



The FA-240 Antenna

A 2.4m flyaway antenna for multi band transmission

on all commercial satellites including Intelsat/Eutelsat



General

Antenna type	Circular, axially symmetric with centre hub plus ten petals
Diameter	2.4m
Configuration	Prime focus
Polarisation	Linear, orthogonal transmit and receive. (Optional C-band circular left and right)
Cross Polarisation	-35 dB within the -1 dB co-polar contour (linear)
Port to Port Isolation	35 dB (linear)

Transmit

Transmit Bands	FA-240/60	5.85 to 6.65 GHz
	FA-240/70	7.90 to 8.40 GHz
	FA-240/140	13.75 to 14.50 GHz
	FA-240/180	17.30 to 18.40 GHz
	FA-240/300	27.50 to 31.00 GHz
3dB Beamwidth	<2.0° at 5.85 GHz	
Transmit Power	1.5 kW max.	
Off Axis Transmit Gain	<29-25 log θ dBi	
VSWR	1.3:1	
Transmit Gain	FA-240/60	42.0 dBi mid band
	FA-240/70	44.2 dBi mid band
	FA-240/140	49.0 dBi mid band
	FA-240/180	51.2 dBi mid band
	FA-240/300	55.5 dBi mid band

Receive

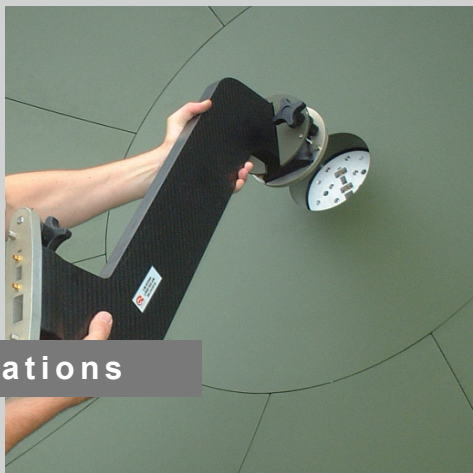
Receive Bands	FA-240/60	3.40 to 4.20 GHz
	FA-240/70	7.25 to 7.75 GHz
	FA-240/140	10.70 to 12.75 GHz
	FA-240/300	19.20 to 21.20 GHz
Receive Gain	FA-240/60	37.5 dBi mid band
	FA-240/70	43.7 dBi mid band
	FA-240/140	47.0 dBi mid band
	FA-240/300	52.5 dBi mid band
Noise Temperature	FA-240/60	51°K/30° elevation
	FA-240/70	38°K/30° elevation
	FA-240/140	42°K/30° elevation
	FA-240/300	60°K/30° elevation

Environmental

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

Physical

Elevation Adjustment	0 to 90°
Azimuth Adjustment	360°
Polarisation Adjustment	+/- 95°
Packed Size	Box 1 0.95 x 0.95 x 0.6m
	Box 2 0.95 x 0.95 x 0.6m
Weight	Box 1 48 kgs
	Box 2 49 kgs



Specifications

The FA-240 is intended primarily for Satellite News Gathering, but is equally well suited to any other application requiring a compact antenna which is rapidly deployable with no tools. It includes a multi segmented carbon fibre honeycomb reflector, ensuring light weight and maximum strength with no deformation, even after being reassembled hundreds of times.

The axially symmetric design with prime focus feed was chosen because of its overall compact dimensions which make the packed size of the antenna smaller than any other comparable product of similar gain. It also means that unlike offset fed designs, each antenna petal is identical allowing simple replacement in case of damage. Intelsat/Eutelsat compliance is guaranteed, including side lobe performance better than 29-25 log θ .

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-240 antenna. Features such as wide spreading multi position legs which provide high stability on any terrain with deployment angles up to 10 degrees.

Once deployed, zero backlash, zero back drive gears in all three axis ensure the antenna will remain on target and allow fine pointing adjustments in all wind conditions.

The FA-240 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-240 packs into two conveniently sized flight cases and carbon fibre is used not only on the reflector and feed arm but also in the mount and flight cases keeping the weight down to an absolute minimum for transportation.



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

GigaSat Inc.

932 Barracuda Cove Ct,
Annapolis, Maryland 21401, USA
Telephone: +1 443 994 2100
Facsimile: +1 410 626 8286
E-Mail: sales@gigasat.com
Website: www.gigasat.com

GigaSat Ltd.

Icknield Way Industrial Estate, Tring,
Hertfordshire, HP23 4JX, UK
Telephone: +44 (0) 845 071 4949
Facsimile: +44 (0) 845 071 4959
E-Mail: sales@gigasat.com
Website: www.gigasat.com

GigaSat Asia Pacific Pty Ltd.

Unit 1/38 Dacre St, Mitchell,
Canberra, ACT 2911, Australia
Telephone: +61 2 6241 4422
Facsimile: +61 2 6241 4122
E-Mail: sales@gigasat.com
Website: www.gigasat.com