

METATRONIX

Innovative Intelligent Transport Systems

Certified System
IATF 16949
Automotive



R118

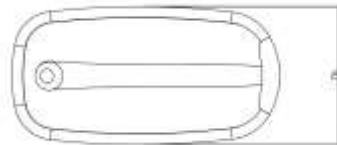
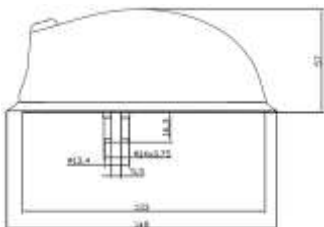
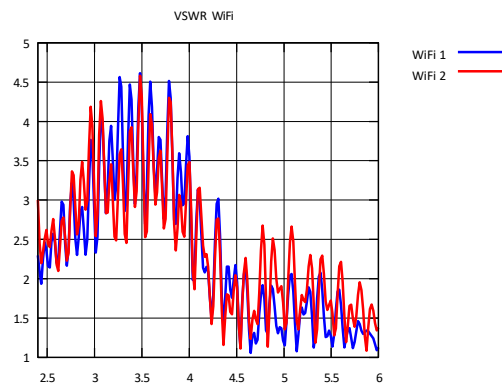
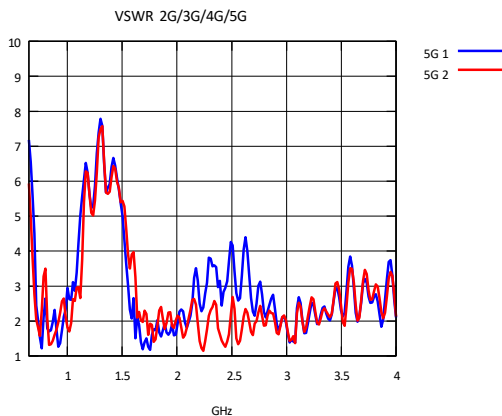


MMBAntenna

ANTENNA MIMO

2x2G/3G/4G/5G, 2x WiFi 2.4/5.8, GPS/GNSS

The **MBAntenna** is designed and manufactured to comply with all the environmental requirements and applicable directives for the Automotive use. All the connectors are standard ITxPT.



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SPECIFICATIONS	
Material Base	Alluminium alloy EN AW-6082
Material Radome	PA6 Black 30% glass fiber
Colour	Black
Dimension	(mm) 148 x 77 x 68
Temperature	(°C) -35° / +80°
Mounting hole:	
Squared	15x15
Round	Ø19
TECHNICAL DATA 2x2G/3G/4G/5G	
Frequency range MHz	690 ÷ 960 1427 ÷ 1518 1710 ÷ 2170 2300 ÷ 2690 3300 ÷ 3800 MHz
Impedance	50 Ω
V.S.W.R.	< 3
Polarization	Vertical
Emission	Omnidirectional
Gain (dBi)	690 ÷ 960 MHz 2 dBi 1427 ÷ 1518 MHz 3 dBi 1710 ÷ 2170 MHz 4 dBi 2300 ÷ 2690 MHz 5 dBi 3300 ÷ 3800 MHz 5 dBi
Cable	RG174 mm.500 – R118 certified
Connector	Standard ITxPT : Fakra Code D/Female/Bordeaux (or custom)
TECHNICAL DATA 2x2.4/5.8	
Frequency range	2400-2485 MHz 5250-5850 MHz
Impedance	50 Ω
V.S.W.R.	< 3
Gain (dBi)	2400 ÷ 2485 MHz 8 dBi 5250 ÷ 5850 MHz 9 dBi
Polarization	Vertical
Emission	Omnidirectional
Cable	RG174 mm.500 – R118 certified
Connector	Standard ITxPT Fakra Code I/Female/Beige (or custom)
TECHNICAL DATA GPS/GNSS/GALILEO	
Antenna type	Active Planar Patch Antenna
Center frequency	1580 MHz
Bandwidth	± 28MHz
V.S.W.R.	< 2.0
Impedance	50 Ω
Polarization	RHCP
Supply voltage	2.7 ÷ 5.1 V
Current absorption	13 ± 2 mA at 3.0 V
Gain amplifier	26 ± 3 dB at 3.0 V
Gain patch antenna	2 dB
Noise figure	< 1.5 dB
Cable	RG174 mm.500 – R118 certified
Connector	Standard ITxPT Fakra Code C/Female/Blue (or custom)
CERTIFICATIONS	
RED	2051-RED-214501
E-mark	E24 10R06 00 3662 00

