



The proven SWE-DISH FA150K Fly-Away system is designed from the bottom and up, to be a rugged, easy to transport and quick to deploy satellite earth terminal. The lightweight antenna design is optimized to keep package size down and efficiency up, without compromising strength and durability. The sturdy construction makes it suitable for fast deployment.

SMART PACKAGING

The rugged cage has integrated wheels and can be used as a trolley, with the electronics flight cases stacked on top. The integrated skid plate is used for the same purpose on softer ground like grass, sand, mud or snow. Every transported pound is used to create a stable antenna platform, leaving no empty crates or lids lying around after deployment. The antenna sits close to the ground for increased wind stability.

QUICK DEPLOYMENT

Deployment and assembly of the antenna requires no tools, and can be done "gloves on" under severe environmental conditions. The FA150K is quickly deployed, and the satellite can be acquired in less than 10 min. Packing down is equally fast. The integrated True Elevation Meter, and a battery-operated

Satellite Analyzer, make antenna pointing fast, easy and accurate. The FA150K has been granted a patent for smart transformation from transportation to operation.

HIGH PERFORMING ANTENNA

The high performing elliptical 1.5 m (59 in) Gregorian offset antenna is the heart of the FA150K. It consists of a four piece segmented carbon fiber reflector, for easy stowing and low weight. The dual optics Gregorian antenna concept allows a small antenna size, combined with the exceptionally good efficiency, low side lobes and good cross polarization/axial ratio performance.

EASE OF USE

Transportation is easy. Assembly is straight forward. Easy Control & Monitoring (ECM) unit helps the not-so-well-trained operator to configure the system - to set up the MPEG 2 encoder, configure the modulator, select pre-set frequency and power level, followed by step-by-step support during line up towards the satellite. The FA150K is a tried and true earth terminal design. It is in use worldwide, often under the most demanding conditions.

KEY FEATURES

- Quick deployment - Satellite acquisition in less than 10 minutes, also with gloves on
- Rugged and durable construction - Combat proven
- High performing antenna - Gregorian offset and carbon fiber
- Smart packaging - Designed for easy transportation on hard and soft surfaces, using wheels and skidplate

JULY 2005 VERSION 1:1

SPECIFICATIONS: SWE-DISH® FA150K FLY-AWAY SYSTEM

ANTENNA PERFORMANCE

Antenna model SWE-DISH 150K EDF
 Antenna concept Gregorian type dual optics. Elliptical 4-piece main reflector in carbon fiber with size 1.5x1.35 m (59.1x53.1 in), folding feed arm and sub reflector
 Side lobe performance 29-25 Log θ dBi
 Polarization Linear orthogonal, < 1° accuracy
 Polarization performance XPD >35 dB

TRANSMIT PERFORMANCE

Transmit frequency 13.75 - 14.5 GHz
 Transmit gain at mid-band 45.0 dBi

RECEIVE PERFORMANCE

Receive frequency 10.7 - 12.75 GHz
 Receive gain at mid-band 43.2 dBi
 G/T 23 dB/K at 20° elevation and 20°C (68°F), clear sky

HPA/EIRP CAPABILITY

Typical HPA rating 125W to 400W TWTA for DSNG, 8-16W transceiver for datacom
 DSNG EIRP capability 64 dBW to 69 dBW DSNG
 52 dBW to 55 dBW datacom

ANTENNA TRAVEL RANGE

Azimuth range Manual coarse: $\pm 360^\circ$
 Turnbuckles mounted: $\pm 25^\circ$ coarse, $\pm 10^\circ$ fine
 Elevation range 0-90°

PLATFORM LEVELING

Pitch and roll Built in compensation for pitch and roll by using platform independent reference to true vertical/horizontal

ENVIRONMENTAL PERFORMANCE

Ambient temperature Operational: -20°C to +55°C (-4°F to +131°F)
 Storage: -40°C to +70°C (-40°F to +158°F)
 Solar radiation Operational up to 1,200 W/m²
 Wind speed Operational up to 20m/s (44 mph), windstays mounted
 Operating humidity Up to 100% condensing
 Rainfall Maximum 100 mm/h (4 in/h), excluding link budget effects
 Sealing All flight cases are sealed to IP65 during transport and storage
 Altitude Operational: Up to 3,000 m (9,850 ft)
 Survival: Up to 10,000 m (32,800 ft)

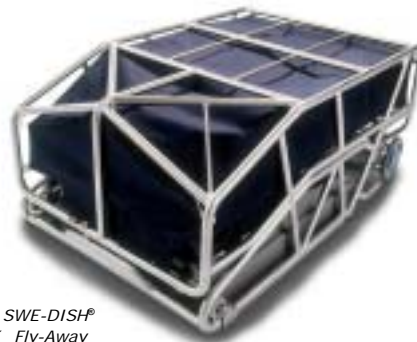
Material/construction Carbon fiber antenna components, stainless steel antenna platform/cage, miscellaneous aluminum parts (anodized)

ANTENNA FEATURES

- Azimuth: Coarse and precision fine adjustment
- Elevation: Generally 0° - 90° with fine adjustment
- Polarization: +/-100°, 1° accuracy, motorized
- True Elevation meter with 0.1° resolutions
- SatViewer signal analyzer for easy, precise antenna alignment incl cross polar rejection & satellite ID

ANTENNA OPTIONS

- Military X band operation including Step Tracking
- Transmit frequency coverage from 12.75 GHz
- 3 port feed for co-polar operation
- HPA 1:1 redundancy or phase combined systems
- Super stable LNA/BDC (PLL) receive concept for low data rate applications
- Detachable rear cage part for installation at places with limited space (OB Van camera platform)



Stowed SWE-DISH® FA150K Fly-Away

MECHANICAL

Typical system Three cases (antenna cage, RF case and electronic case)
 Weight FA150K antenna with Ku-band feed chain, PLL LNAs and accessories: 65 kg (143 lbs)
 RF case typically 27,5 kg (60.6 lbs)
 HPA case typically 28 kg (61.7 lbs)
 Dimensions FA150K stowed 120x76x53 cm (47.2x29.9x20.9 in)

APPROVALS & COMPLIANCE

- Eutelsat/Intelsat compliant, station approvals
- FCC license E980294

Specifications are subject to change without notice, and this datasheet will not form part of any contract.