



# FA-180 Antenna

A 1.8m flyaway antenna for multi-band transmission on all commercial satellites including Intelsat/Eutelsat

## Features

- Assembled in less than 10 minutes
- No tools required
- Only 2 cases <90kgs
- Multi-band feeds changed in minutes
- Intelsat/Eutelsat compliant for commercial bands
- Skynet Certified for X-band
- MIL-STD-810G Certified Version
- Modem agnostic, L-band interface
- Complete, integrated, systems available

The FA-180 is designed specifically for any application requiring a compact, rugged, multi-band 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 re-assembled 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.

The FA-180 has a unique multi-band feed arm allowing a change of frequency band in a matter of seconds simply by swapping out a quick release feed cartridge. Termination of transmit waveguide and receive coax is in a safe position at the back of the reflector.

Intelsat/Eutelsat compliance is guaranteed, including side lobe performance better than 29-25 logθ.

Operators in the field face difficulties and the attention to detail found in the FA-180 antenna greatly assists.

Features such as fully adjustable, 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.

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.

GigaSat Flyaway antennas available from 1.0m to 3.7m diameter.

WGS certified 2.4m and 3.7m systems available.

Skynet Certified systems available for X-band.

# Specifications

## General

<b>Antenna Type</b>	Circular, axially symmetric with centre hub plus eight petals
<b>Diameter</b>	1.8m
<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-180/60	5.85 to 6.65GHz
	FA-180/70	7.9 to 8.4GHz
	FA-180/140	13.75 to 14.5GHz
	FA-180/180	17.3 to 18.4GHz
	FA-180/300	27.5 to 31GHz
<b>3dB Beamwidth</b>	<2.0° 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-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
	FA-180/300	52.1dBi mid-band

## Receive

<b>Receive Bands</b>	FA-180/60	3.4 to 4.2GHz
	FA-180/70	7.25 to 7.75GHz
	FA-180/140	10.7 to 12.75GHz
	FA-180/180	10.7 to 12.75GHz
	FA-180/300	19.2 to 21.2GHz
<b>Receive Gain</b>	FA-180/60	34.5dBi mid-band
	FA-180/70	41.2dBi mid-band
	FA-180/140	44.5dBi mid-band
	FA-180/180	44.5dBi mid-band
	FA-180/300	48.6dBi mid-band

## Power

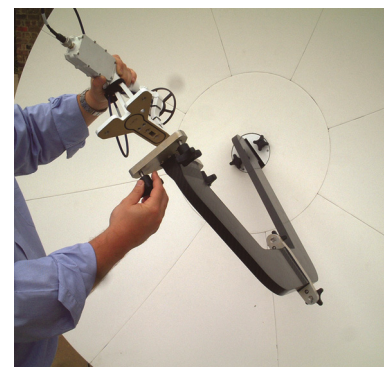
<b>Power Requirement</b>	90 to 264V AC Power Supply (option) +24V DC (option)
--------------------------	---

## Environmental

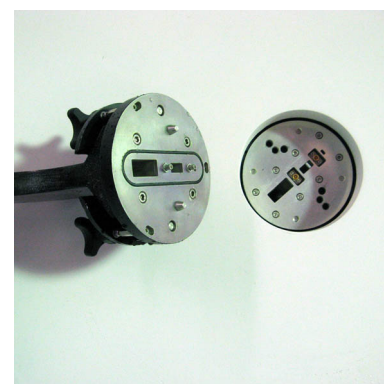
<b>Temperature</b>	-40 to +80°C - Transportation & Storage -20 to +60°C - Operational
<b>Humidity</b>	100%
<b>Altitude</b>	4,500m
<b>Wind Rating</b>	Operational 60km/h with gusts to 72km/h Survival 121km/h

## Physical

<b>Elevation Adjustment</b>	0 to 90°	
<b>Azimuth Adjustment</b>	+/-180°	
<b>Polarisation Adjustment</b>	+/- 95°	
<b>Packed Size</b>	Box 1	0.88 x 0.88 x 0.51m
	Box 2	0.88 x 0.88 x 0.51m
<b>Weight</b>	Box 1	39kgs
	Box 2	49kgs



Quick Release Feed



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



**GigaSat**

Ultra Electronics  
GIGASAT

Tring Business Centre  
Icknield Way  
Tring  
Hertfordshire, HP23 4JX  
United Kingdom  
Tel: +44 1442 892000  
Email: [enquiries@ultra-gigasat.com](mailto:enquiries@ultra-gigasat.com)  
[www.ultra-gigasat.com](http://www.ultra-gigasat.com)  
[www.ultra-electronics.com](http://www.ultra-electronics.com)

Ultra Electronics reserves the right to vary these specifications without notice.  
© Ultra Electronics Limited 2014.  
Printed in England