MMBAntenna is ITxPT compliant



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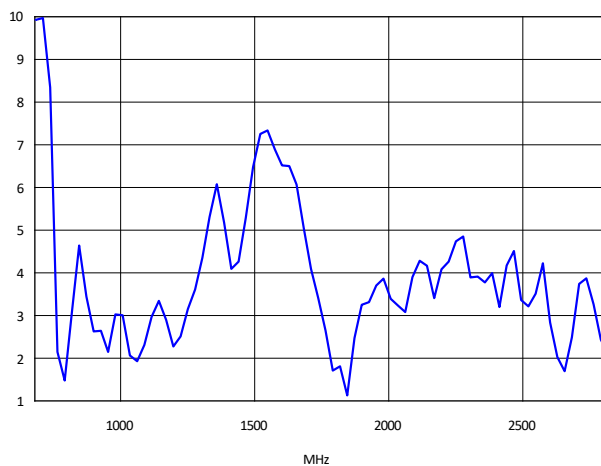
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ANTENNA

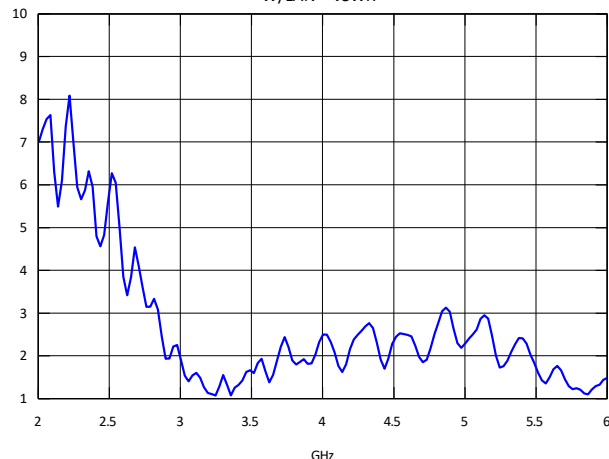
3x2G/3G/4G, 1xWiFi 2.4/5.8, 2xGPS/GNSS

The **MBAntenna** is designed and manufactured to comply with all the environmental requirements and applicable directives for the Automotive use. All the connectors are standard ITxPT.

LTE - VSWR



W/LAN - VSWR



SPECIFICATIONS

Material	PA6
Colour	Black
Height	80 mm
Diameter	140 mm
Temperature	-40°C to +85°C

LTE

Frequency range MHz	690 ÷ 960 1710 ÷ 2690
Impedance	50 Ω
V.S.W.R	< 3
Polarization	Vertical
Emission	Omnidirectional
Gain	690 ÷ 960 MHz 2 dBi 1710 ÷ 2690 MHz 4 dBi
Cable	RG174 mm 500 – R118 certified
Connector	Standard ITxPT : Fakra Code D/Female/Bordeaux (or custom)

WLAN

Frequency range	2400 ÷ 2485 MHz 4900 ÷ 5925 MHz
Impedance	50 Ω
V.S.W.R.	< 3
Gain	2400 ÷ 2485 MHz 4 dBi 4900 ÷ 5925 MHz 6 dBi
Polarization	Vertical
Emission	Omnidirectional
Cable	RG174 mm 500 – R118 certified
Connector	Standard ITxPT Fakra Code I/Female/Beige (or custom)

