

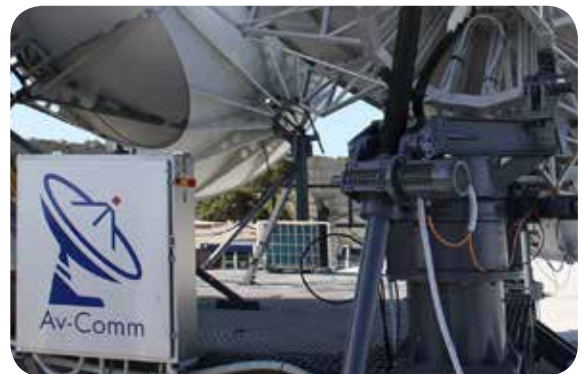
The Av-Comm 4.5m C Band Inclined Orbit Antenna System has been designed to provide a reliable and cost effective solution for inclined orbit tracking applications. Our solution utilises a high performance 4.5m reflector integrated with an Antenna Control Unit (ACU) which provides the motorisation and tracking functionality. Our solution can be configured for use in a variety of frequency bands and can support tracking via Step, Memory, or TLE methods.

The Av-Comm 4.5m C Band Inclined Orbit Antenna System is designed for teleport and uplink providers who require accurate and reliable antenna positioning required for inclined orbit tracking operations. The antenna system can also be used as motorised system allow for fast and accurate positioning of the antenna between satellites.

\*Additional frequency band solutions available

#### Main Features

- 4.5m Aperture Antenna
- Step Track/Memory Track/TLE Tracking
- 16 Bit Resolver Position Sensors – 0.005 degree resolution
- Variable Speed Drives (VFDs) for Azimuth and Elevation motor control (single or dual speed)
- Three axis motorisation (Az/El/Pol\*)
- Ethernet interface
- Support SNMP Monitoring
- Spectrum Analyser\* optional
- Local antenna jog control
- Stainless steel ACU enclosure\*
- Emergency Stop
- Hard and soft position limit interlocks
- Integrated beacon receiver for satellite position tracking\*



#### Antenna Specifications cat# D1045

Parameter	Receive	Transmit
Frequency (GHz)	3.625-4.2	5.850-6.425
	*3.4-4.2	5.925-6.725
Gain at Midband	43.6dB	47.3dB
Sidelobes		
1st sidelobe	-14dB	-14dB
$100\lambda/D^{\circ} \leq \Theta \leq 48^{\circ}$	29-25Log $\Theta$ dBi	29-25Log $\Theta$ dBi
VSWR	1.25:1	1.25:1
Beamwidth	1.09 $^{\circ}$	0.71 $^{\circ}$
Typical G/T at 20 $^{\circ}$ Elevation, Clear Horizon, 4Hz with 55 $^{\circ}$ K LNA	24.8dB/ $^{\circ}$ K (11.85GHz, with 90 $^{\circ}$ K LNA)	
Feed Interface	CPR-229F	CPR-137G
Feed Insertion Loss	0.15dB	0.17dB
Cross Polarization Isolation		
On Axis	35dB	35dB
Within 1dB Beamwidth	30dB	30dB
Port to Port Isolation(Tx-RX with Filter)	$\geq 85$ dB	
Axial Ratio (Circular Polarization)		
2 Port Tx/Rx	1.3	1.09

#### Environment Specifications

Wind Loading Operational	126km/h
Wind Loading Survival	198km/h

#### Mechanical Specifications Parameters

Azimuth Adjustment	360 $^{\circ}$ continuous
Elevation Adjustment	5 $^{\circ}$ to -90 $^{\circ}$
Polarisation Adjustment	$\pm 90^{\circ}$

\*Optional