



The FA-370 Antenna

A 3.7m flyaway antenna for multi band transmission

on all commercial satellites including Intelsat/Eutelsat



General

Antenna type	Circular, axially symmetric with centre hub plus eighteen petals
Diameter	3.7m
Configuration	Prime focus
Polarisation	Linear, orthogonal transmit and receive. (Optional C/X-band circular left and right)
Cross Polarisation	-35dB within the -1dB co-polar contour (linear)
Port to Port Isolation	40dB (linear)

Transmit

Transmit Bands	FA-370/60	5.85 to 6.65GHz
	FA-370/70	7.90 to 8.40GHz
	FA-370/140	13.75 to 14.50GHz
	FA-370/180	17.30 to 18.40GHz
	FA-370/300	27.50 to 31.00GHz
3dB Beamwidth	<1.0° at 5.85GHz	
Transmit Power	1.5kW max.	
Off Axis Transmit Gain	<29-25 logθ dBi	
VSWR	1.3:1	
Transmit Gain	FA-370/60	45.5dBi mid band
	FA-370/70	46.7dBi mid band
	FA-370/140	52.5dBi mid band
	FA-370/180	55.0dBi mid band
	FA-370/300	59.5dBi mid band

Receive

Receive Bands	FA-370/60	3.40 to 4.20GHz
	FA-370/70	7.25 to 7.75GHz
	FA-370/140	10.70 to 12.75GHz
	FA-370/300	19.20 to 21.20GHz
Receive Gain	FA-370/60	40.5dBi mid band
	FA-370/70	46.2dBi mid band
	FA-370/140	50.5dBi mid band
	FA-370/300	56.0dBi mid band
Noise Temperature	FA-370/60	49°K/30° elevation
	FA-370/70	32°K/30° elevation
	FA-370/140	30°K/30° elevation
	FA-370/300	30°K/30° elevation

Environmental

Operating Temperature	-40 to +80°C
Humidity	100%
Altitude	4,500m
Wind Rating	100km/h survival when locked 60km/h tracking

Physical

Elevation Adjustment	0 to 90°	
Azimuth Adjustment	+/- 60°	
Polarisation Adjustment	+/-95°	
Packed Size/weight	Box 1	1.23 x 1.23 x 0.55m x 47kgs
	Box 2	1.23 x 1.23 x 0.55m x 48kgs
	Box 3	1.23 x 1.23 x 0.55m x 50kgs
	Box 4	1.23 x 1.23 x 0.50m x 49kgs
	Box 5	1.23 x 1.23 x 0.50m x 49kgs



The FA-370 is a compact ultra high gain antenna which can be easily deployed by one person with no tools in less than 30 minutes.

All major components of the antenna including the multi segmented reflector plus integrated 3 axis mount and flight case system are moulded from carbon fibre, which makes it more practical to transport than many much smaller antennas, yet

Specifications

the 3.7m diameter allows for an uplink EIRP previously unachievable from a flyaway earth station. GigaSat's

high precision manufacturing process ensures excellent surface accuracy on the dish and guarantees no deformation, even after being assembled hundreds of times.

The FA-370 is ideal for any rapid deployment broad band communications requirement such as MCPC digital video or multiple SCPC transmission. Major news stories, sporting events, emergency restoration and secure government communications are obvious applications.

Each FA-370 antenna has a four piece segmented feed arm which allows operation at C, X, Ku, DBS and Ka band frequencies. Band changes are achieved simply by clipping the relevant feed cartridge into position.



The axially symmetric prime focus feed system was chosen because of its overall compact dimensions and commonality of spare parts. A spares holding of only two petals is all that's required to repair a reflector in case of damage. Compliance with all satellite authority specifications is guaranteed, including side lobe performance better than 29-25 logθ.

At GigaSat we understand the difficulties faced by operators in the field and this is reflected in the attention to detail found in the FA-370 antenna. Vernier adjustments with clear scales are included for all three axis including fine and course adjustment for elevation and in common with all FA series antennas the FA-370 has a full 0 to 90 degree elevation capability.



The FA-370 can be fully motorised and when combined with the GigaSat STC-100 antenna controller it can automatically acquire and track, even on inclined orbit satellites.

The FA-370 stows in only five light weight flight cases, which are protected from cosmetic damage during transit by padded canvas bags.



Note: Specifications are subject to change without notice
Please check with the factory 11/2006

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