DATA GPS/GNSS

Antenna type	Active Planar Patch
Center frequency	1580 MHz
Bandwidth	± 28MHz
V.S.W.R	< 2.0
Impedance	50 Ω
Polarization	RHCP
Supply voltage	2.7 ÷ 5.1 V
Current absorption	13 ± 2 mA at 3.0 V
Gain amplifier	26 ± 3 dB at 3.0 V
Noise figure	< 1.5 dB
Cable	RG174 mm.500 – R118 certified
Connector	Standard ITxPT Fakra Code C/Female/Blue (or custom)

CERTIFICATIONS

RED	2051-RED-214501
E-mark	E24 10R06 00 3662 00

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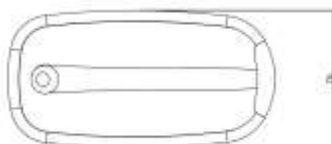
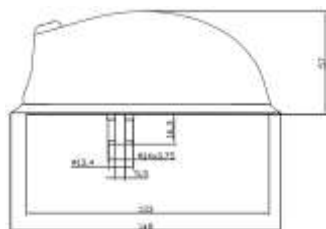
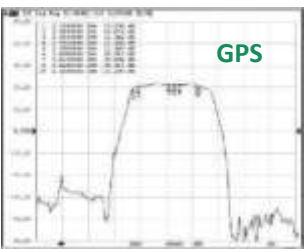
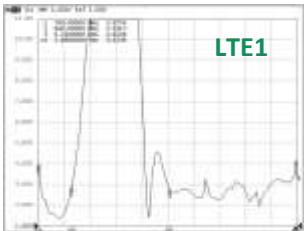
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MIMO ANTENNA
2x2G/3G, 2xWiFi 2.4/5.8, 1xGPS/GNSS

The **MBAntenna** is designed and manufactured to comply with all the environmental requirements and applicable directives for the Automotive use. All the connectors are standard ITxPT.



SPECIFICATIONS

Material Base	Alluminium alloy EN AW-6082
Material Radome	PA6 Black 30% glass fiber
Colour	Black
Dimension	(mm) 140 x 62 x h.52
Temperature	(°C) -40° / +80°
Mounting hole:	
Squared	15x15
Round	Ø19

TECHNICAL DATA 2xLTE

Frequency range	AMPS/GSM 850 : 824-894 MHz GSM 900 : 880-960 MHz GSM 1800 : 1710-1800 MHz GSM 1900 : 1850-1990 MHz UMTS : 1920-2170 MHz LTE 700 : 746-793 MHz LTE 2700 : 2500-2690 MHz
Impedance	(Ohm) 50
V.S.W.R.	Less than 3
Polarization	Vertical
Emission	Omnidirectional
Gain (dBi)	5 - 890 MHz 5 - 1710 MHz 2 - 2690 MHz
Cable	RG174 mm.500
Connector	Standard ITxPT : Fakra Code D/Female/Bordeaux (or custom)

TECHNICAL DATA 2xWLAN

Frequency range	2400-2485 MHz 5250-5850 MHz
Impedance (Ohm)	50
V.S.W.R.	Less than
Gain (dBi)	8.5 - 2400 MHz 9 - 5000 MHz
Polarization	Vertical
Emission	Omnidirectional
Cable	RG316 mm.500
Connector	Standard ITxPT Fakra Code I/Female/Beige (or custom)

