

## iSat 2.4mtr Ka-band antenna



This 4 (four) piece Prodelin reflector is adjustable on 2-axis; Azimuth and Elevation purchased from their Ka-band specified capable antennas.

- The antenna is made of Glass Fiber reinforced polyester (SMC).
- With the iSat Ka-band feed and filters, the assembled reflector provides outstanding 4-port Ku performance and reliability.
- The antenna comes with stabilising bar from the bottom of the boom arm to the king post giving support to the weight of the TWTA on the boom arm which can be mounted on the boom arm.

The 4 (four) piece antenna has a robust steel galvanised backing structure.

- The four segments are held in place by a galvanised steel cross, which ensures the polyester panels remain in shape.
- The panels are bolted to a square 'back spine', which is set in the factory again to ensure correct shape
- Both these features ensure compliance to ITU sidelobe performance.

	4 port Ka-band Linear Feed			
	Vertical		Horizontal	
Frequency (GHz)	21.4-25.25		21.4-25.25	
Port-to-Port Isolation (dB)	RxV-RxH >40		TxV-TxH >40	
Diplexer frequency filtering	Transmit	Receive	Transmit	Receive
	24.65-25.25GHz	21.4-22.0GHz	24.65-25.25GHz	21.4-22.0GHz
Antenna Gain at Midband, dBi (+/- 0.2dB)	53.4	52.4	53.4	52.4
Diplexer passband Insertion loss	0.8dB Typical, 1.2dB Max			
Tx/Rx Isolation (dB)	RxV-TxH > 120dB RxH-TxV > 120dB			
Antenna Noise Temperature				
10° Elevation	131 k			
20° Elevation	103 k			
40° Elevation	100 k			
Sidelobe Envelope, Co-Pol (dBi)				
100λ / D < θ ≤ 20°	29 - 25 Logθ dBi			
20° < θ ≤ 26.3°	-3.5 dBi			
26.3° < θ ≤ 48°	32 - 25 Logθλ dBi			
θ > 48°	-10 dBi (averaged)			
VSWR Performance	1.6:1 worst case 1.3:1 typical			
Cross polarisation				
On-axis	>30dB			
Within 1.0dB Beamwidth	>25dB			
Waveguide Interface Flange	WG20 Tx WG20 Rx			
Total Power Handling Capability	200W CW			