross-sectional, longitudinal)	30 m/s <sup>2</sup> , 30 m/s <sup>2</sup> , 50 m/s <sup>2</sup> , 30 ms
Impacts	30 J

### EMC according to EN 50121-3-2:2016

### DC GROUNDING, HIGH VOLTAGE AND HIGH CURRENT PROTECTION according to UIC533

### RoHS 2011/65/EU compliant

### FLAMMABILITY RATING according to NF F16-101/102, EN 45545-2:2013

## MOUNTING FLANGE

Mounting flange holes are indicated in the relevant mounting instruction document.

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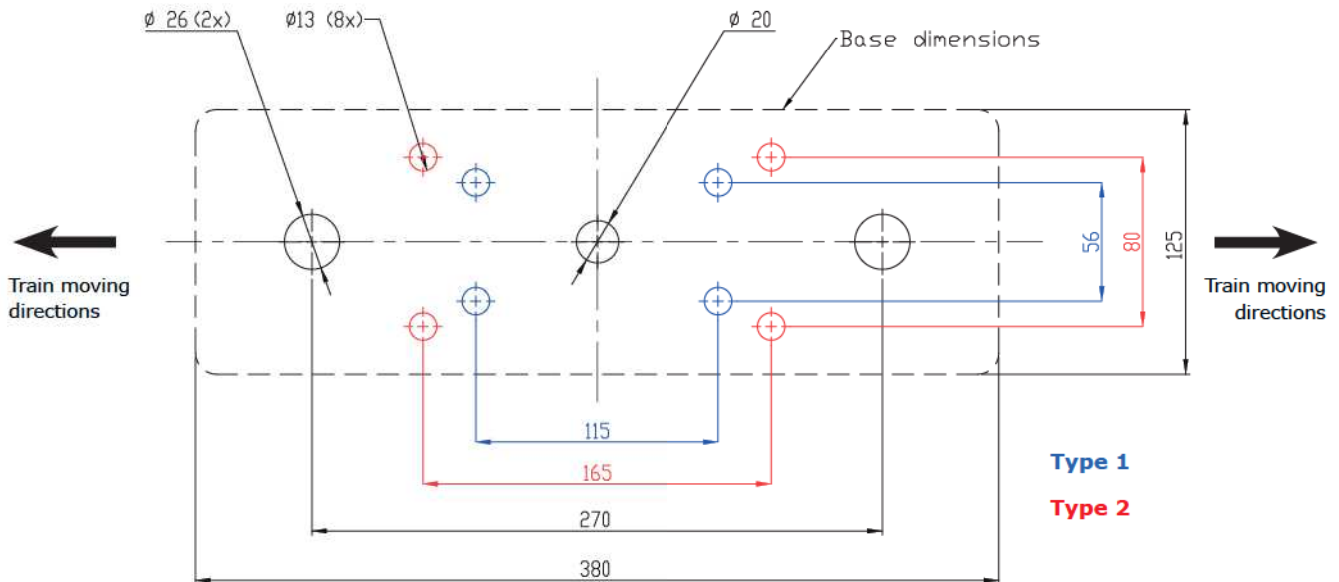
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## MOUNTING FLANGE



All dimensions are in mm

## MOUNTING RECOMMENDATIONS