TECHNICAL DATA GPS/GNSS/GALILEO

Antenna type	Active Planar Patch Antenna
Center frequency	1580 MHz
Bandwidth	± 28MHz
V.S.W.R.	Less than 2.0
Impedance (Ohms)	50
Polarization	RHCP
Supply voltage	2.7 ÷ 5.1 V
Current absorption	10 ± 1 mA at 2.7 V. 16 ± 1 mA at 5.0 V.
Gain amplifier	18 ± 1 dB at 2.7 V. 22 ± 1 dB at 5.0 V.
Gain patch antenna	2 dB
Noise figure	1.7 ÷ 2.1 dB
Temperature (°C)	-30° - +80°
Cable	RG174 mm.500
Connector	Standard ITxPT Fakra Code C/Female/Blue (or custom)

MMBAntenna is ITxPT compliant

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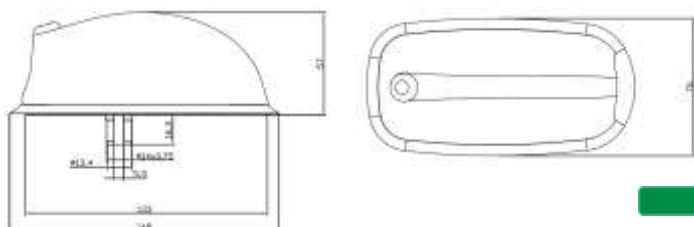
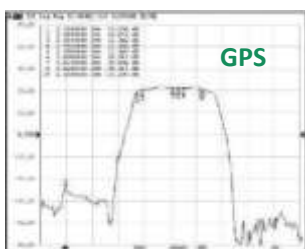
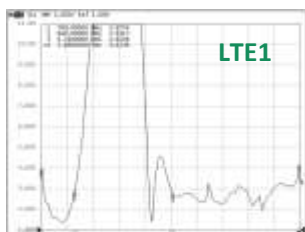


MMBAntenna

ANTENNA

1x2G/3G, 1xWiFi 2.4/5.8, 1xGPS/GNSS

The **MBAntenna** is designed and manufactured to comply with all the environmental requirements and applicable directives for the Automotive use. All the connectors are standard ITxPT. **MBAntenna** is certified R10 and R118 for automotive use.



SPECIFICATIONS	
Material Base	Alluminium alloy EN AW-6082
Material Radome	PA6 Black 30% glass fiber
Colour	Black
Dimension	(mm) 140 x 62 x h.52
Temperature	(°C) -40° / +80°
Mounting hole:	
Squared	15x15
Round	Ø19
TECHNICAL DATA 1xLTE	
Frequency range	AMPS/GSM 850 : 824-894 MHz GSM 900 : 880-960 MHz GSM 1800 : 1710-1800 MHz GSM 1900 : 1850-1990 MHz UMTS : 1920-2170 MHz LTE 700 : 746-793 MHz LTE 2700 : 2500-2690 MHz
Impedance	(Ohm) 50
V.S.W.R	Less than 3
Polarization	Vertical
Emission	Omnidirectional
Gain (dBi)	5 - 890 MHz 5 - 1710 MHz 2 - 2690 MHz
Cable	RG174 mm.500
Connector	Standard ITxPT : Fakra Code D/Female/Bordeaux (or custom)
TECHNICAL DATA 1xWLAN	
Frequency range	2400-2485 MHz 5250-5850 MHz
Impedance (Ohm)	50
V.S.W.R.	Less than
Gain (dBi)	8.5 - 2400 MHz 9 - 5000 MHz
Polarization	Vertical
Emission	Omnidirectional
Cable	RG316 mm.500
Connector	Standard ITxPT Fakra Code I/Female/Beige (or custom)
TECHNICAL DATA GPS/GNSS/GALILEO	
Antenna type	Active Planar Patch Antenna
Center frequency	1580 MHz
Bandwidth	± 28MHz
V.S.W.R	Less than 2.0
Impedance (Ohms)	50
Polarization	RHCP
Supply voltage	2.7 ÷ 5.1 V
Current absorption	10 ± 1 mA at 2.7 V. 16 ± 1 mA at 5.0 V.
Gain amplifier	18 ± 1 dB at 2.7 V. 22 ± 1 dB at 5.0 V.
Gain patch antenna	2 dB
Noise figure	1.7 ÷ 2.1 dB
Temperature (°C)	-30° - + 80°
Cable	RG174 mm.500
Connector	Standard ITxPT Fakra Code C/Female/Blue (or custom)

