Broadband DF Antenna System

AT-DF-0.4-6-S

AT-DF-0.4-6-S-v1.0-0626

400 MHz-6 GHz triple band DF antenna system fitted with an SMA connectors

AT-DF-0.4-6-S

Please contact AntennaTec for a full interface control drawing.

Key Specifications	
Operating frequency band A	400-1000 MHz
Operating frequency band B	1 - 3 GHz
Operating frequency band C	3 - 6 GHz
Connector	SMA female
VSWR	< 2:1
Gain	2 dBi
Polarization	vertical
Impedence	50 Ω

This broadband DF antenna system covers the 400 MHz–6 GHz frequency range and is designed for receive-side wideband direction finding, spectrum monitoring, and signal-location applications. The system uses a 15-element dipole interferometer arrangement across three operating bands, with five DF elements per band, and is intended for operation with a compatible 5-channel phase-sensitive DF receiver using a correlative interferometer DF algorithm. Its vertically polarised elements, fast switching performance, broadband frequency coverage, and practical mast-mounted structure support stable DF sensitivity, reliable bearing response, and effective integration in fixed monitoring stations, mobile DF platforms, spectrum enforcement systems, RF surveillance sites, and field-deployed signal intelligence applications.

SPECIFICATIONS

DF Architecture	Three-band five-element dipole interferometer system
Receiver Compatibility	Compatible with 5-channel phase-sensitive DF receivers
DF Processing Method	Correlative interferometer direction finding
Operating Mode	Receive-side DF and spectrum monitoring
Band Structure	Band A: 400–1000 MHz; Band B: 1–3 GHz; Band C: 3–6 GHz
Element Arrangement	Five DF elements per operating band
Total Element Count	15 dipole elements
Switching Performance	<50 µs element switching; 150 µs total switching time
Polarisation	Vertical polarisation for DF reception
Azimuth Coverage	360° direction-finding coverage
Mounting Configuration	Mast-mounted structure for fixed or mobile DF platforms
Receiver Interface	SMA RF interfaces for connection to DF receiver channels
Characterisation	Antenna characterisation/calibration data available on request
Typical Applications	Spectrum monitoring, RF surveillance, signal location, border/coastal monitoring, mobile DF platforms, fixed monitoring stations
Integration Note	Intended for use with a compatible DF receiver and bearing-processing software

Antenna characterisation and calibration data for use with compatible DF receivers can be provided on request.

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