



## FA-100 Antenna

Ultra light weight 1.0m flyaway antenna with manual or automatic satellite acquisition

### Features

- Assembled in less than 10 minutes
- No tools required
- Only 3 cases <30kgs
- Multi-band feeds changed in minutes
- Intelsat/Eutelsat compliant for commercial bands
- Modem agnostic, L-band interface
- Complete, integrated, systems available

The FA-100 antenna is specifically designed for applications where high mobility and rapid deployment are vitally important, such as TV newsgathering, emergency telecommunication services and front line military communications.

The complete 1m offset antenna breaks down into multiple parts allowing packed dimensions to be kept to an absolute minimum and the carbon fibre construction of the feed arm, reflector and tripod mount means it can easily be carried by one person.

As standard the antenna packs into three compact soft pack cases making it ideal for transport by helicopter or light aircraft and with each case weighing around 10kg it is considerably below the maximum weight limits imposed by commercial airlines for checked baggage.

Customers can choose between manual 3 axis positioning or a fully motorised version. Both versions provide on bore sight polarisation adjustment for optimum side lobe and cross pole performance on all satellites.

Intelsat/Eutelsat recommended specifications are comfortably exceeded, including side lobe performance better than 29-25 log $\theta$  and a choice of high power or low power antenna feed system means that cost can be optimised for conventional SNG systems or low power video over IP systems.

When combined with the GigaSat STC-100 antenna controller, flux gate compass, GPS system and inclinometer, the FA-100 can automatically point at and acquire any geostationary satellite, allowing readiness for transmission within minutes of arriving at a site.

No additional user intervention is required.

# Specifications

## General

<b>Antenna Type</b>	Elliptical, offset with 7 segment reflector and 2 piece feed arm.
<b>Diameter</b>	1.1m x 1.0m
<b>Configuration</b>	Offset
<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-100/70	7.9 to 8.4GHz
	FA-100/140	13.75 to 14.5GHz
	FA-100/180	17.3 to 18.4GHz
	FA-100/300	27.5 to 31GHz
<b>3dB Beamwidth</b>	<1.5° at 13.75GHz	
<b>Transmit Power</b>	50W & 1.0kW versions	
<b>Off Axis Transmit Gain</b>	<29-25 logθ dBi	
<b>VSWR</b>	1.3:1	
<b>Transmit Gain</b>	FA-100/70	38.0dBi mid-band
	FA-100/140	42.0dBi mid-band
	FA-100/180	43.5dBi mid-band
	FA-100/300	47.0dBi mid-band

## Receive

<b>Receive Bands</b>	FA-100/70	7.25 to 7.75GHz
	FA-100/140	10.7 to 12.75GHz
	FA-100/180	10.7 to 12.75GHz
	FA-100/300	19.2 to 21.2GHz
<b>Receive Gain</b>	FA-100/70	37.0dBi mid-band
	FA-100/140	40.0dBi mid-band
	FA-100/180	40.0dBi mid-band
	FA-100/300	43.5dBi 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 +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	80km/h

## Physical

<b>Elevation Adjustment</b>	0 to 90°	
<b>Azimuth Adjustment</b>	+/-170°	
<b>Polarisation Adjustment</b>	+/- 90°	
<b>Packed Size</b>	Case 1	0.5 x 0.4 x 0.32m
	Case 2	0.5 x 0.4 x 0.4m
	Case 3	0.5 x 0.4 x 0.35m
<b>Weight</b>	Case 1	8.6kgs
	Case 2	10.1kgs
	Case 3	10.3kgs



FA-100 Deployed in Europe



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