Compact Tri-sector Tri-band (GSM/BB/BB) Antenna for BTS

Features

Frecuency bands
· 870-960 MHz
· 1710-2170 MHz
· 1710-2170 MHz.

Multisector configuration
Monosector, bisector 120º, bisector 180º and trisector configuration available.

Variable Electrical Tilt, RET
· Wide Electrical Tilt range (2-10º).
· Ready for RET configuration.

Double azimuth
Global azimuth (+/-50º) and independent azimuth for each sector (+/-15º).

Accessibility
The lower compartment allows easy access to connectors and antenna adjusting (azimuth and tilt).

Minimum size
Minimum weight and size in the market, thanks to fractal technology. It reduces stress due to wind and structural requirements .

MAST + ANTENNA SOLUTION

Minimum visual impact
Its small size, together with the mast and add-ons integrated into city scapes, reduces visual impact to the minimum, making it easier to find installation sites.

Increased safety
The safety systems included reduce the risk of accidents and the need to work at height. Availability of access for installers only.

Cost savings
Folding Mast: Reduces installation time and costs, without expensive work at height. Modular Mast and Base Plate: no crane or civil work costs, resulting in high productivity. It makes it posible to work under adverse weather conditions. Cables channelled inside the mast.

Description

The TELNET **Compact Tri-sector Tri-band (GSM/BB/BB) antenna** is part of the ***ENVIA*** family, a new generation of antennas for mobile telephone base stations, with radiating components based on fractal geometry. This technology significantly reduces the overall size of the antenna, allowing it to be incorporated under a single cylindrical radome, equivalent to 9 single-band panels in a traditional antenna.

This innovative line of TELNET Compact Antennas has significantly reduced visual impact. It can be assimilated almost imperceptibly into the urban environment by mimicking building elements. In addition, the small height and weight of this family of antennas simplifies installation and maintenance tasks.

MAST + ANTENNA SOLUTION

Each Compact Antenna can be supplied in monosector, bisector or trisector configurations. In addition, each antenna can be supplied in different colours and covers. This family of antennas is ready for RET (Remote Electrical Tilt) technology.

TELNET Compact Antennas are supplied with a modular mast. The masts can reach heights of up to 6 metres and have available a module to house the TMA inside. They are available in different colours and finishes, and three safety options to make installation safer.

Finally, the whole antenna and mast unit is supported by an anchoring mechanism. There are three types available, depending on the needs of each location: floating bedplate, ground pillar mounted and wall mounted.

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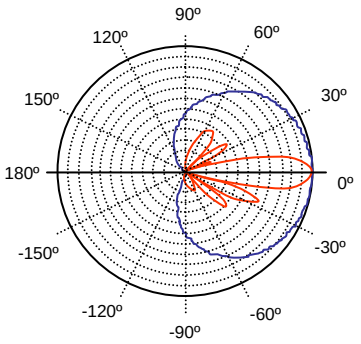
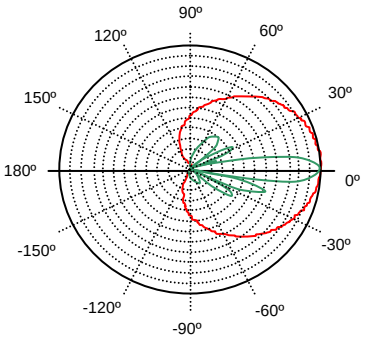
Family TNA530 - Technical Features

Radio-Electrical	GSM	Broadband Down	Broadband Up
Frequency Range	870-960 MHz	1710-2170 MHz	1710-2170 MHz
Polarization	Xpol,+/- 45°	Xpol,+/- 45°	Xpol,+/- 45°
Gain Max	15,7 dBi	16,3 dBi	16 dBi
Gain +/- Avg dev dBi	15.4 +/- 0,3 dBi	15.6 dBi // 16 dBi +/-0,3	15.2 dBi // 15,6 dBi +/-0,3
Horizontal Beam width	66,5°	57° // 55°	57° // 55°
Vertical Beam width	8.8°	8.6° // 7,8°	8.6° // 7,8°
Cross Polar Discrimination Boresight	Typ 18 dB	Typ 18 dB	Typ 18 dB
F/B Ratio Copolar (180°+/-30° cone)	25 dB	22 dB	22 dB
Side lobe suppression for f1st side lobe above horizon	18 20 14 dB 2° 6° 10°	21 21 16 dB 2° 6° 10°	21 21 16 dB 2° 6° 10°
Electrical tilt continuously adjustable	2° - 10° (band and sector independent)	2° - 10° (band and sector independent)	2° - 10° (band and sector independent)
VSWR	< 1,5:1	< 1,5:1	< 1,5:1
Intra band Isolation	> 30 dB	> 30 dB	> 30 dB
Inter band Isolation	> 30 dB	> 30 dB	> 30 dB
Null fill	Typ 27 dB	Typ 20 dB	Typ 20 dB
Impedance	50 Ohms	50 Ohms	50 Ohms
Max. Power per input	300W	300W	300W
PIM (2*20W)	150dBc	150dBc	150dBc
Azimuth	+/-50° : Full Antenna Azimuth // +/-15° : Independent Azimuth per sector		
Prepared for RET	OK	OK	OK



GSM900 pattern per sector



Broadband pattern per sector

Mechanical	
Input	18 x 7/16 female
Connectors position	Bottom, 3 x 6 (7/16)
Dimensions	Diameter: 450 mm Length: 2230mm + 300 mm
Weight	78 Kg.
Max. speed wind	200 Km/h

Material	
Radome	Fiber glass + polyester
End Caps	Stainless Steel
Screws and Nuts	Stainless Steel

Enviromental and mechanical tests	
IEC 60068-2-2: Dry Heat	IEC 60068-2-64: Random Vibration
IEC 60068-2-56: Damp Heat Steady State	IEC 60068-2-6: Sine Vibration
IEC 60068-2-30: Damp Heat Cyclic	IEC 60068-2-27: Shock Test
IEC 60068-2-14: Change of Temperature	IEC 60068-2-32: Free Fall Test
IEC 60068-2-1: Cold	IEC 60068-2-29: Bump Test
IEC 60068-2-18: Water (Handheld shower)	

Telnet antennas have passed environmental tests recommended in ETS 300 019-2-4, and extensive test recommended by the main operators over the world.

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