



The FA-180 Antenna

A 1.8m flyaway antenna for multi band transmission

on all commercial satellites including Intelsat/Eutelsat



General

Antenna type	Circular, axially symmetric with centre hub plus eight petals
Diameter	1.8m
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-180/60	5.85 to 6.65GHz
	FA-180/70	7.90 to 8.40GHz
	FA-180/140	13.75 to 14.50GHz
	FA-180/180	17.30 to 18.40GHz
3dB Beamwidth		<2.0° at 5.85GHz
Transmit Power		1.5kW max.
Off Axis Transmit Gain		<29-25 log θ dBi
VSWR		1.3:1
Transmit Gain	FA-180/60	39.5dBi mid band
	FA-180/70	41.7dBi mid band
	FA-180/140	46.5dBi mid band
	FA-180/180	48.2dBi mid band

Receive

Receive Bands	FA-180/60	3.40 to 4.20GHz
	FA-180/70	7.25 to 7.75GHz
	FA-180/140	10.70 to 12.75GHz
Receive Gain	FA-180/60	34.5dBi mid band
	FA-180/70	41.2dBi mid band
	FA-180/140	44.5dBi mid band
Noise Temperature	FA-180/60	62°K/30° elevation
	FA-180/70	45°K/30° elevation
	FA-180/140	53°K/30° elevation

Environmental

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

Physical

Elevation Adjustment	0 to 90°
Azimuth Adjustment	360°
Polarisation Adjustment	+/- 95°
Packed Size	Box 1 0.75 x 0.75 x 0.45m Box 2 0.75 x 0.75 x 0.6m
Weight	Box 1 39kgs Box 2 49kgs



The FA-180 is intended primarily for Satellite News Gathering in C, Ku or K-band, but is equally well suited to any other application requiring a compact rugged 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.

Specifications

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-180 antenna. Features such as wheels so the antenna can be easily moved to site, and wide spreading legs for high stability on any terrain.

The FA-180 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. With or without the motorisation option vernier controls are provided for manual adjustment and fine tuning.

For transportation the FA-180 packs into its own mount which splits into two conveniently sized flight cases for transportation. There are no other cases required.



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

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