

SWE-DISH DA150K Compact Drive-Away



A high performing, easy to use and rugged satellite system.

The Rockwell Collins SWE-DISH DA150K Compact Drive-Away is a small size antenna only concept for vehicle mounted antenna systems. The standard antenna pod had been made shorter by replacing the fairing with a hard protective cover to protect the antenna base. The shorter pod enables the DA150K Compact Drive-Away to be mounted on any vehicle. Fitting to the rooftop is easy thanks to a supporting frame that distributes the load of the antenna.

High performing antenna

The key component of the DA150K Drive-Away satellite antenna is the high performing elliptical 1.5m Gregorian offset antenna. Thanks to the Gregorian offset design the antenna has an unprecedented antenna efficiency of >80%. The dual optics and accurate carbon fiber reflector surface provide exceptional low side lobes and good cross-polar performance. The antenna mount is a large diameter turntable, totally backlash free in both elevation and azimuth.

Straightforward integration

The rooftop integration capabilities are unsurpassed. You can have anything from a 20 W SSPA giving 56 dBW, to the high power configuration 200 W or 400 W TWTA's - beaming up to 66 dBW and 69 dBW EIRP towards the bird.

Ease of use and quick deployment

Operation is extremely easy if the GPS/compass option is fitted. Using the SWE-DISH ACU3000, the operator simply chooses the satellite and the antenna automatically aligns. Typically within

10 minutes you are on the air, ready to transmit back to base. The proven Easy Control & Monitoring (ECM025) unit, step by step, helps the not-so-well-trained operator to configure and set up the system during line up towards the satellite.

Rugged design

During transportation the DA150K Compact Drive-Away has a low profile, giving low drag and good appearance. The fully encapsulated pod protects the antenna mechanism including feed arm and RF components, and reduces wear and tear from brushes or dust during transportation. At the same time all parts are easily accessible for repair. This improves the antenna reliability and durability. The DA150K Compact Drive-Away is a high performing, easy to use and rugged satellite system.

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KEY FEATURES

- Low drag and nonconspicuous – low profile
- Small and compact – aluminum frame distributes the weight, fits any vehicle
- Rugged – all equipment is totally encapsulated during transportation
- High EIRP supports simultaneous HD and SD, IP streaming or DVB-S2, contribution channels
- Wide choice of configurations – automatic alignment with GPS, step tracking, single thread, redundant, phase combined, integrated aircon system
- Gregorian offset – high performance antenna, giving >80% efficiency gain
- FCC compliant, Intelsat/Eutelsat compliant, station approvals

SPECIFICATIONS

Antenna performance

Antenna model	SWE-DISH 150K EDD
Antenna concept	Gregorian type dual optics antenna. Elliptical main reflector in carbon fiber with size 1.5 x 1.35m (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

EIRP capability

DSNG EIRP capability	69 dBW with 400 W TWTA
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Antenna control unit ACU3000 capabilities

Lowest level of operation	Automatic stow and deploy movements. Two speed manual jog in azimuth, elevation and polarization with position readouts.
Next level of operation	Select preset locations (Lat/Long), enter vehicle heading, select "Locate" for automatic antenna pointing – without GPS or fluxgate compass
Fluxgate compass	Select preset locations (Lat/Long), vehicle heading is given by fluxgate compass option
Normal level of operation	GPS and fluxgate compass options are included, allowing automatic antenna pointing towards selected satellite

General characteristics – Antenna travel range

Azimuth range	+/- 180°
Azimuth drive	Worm-gear driven turntable Resolution: 0.05° Fast mode: 2.0°/s Slow mode: 0.3°
Elevation range	0° to 90°
Elevation drive	Harmonic drive gear Resolution: 0.05°

Deployment and stow

Antenna sensors

Environmental specification

Ambient temperature	Operational: -20°C to +55°C (-4°F to +131°F) Storage: -30°C to +70°C (-22°F to +158°F)
Solar radiation	Operational up to 1,200 W/m2
Wind speed	Operational up to 15 m/s (33 mph) Survival stowed up to 150 km/h (93 mph)
Rainfall	Maximum 100 mm/h (4 in/h), excluding link budget effects
Operating humidity	Up to 100% condensing
Sealing	All parts/units are sealed to IP65
Altitude	Operational: up to 3,000 m (9,850 ft) Survival: up to 10,000 m (32,800 ft)

Mechanical

Finish, paint system	Pod in glass-fiber reinforced polyester
Interface to vehicle	The DA150K Drive-Away sub-frame can be permanently or temporarily attached to standard vehicle roof rails or directly to vehicle roof
Weight	110 kg (242.5 lbs)
Dimensions	196.4 x 154.2 x 45.1 cm (77.3 x 60.7 x 17.8 in)

Approvals

- Eutelsat/Intelsat compliant, station approvals
- FCC compliant

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.

For more information contact:

Rockwell Collins Sweden AB
Torggatan 15, 3rd floor
P.O. Box 6075
SE-171 06 Solna, Sweden
Ph: +46 8 728 50 00
Fax: +46 8 728 50 50
email: learnmore@rockwellcollins.com
Web site: www.rockwellcollins.com

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