SWE-DISH®
DA150K COMPACT

The SWE-DISH® DA150K Compact is small size antenna only concept for vehicle mounted antenna systems. The standard antenna pod has been made shorter, by replacing the fairing with a hard protective cover to protect the antenna base. The shorter pod enables the DA150K Compact 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 satellite antenna is the high performing elliptical 1.5 m 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.

STRAIGHT FORWARD INTEGRATION

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

EASE OF USE & 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. Within 10 minutes you are on 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 configurate and set up the system during line up towards the satellite.

RUGGED DESIGN

During transportation the DA150K Compact 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 is a high performing, easy to use and rugged satellite system.

KEY FEATURES

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

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SPECIFICATIONS: SWE-DISH® DA150K COMPACT

ANTENNA PERFORMANCE

Antenna model	SWE-DISH 150K EDD
Antenna concept	Gregorian type dual optics antenna. Elliptical main reflector in carbon fiber with size 1.5x1.35m (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 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 400W TWTA

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	12° to 85°
Elevation drive	Harmonic drive gear Resolution: 0.05° Fast mode: 2.0°/s Slow mode: 0.3°/s
Deployment and stow	Automatic, by command from Antenna Control Unit ACU3000
Antenna sensors	True Elevation Inclinometer in elevation, multi-turn sensor in azimuth. Antenna position displayed on ACU

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 sub-frame can be permanently or temporarily attached to standard vehicle roof rails or directly to vehicle roof
Weight	130 kg (286.6 lbs)
Dimensions	196.4x154.2x45.1 cm (77.3x60.7x17.8 in)

APPROVALS

Eutelsat/Intelsat compliant, station approvals
FCC compliant

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

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