



MULTIBAND ROOFTOP ULTRA LOW PROFILE MULTI MIMO ANTENNA 4x4 + GNSS

T01841801

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POLOMARCONI offers a very wide range of wireless products.
Our products can be tailored according to the customer's need.

TRANSPORT

Electrical Specifications

Frequency bands 2G/3G/4G/5G and Wi-Fi	694 ÷ 790 MHz	
	790 ÷ 870 MHz	
	870 ÷ 960 MHz	
	1427 ÷ 1511 MHz	
	1710 ÷ 2170 MHz	
	2300 ÷ 2700 MHz	
	3300 ÷ 3800 MHz	

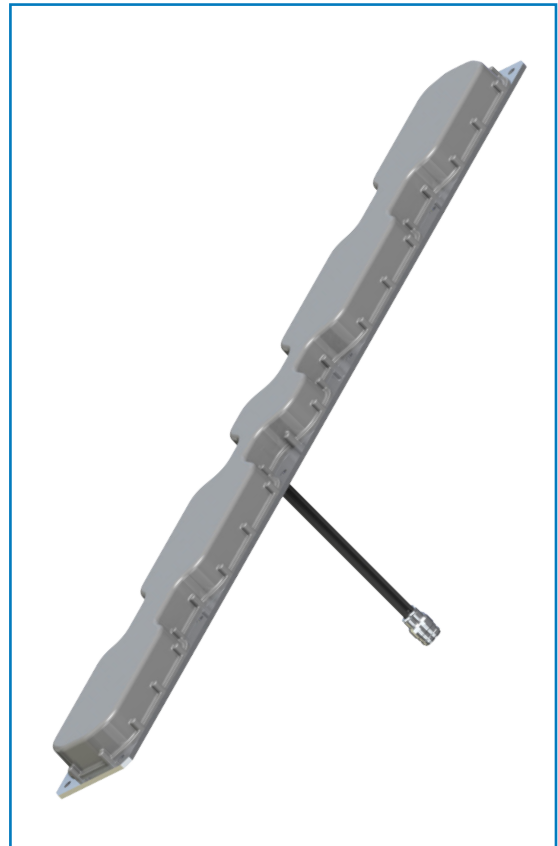
GENERAL DATA

Impedance (Ω)		50
VSWR	694 ÷ 960 MHz	< 2.4:1
	1427 ÷ 1511 MHz	< 2.0:1
	1710 ÷ 2170 MHz	< 2.0:1
	2300 ÷ 2700 MHz	< 2.0:1
	3300 ÷ 3500 MHz	< 2.4:1
	3500 ÷ 3800 MHz	< 2.2:1
Continuous Max. Composite Power (W)		40
Polarization		linear vertical
Gain (dBi) (*)	700/800/900 MHz	> 5
	1427 ÷ 1511 MHz	> 6
	1710 ÷ 2170 MHz	> 7
	2300 ÷ 2500 MHz	> 7
	2500 ÷ 3300 MHz	> 7
	3300 ÷ 3800 MHz	> 8
Isolation between ports (dB)	frequency \leq 1000 MHz	> 15
	frequency > 1000 MHz	> 20
Operating Temp. Range ($^{\circ}$ C)		-40 ÷ +85

*Cable losses not factored

NAVIGATION AND GEOLOCALIZATION BANDS

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



DESCRIPTION

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

Mechanical Specifications

Connectors		
2G/3G/4G/5G and Wi-Fi bands		4 x 200mm of low loss RF coaxial cable pigtail with N/f connector
NAVIGATION AND GEOLOCALIZATION bands		1 x 200mm of low loss RF coaxial cable pigtail with TNC/m connector
Dimensions (Height from installation surface x Width x Depth, mm)		40 x 110 x 1000
Weight (kg)		abt. 2.6
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		Recommended 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 EN50155:2021 and EN60068:2012

MECHANICAL CONDITIONS according to EN50155:2021 and EN61373:2012

EMC according to EN50121-3-2:2016

RoHS and REACH compliant

FLAMMABILITY RATING according to EN45545-2:2013/A1:2015

IP rating: IP69

**DC GROUNDING, HIGH CURRENT PROTECTION according to NF EN 50153:2014, UIC 758,
NF EN 50388:2013 and NF EN 50123:2004, EN50124-1:2020, UIC 533**

Short-circuit currents flow / time before breaking

70 kA / 5 ms – 40 kA / 100 ms (DC)
31.5 kA / 10 ms – 15 kA / 100 ms (AC)

MOUNTING FLANGE

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