

# SWE-DISH FA150K Fly-Away



## Intelligent packaging and quick to deploy.

The Rockwell Collins SWE-DISH FA150K Fly-Away is designed from the bottom up to be a rugged, easy to transport, quickly deployed 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 electronic 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 wing stability.

## Quick deployment

Deployment and assembly of the antenna require no tools, and can be done “gloves on” under severe environmental conditions. The FA150K Fly-Away is quickly deployed, and the satellite typically can be acquired in less than 10 minutes. Packing down is equally as fast. The integrated true elevation meter makes the antenna pointing fast, easy and accurate. The FA150K Fly-Away 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 Fly-Away. 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 straightforward. Easy Control & Monitoring (ECM) unit helps the not-so-well-trained operator to configure the system – to set up the MPEG 2/4 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 Fly-Away is tried and true earth terminal design in use worldwide, often under the most demanding conditions.

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## KEY FEATURES

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

## SPECIFICATIONS

### Antenna performance

Antenna model	SWE-DISH 150K EDF
Antenna concept	Gregorian type dual optics. Elliptical 4-piece main reflector in carbon fiber with size 1.5 x 1.35 m (59.1 x 53.1 in), folding feed arm and sub reflector
Side lobe performance	29-25 log Ø dBi
Polarization	Linear orthogonal, <1° accuracy
Polarization performance	XPD >35 dB

### Transmit performance

Transmit frequency	13.75 to 14.50 GHz
Transmit gain at mid-band	45.0 dBi

### Receive performance

Receive frequency	10.70 to 12.75 GHz
Receive gain	43.2 dBi
G/T	23 dB/K at 20° elevation and 20°C (68°F), clear sky

### HPA/EIRP capability

Typical HPA rating	125 W to 400 W TWTA for DSNG 16-40 W transceiver for datacom
DSNG EIRP capability	64 dBW to 69 dBW DSNG 55 dBW to 59 dBW datacom

### Antenna travel range

Azimuth range	Manual coarse: ±360° Turnbuckles mounted: ±25° coarse, ±10° 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
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### 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/m <sup>2</sup>
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

### Antenna options

- Three port feed for co-polar operation
- Military X-band operation including step tracking
- The FA150K Fly-Away antenna is available in an IATA compatible version FA150K Lite
- Super stable PLL LNB receive concept for low data rate applications
- Transmit frequency coverage from 12.74 GHz
- HPA 1:1 redundancy
- Additional transmit frequency coverage from 13.00 GHz to 13.75 GHz

### Mechanical

Typical system	Three cases (antenna cage, RF case and electronic case)
Weight	FA150K Fly-Away antenna: 65 Kg (143 lbs) with Ku-band feed chain With accessories: 78 kg (171.9 lbs) RF case typically 27.5 kg (60.6 lbs) Base Band case typically 28 kg (61.7lbs)
Dimensions	FA150K stowed 120 x 76 x 53 cm (47.2 x 29.9 x 20.9 in)

### Approvals and compliance

- Eutelsat/Intelsat compliant, individual station approval applies
- FCC license E980294

## SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

### Building trust every day.

Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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