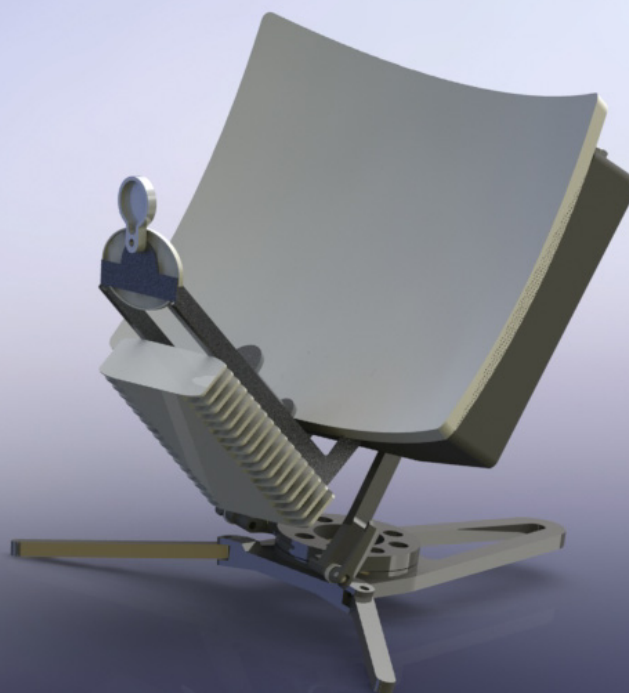
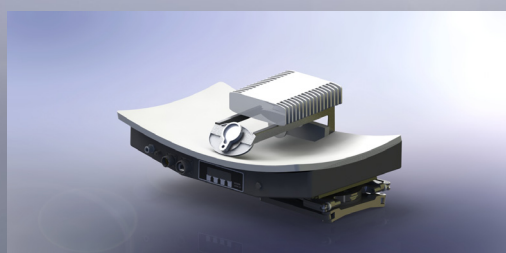
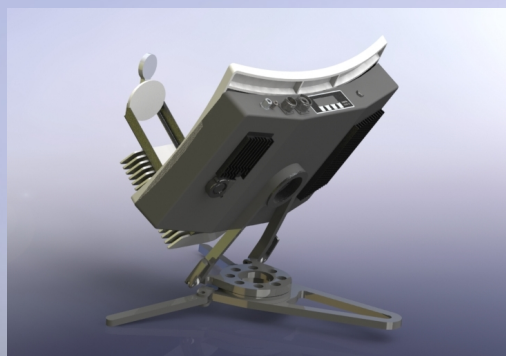




FA-049 Terminal (Ka / L-band)

Light and compact antenna with manual satellite acquisition

Features

- On-Air in minutes
- No tools required
- Ka and L-band operation
- Simplicity of a BGAN terminal
- High data rate communications
- Modem agnostic, L-band interface
- Complete integrated system
- Greater EIRP SD than a 0.60m centre-fed antenna

The FA-049 terminal utilises a custom antenna. This rugged suitcase terminal offers the simplicity of a BGAN terminal with the increased through-put of Commercial and Military satellites. Operates in both Ka and L-band.

The complete terminal is designed to be carried as airline cabin luggage.

A unique feature of this antenna is the EIRPSD (EIRP Spectral Density), which distinguishes this design from a centre-fed design by providing a higher data rate than a centre-fed 60cm.

The antenna efficiency and patterns allow maximum EIRP towards the satellite for higher bit rate capability with no back-off associated with less efficient systems

The standard terminal is offered with an embedded iDirect Evolution modem. The modem incorporates Adaptive Coding and Modulation (ACM), required for Ka-band operation.

The terminal is designed to be modem agnostic and can house a number of modem options including, but not limited to:

iDirect e150
iDirect e850
iDirect e950
Comtech DMD1050
Paradise Q-Flex

It is possible to bypass or omit an internal modem and connect an external modem using the L-band interfaces.

The FA-049 can operate as a high throughput L-band terminal.

The terminal incorporates a simple pointing system using a highly intuitive Graphical User Interface to peak the antenna onto the chosen satellite.

The embedded control board controls all functions of the terminal and allows external control via Ethernet.

Data is connected to the terminal using a RJ45 Ethernet connector.

Different size BUCs can be externally connected to the terminal, should increased EIRP be required.

The terminal can be powered by DC (11 to 36VDC) or mains (90 to 264VAC).



MICRO-ANT
ANTENNA DESIGN AND MANUFACTURING

GigaSat

Ultra
ELECTRONICS

Specifications

General

Antenna Type	Offset Gregorian
Dimensions	22" x 14" (0.49m Parabolic equivalent)
Polarisation	LHCP/RHCP
Ka-band Axial Ratio	1.0dB (Tx) 1.5dB (Rx)

Transmit

Transmit Bands	FA-016 (L) FA-300 (Ka) FA-300 (Ka)	1.6265 to 1.675GHz 29.0 to 30.0GHz 30.0 to 31.0GHz
3dB Beamwidth	<1.2° at 30.5GHz	
VSWR	1.3:1	
Transmit Gain	FA-049/16 FA-049/300	17.2dBi mid-band 42.0dBi mid-band
Transmit EIRP Linear (PSat)	FA-049/16 FA-049/300	31.0dBW (33.5dBW) 48.1dBW (51.4dBW)

Higher powers available

Terminal User Interface

Simple Intuitive User interface via Graphical Display
Audible Output for Satellite Acquisition
Web Browser Setup
Network Management System (Option)

Satellite Acquisition

Via Modem SNR or Rx Signal Level
Beacon Receiver (Option)

Receive

Receive Bands	FA-016 (L) FA-300 (Ka) FA-300 (Ka)	1.518 to 1.559GHz 19.2 to 20.2GHz 20.2 to 21.2GHz
Receive Gain	FA-049/16 FA-049/300	17.0dBi mid-band 39.0dBi mid-band
Receive G/T	FA-049/16 FA-049/300	-5.5dB/K 16.0dB/K

Power

Power Requirement	+11 to 36V DC External battery (Option) Mains (90 to 264VAC) adaptor
Operating Powers (Ka band)	150W Maximum (PSat) 130W Typical Operation (PLin) <45W Receive Only

Environmental

Temperature	-40 to +80°C - Transportation & Storage -20 to +55°C - Operational
Humidity	MIL-STD-810G 507.5, Proc II
Altitude	MIL-STD-810G 500.5, Proc II, 15,000ft
Wind Rating	72km/h (45mph) - Operational 104km/h (65mph) - Survival
Shock	MIL-STD-810G 516.6 Proc. I
Shock—Transit Drop	MIL-STD-810G 516.6 Proc. IV
Vibration	MIL-STD-810G 514.6 Proc. I, Cat 24
Ingress Protection	IP65

Physical

Elevation Adjustment	0 to 90°
Azimuth Adjustment	360°
Antenna Slew	0 to 90°
Packed Size	< 22" x 14" x 9" (56cm x 36cm x 23cm)
Weight	<20lbs (9kgs) without Modem and case

Ultra Electronics reserves the right to vary these specifications without notice.

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GigaSat

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