



## FA-370 Antenna

A 3.7m flyaway antenna for multi-band transmission on military and commercial satellites

### Features

- Assembled in less than 30 minutes
- No tools required
- Only 5 cases <470kgs
- Multi-band feeds changed in minutes
- WGS certified for X and Ka bands
- Skynet and XTAR certified for X-band
- Intelsat/Eutelsat compliant for commercial bands
- Modem agnostic, L-band interface
- Complete, integrated, systems available

The FA-370 is a compact ultra high gain antenna which can be easily deployed 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. This makes it more practical to transport than many much smaller antennas, yet 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 and particularly suitable as a hub for front line military satellite communications. Emergency restoration and secure government communications are other 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 log $\theta$ .

Vernier adjustments with clear scales are included for all three axes 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, comfortably meeting WGS tracking specifications.

**GigaSat**

**Ultra**  
ELECTRONICS

# Specifications

## General

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

## Transmit

<b>Transmit Bands</b>	FA-370/60	5.85 to 7.025GHz
	FA-370/70	7.9 to 8.4GHz
	FA-370/140	12.75 to 14.5GHz
	FA-370/180	17.3 to 18.4GHz
	FA-370/300	27.5 to 31GHz
<b>3dB Beamwidth</b>	<1.0° at 5.85GHz	
<b>Transmit Power</b>	1.5kW max.	
<b>Off Axis Transmit Gain</b>	<29-25 log $\theta$ dBi	
<b>VSWR</b>	1.3:1	
<b>Transmit Gain</b>	FA-370/60	45.3dBi mid-band
	FA-370/70	47.7dBi mid-band
	FA-370/140	52.5dBi mid-band
	FA-370/180	54.6dBi mid-band
	FA-370/300	58.4dBi mid-band

## Receive

<b>Receive Bands</b>	FA-370/60	3.4 to 4.2GHz
	FA-370/70	7.25 to 7.75GHz
	FA-370/140	10.7 to 12.75GHz
	FA-370/180	10.7 to 12.75GHz
	FA-370/300	17.7 to 22.2GHz
<b>Receive Gain</b>	FA-370/60	40.9dBi mid-band
	FA-370/70	47.0dBi mid-band
	FA-370/140	50.5dBi mid-band
	FA-370/180	50.5dBi mid-band
	FA-370/300	54.8dBi mid-band

## Power

<b>Power Requirement</b>	90 to 264V AC Power Supply (option) +24V DC (option)
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## Environmental

<b>Temperature</b>	-40 to +70°C - Transportation & Storage -20 to +60°C - Operational	
<b>Humidity</b>	100%	
<b>Altitude</b>	4,500m	
<b>Wind Rating</b>	Operational	60km/h with gusts to 72km/h
	Survival	121km/h

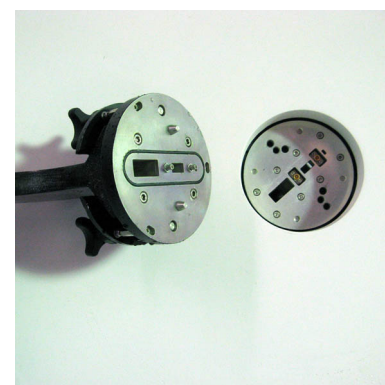
## Physical

<b>Elevation Adjustment</b>	0 to 90°
<b>Azimuth Adjustment</b>	+/-60°
<b>Polarisation Adjustment</b>	+/- 95°

<b>Packed Size</b>	Box 1	1.23 x 1.23 x 0.55m
	Box 2	1.23 x 1.23 x 0.55m
	Box 3	1.23 x 1.23 x 0.55m
	Box 4	1.23 x 1.23 x 0.5m
	Box 5	1.23 x 1.23 x 0.5m

<b>Weight</b>	Box 1	77kgs
	Box 2	77kgs
	Box 3	107kgs
	Box 4	118kgs
	Box 5	83kgs

Weights above are for manual, baseline, configuration



Quad-band Feed arms—C/X, Ku & Ka  
(C/X, Ku/DBS & Ka available as an option)



# GigaSat

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