MMBAntenna is ITxPT compliant



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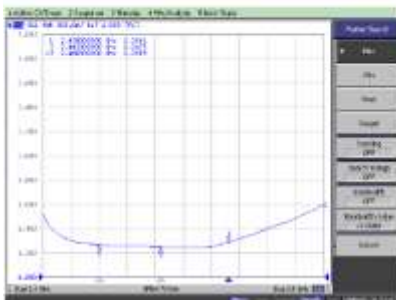
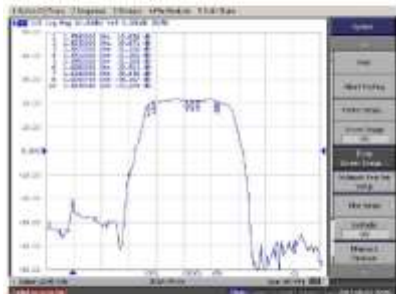
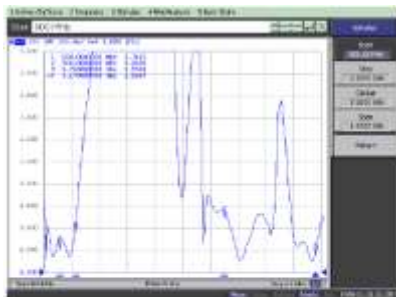
R118



MBAntenna

ANTENNA
1xGSM/1xWLAN /GPS-GNSS-GALILEO

The **MBAntenna** is designed and manufactured to comply with all the environmental requirements and applicable directives for the Automotive use. All the connectors are standard ITxPT or according to customer needs.



SPECIFICATIONS:

Material	Cap	Polyamide 6
	Gasket	Arnitel EM 400
	Colour	Black
	Net weight (g)	150 ± 20
Dimensions (mm)	Length	95
	Width	52
	Height	65
Mounting hole (mm)	Squared	15*15
	Round	Ø 19
Temperature (°C)	-30° - +80°	

TECHNICAL DATA TELEPHONE

Antenna type	1/4 l Mobile Antenna	
Frequency range	GSM-ETACS-NNT	824 ÷ 960 MHz
	PCN-GSM	1710 ÷ 1880 MHz
	UMTS	1900 ÷ 2170 MHz
	V.S.W.R.	Less than 2.5
Impedance (Ohms)	50	
Max power (W)	10	
Polarization	Vertical	
Emission	Omnidirectional	
Gain (dBi)	2.14	
Cable lenght	RG 174 mm.100±20	

TECHNICAL DATA GPS/GNSS/GALILEO

Antenna type	Active Planar Patch Antenna	
Center frequency	1580 MHz	
Bandwidth	± 28MHz	
V.S.W.R.	Less than 2.0	
Impedance (Ohms)	50	
Polarization	RHCP	
Supply voltage	2.7 ÷ 5.1 V	
Current absorption	10 ± 1 mA at 2.7 V.	16 ± 1 mA at 5.0 V.
Gain amplifier	18 ± 1 dB at 2.7 V.	22 ± 1 dB at 5.0 V.
Gain patch antenna	2 dB	
Noise figure	1.7 ÷ 2.1 dB	
Temperature (°C)	-30° - + 80°	
Cable	RG 174 mm.180±20	

TECHNICAL DATA WIRELESS LAN

Antenna type	1/4 l Mobile Antenna	
Frequency range	2400 ÷ 2485 MHz	
Impedance (Ohms)	50	
Max power (W)	10	
V.S.W.R.	Less than 2.0	
Polarization	Vertical	
Emission	Omnidirectional	
Gain (dBi)	2.14	
Cable	lenght RG 174 mm.210±20	

