

SWE-DISH FA150K Lite Fly-Away



Efficient, high gain and IATA compatible.

The Rockwell Collins SWE-DISH FA150K Lite Fly-Away is designed to meet the IATA weight concept. The IATA compatible Fly-Away originates from the successful FA150K Fly-Away, where the cage and skid plate have been removed to decrease the overall weight even further and to enable repacking in separate IATA flight cases. The flight cases are strong and rugged to withstand rough handling during transport.

Airline checkable

The lightweight antenna system is optimized for quick departure and to be airline checkable. Each case weighs less than 32 kg (70.5 lbs). During transportation the antenna is fitted into rugged transport cases, with handles for easy transportation at airports or lifting short distances.

Stable construction

Deployment and assembly of the antenna requires no tools, and can be done “gloves on” under severe environmental conditions. The FA150K Lite Fly-Away is quickly deployed, and the satellite typically can be acquired in less than 10 minutes. Packing is equally fast. The integrated True elevation meter makes antenna pointing fast, easy and accurate. Excellent wind stability is achieved by the low antenna placement and the stainless-steel front legs and

rear support. The back support doubles as a holder for an HPA flight case, or the SWE-DISH IPT Suitcase, which may be interconnected to the FA150K Lite Fly-Away with increased link margins and greater flexibility as key advantages.

High performing antenna

The antenna is a high performance elliptical 1.5 m (59 in) Gregorian offset antenna. The reflector is made from carbon fiber, and is divided into four lightweight segments for easy stowing. The dual optics Gregorian antenna concept allows for a small antenna size, combined with the exceptional efficiency, low side lobes, good cross polarization and axial ratio performance. The FA150K Fly-Away is a proven true earth terminal design and is 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, no tools required
- Combat proven – Rugged and durable construction
- Airline checkable – Designed for IATA weight concept
- High performing antenna – Gregorian offset and carbon fiber
- Mobility – Designed for easy and quick transportation
- Flexibility – Optionally use IPT Suitcase as a light, compact and fully integrated HPA and baseband package

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 \emptyset 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	200 W to 400 W TWTA
DSNG EIRP capability	66 dBW to 69 dBW DSNG

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
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Environmental performance

Ambient temperature	Operational: -30°C to +55°C (-22°F to +131°F) Storage: -40°C to +70°C (-40°F to +158°F)
Solar radiation	Operational up to 1,200 W/m ²
Wind speed	Operational up to 20 m/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
- HPA 1:1 redundancy
- Super stable PLL LNB receive concept for low data rate applications
- The FA150K Lite Fly-Away can be delivered as an option to the IPT Suitcase

Mechanical

Weight

FA150K Fly-Away antenna with Ku-band feed chain, PLL LNBS and accessories: 56 kg (123.4 lbs)
Baseband case typically 27.5 kg (60.6 lbs)
HPA case typically 28 kg (61.7 lbs)

Approvals and compliance

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

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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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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