

Compact Tri-sector Dual-band (DCS/UMTS) antenna for BTS

Features

Frequency bands

- 1710-1880 MHz
- 1920-2170 MHz

Multisector configuration

Monosector, bisector 120°, bisector 180° and trisector configuration available.

Variable Electrical Tilt, RET

- Wide Electrical Tilt range (2-10°).
- Ready for RET configuration.

Double azimuth

Global azimuth (+/-50°) and independent azimuth for each sector (+/-10°).

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 possible to work under adverse weather conditions. Cables channelled inside the mast.



Description

The TELNET **Compact Tri-sector Dual-band (DCS/UMTS) 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 6 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

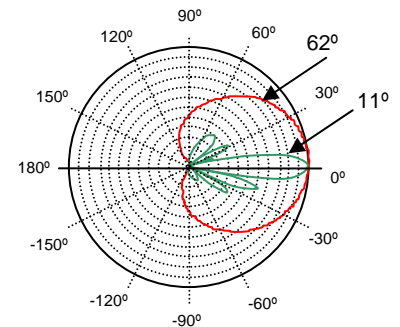
Each Compact Antenna can be supplied in monosector, bisector or trisector configurations. In addition, each antenna can be supplied in different colours and covers. This family of antennas is ready for RET (Remote Electrical Tilt) technology.

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.

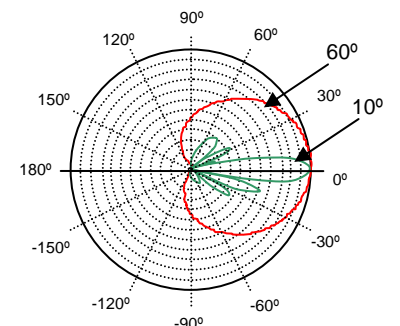
Finally, the whole antenna and mast unit is supported by an anchoring mechanism. There are three types available, depending on the needs of each location: floating bedplate, ground pillar mounted and wall mounted.

Family TNA560 - Technical Features

Radio-Electrical	DCS			UMTS		
Frequency Range	1710-1880MHz			1920-2170 MHz		
Polarization	Xpol,+/- 45°			Xpol,+/- 45°		
Gain Max	15,6 dBi			16,2 dBi		
Gain +/- Avg. Dev	15,3 +/- 0,3 dBi			15,6 +/- 0,3 dBi		
Horizontal Beam width	62 °			60°		
Vertical Beam width	11°			10°		
Cross Polar Discr. Boresight	Typ 20 dB			Typ 20 dB		
F/B Ratio Cop. (180°+/-30°)	> 25 dB			>25 dB		
Sidelobe suppression for first sidelobe above horizon	18	17	15dB	18	17	15dB
	2°	6°	10°	2°	6°	10°
Electrical tilt continuously adjustable	2° - 10° (band and sector independent)			2° - 10° (band and sector independent)		
VSWR	< 1,5:1			< 1,5:1		
Intraband Isolation	> 30 dB			> 30 dB		
Interband Isolation	> 35 db, typ 45 dB			> 35 dB, typ 45 dB		
Nullfill	23 dB			19 dB		
Impedance	50 Ohms			50 Ohms		
Max. Power per input	300W			300W		
PIM (2*20W)	150dBc			150dBc		
Azimuth	+/- 10° per sector +/- 50° global			+/- 10° per sector +/- 50° global		
Prepared for RET	OK			OK		



DCS pattern per sector



UMTS pattern per sector

Mechanical	
Input	12 x 7/16 female
Connectors position	Bottom, 3 x 4 (7/16)
Dimensions	Diameter: 250 mm Length: 1650mm + 200 mm
Weight	35 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	UNE-EN 60598-2-3: Resistance to wind
IEC 60068-2-56: Damp Heat Steady State	IEC 60068-2-6: Sine Vibration
IEC 60068-2-30: Damp Heat Cyclic	Particular Specification: Resistance to ice
IEC 60068-2-52: Salt mist cyclic	IEC 60068-2-27: Shock Test
IEC 60068-2-11: Salt mist	IEC 60068-2-32: Free Fall Test
IEC 60068-2-14: Change of Temperature	IEC 60695-2-1/2: Resistance to fire
IEC 60068-2-1: Cold	IEC 60529: IP Code Test
IEC 60068-2-18: Water (Handheld shower)	IEC 60068-2-29: Bump Test
IEC 60068-2-64: Random Vibration	

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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