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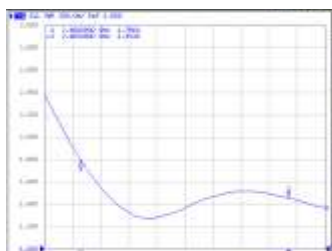
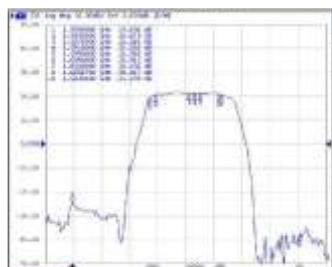
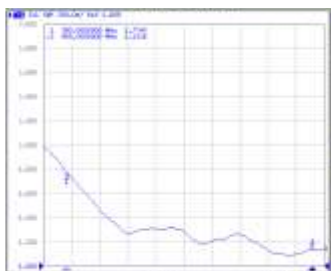
Innovative Intelligent Transport Systems



FMBA_{antenna}

LOW PROFILE ANTENNA
1xUHF, 1xWLAN, 1xGPS/GNSS/GALILEO

The **MBAntenna** is designed and manufactured to comply with all the environmental requirements and applicable directives for the Automotive use and according to Federtrasporti regulation.



SPECIFICATIONS

Material Base	Alluminium alloy EN AW-6082
Material Radome	Polycarbonate
Net weight	1000 g
Dimension	(mm) 106 x 160
Temperature	(°C) -40° / +80°
Mounting hole:	In conformity with FEDERTRASPORTI 00104/5
Certifications	RED 2051-red-182604 CE E24 10R-041857 R118 RG316 15-0397_3_ISO 14572

TECHNICAL DATA 380÷485 MHZ

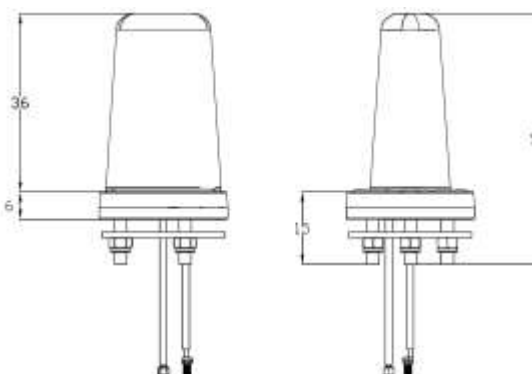
Frequency range	380÷485 MHZ
Impedance	(Ohm) 50
Max Power	200 W
V.S.W.R	Less than 1,5
Polarization	Vertical
Emission	Omnidirectional
Gain (dBi)	2.14 dBi over 1/4 l
Cable	RG316 R118 150 mm or on request
Connector	N Female or on request

TECHNICAL DATA WLAN

Frequency range	2400-2485 MHz
Impedance (Ohm)	50
V.S.W.R.	Less than 2,5
Gain (dBi)	2.14 dBi over 1/4 l
Polarization	Vertical
Cable	RG 316 mm.220 or on request
Connector	"N" f or on request

TECHNICAL DATA GPS/GNSS/GALILEO


Antenna type	Active Planar Patch Antenna
Center frequency	1580 MHz
Bandwidth	± 28MHz
V.S.W.R	Less than 2.0
Impedance (Ohms)	50
Polarization	RHCP
Supply voltage	2.7 ÷ 5.1 V
Current absorption	10 ± 1 mA at 2.7 V. 16 ± 1 mA at 5.0 V.
Gain amplifier	18 ± 1 dB at 2.7 V. 22 ± 1 dB at 5.0 V.
Gain patch antenna	2 dB
Noise figure	1.7 ÷ 2.1 dB
Temperature (°C)	-30° - + 80°
Cable	RG 316 R118 mm.200 or on request
Connector	TNCF or on request



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* Labeling in progress