TriStar V/UHF-DF Antennas

The TriStar family of DF antennas are recommended over the Toadstool V/UHF-DF antennas for permanent site installations where harsher environmental conditions, such as increased wind loads or ambient moisture, may be factors. Attached to a teamSENTINEL V/UHF DF-enabled sensor, the Espy TriStar V/UHF-DF antenna can be configured to support both AoA-DF from 20 MHz up to 3000 MHz, as well as Monitoring and TNG-tasking of received signals from 20 MHz up to 6000 MHz.

The full-size elements on each band gives excellent DF performance and sensitivity. Ultimate angular resolution for strong signals is better than 2° for most of the frequency range. Dipole elements provide good cross-polarization rejection and good performance for signals arriving from up to 15° above or below the horizon. Designed for tower mounting, each antenna armature is removable for easy maintenance and sparing.

Figure 29: TriStar V/UHF-DF Antenna

Table 27: TriStar-3.0G V/UHF-DF Antenna Specifications

Feature	TriStar V/UHF-DF Antenna
DF Frequency Coverage	30 – 3,000 MHz
Polarization	Vertical
AoA- DF	
A Band DF Frequency Coverage	30~300 MHz
B Band DF Frequency Coverage	300~1000 MHz
C Band DF Frequency Coverage	1000~3,000 MHz
A Band Azimuth Accuracy	2º RMS or better
B Band Azimuth Accuracy	2º RMS or better
C Band Azimuth Accuracy	2º RMS or better
Elevation Coverage Typical	-15º to +15º (full accuracy)
Monitoring	
Monitoring Frequency Coverage	20~6,000 MHz
Refence Antenna	Combined Monopole
Nominal Input Impedance	50 Ω
GPS Antenna	Included as standard
Compass	Optional
Diameter	8.7 ft (2.7 m)
Height Assembled	11.15 ft (3.4 m)
Weight	121.25 lbs (55 kg)
Shipping Weight	298 lbs (135 kg)
Wind Loading	4.265 ft2 (1.3 m2)
Wind Survival without ice	100 mph (160 km/h)
Operating Temperatures	-86º to 158º F (-123 º to 70 º C)
Operating Humidity	95%
Color	Metallic