



The SWE-DISH DA150K Mil Drive-Away system is a combat proven, vehicle mounted, encapsulated antenna system, suitable for rough and quick to air situations. It is designed for military and government applications, and can serve as a highly mobile command post, a hub for theatre broadcast or be mounted on an incident response vehicle. The antenna deploys automatically, and is set up for transmission from inside the vehicle. Auto pointing, and automatic satellite acquisition using a GPS and an electronic compass makes for easy operation.

BROADBAND CONNECTIVITY

The DA150K Mil system is capable of both high and low power Ku-band transmission of data, voice and video. X-band capability is optional through upgrades.

STRAIGHT FORWARD INTEGRATION

The pod can be mounted flush on the vehicle roof, or for a greater flexibility on a roof rack. A simple four man lift is required to mount or dismount. Integration is easy with only one set of cables needed from the outside pod to the inside electronic rack. Noise and heat inside the vehicle is reduced by housing power amplifiers and RF equipment inside the pod. A low profile when stowed makes the antenna less conspicuous and reduces drag during transport.

HIGH PERFORMANCE ANTENNA

The high performing elliptical 1.5 m (59 in) Gregorian offset antenna is the heart of the DA150K Mil. The dual optics and accurate carbon composite reflector surfaces give exceptionally low side lobes and good polarization performance. The antenna is mounted on a large diameter turntable, making it backlash free in both elevation and azimuth.

EASE OF USE

Auto pointing makes the DA150K Mil easy to operate and quick to air in the field. Inbuilt GPS, electronic compass and inclinometers, together with the Easy Control Module, allow the antenna to automatically acquire a selected satellite. The operator needs a minimum of training to operate the system.

RUGGED SOLUTION

The combat proven DA150K Mil is designed, manufactured and tested for compliance with military specifications. The pod encapsulates the antenna, antenna mechanics, feed arm and RF components, to reduce wear and tear from brushes or dust during transportation. At the same time all parts are easily accessible for repair. Extra care has been taken to make all mechanics resistant to sand, dust, and grit. The DA150K Mil has successfully performed in combat operations.

KEY FEATURES

- Combat proven
- Rapid deployment in and out of action
- Easy and cost effective integration
- High EIRP and G/T thanks to antenna design
- Encapsulated and rugged design
- FCC, Intelsat/Eutelsat, ETSI/CTR 030 approved, CE-marked with military EMC requirements

JANUARY 2004 VERSION 1.2

SPECIFICATIONS: SWE-DISH® DA150K MIL DRIVE-AWAY

GENERAL		KU-BAND ANTENNA PERFORMANCE	
Azimuth range	±183°	Antenna model	SWE-DISH 150K EDD
Azimuth drive	Worm-gear driven turnable Resolution: 0.05° Fast mode: 2.0°/s Slow mode: 0.2°/s	Sidelobe performance	29-25 Log θ dBi
Elevation range	0 to 90° elevation (for azimuth ±90°), 13° to 60° (for azimuth ±90-183°)	Polarization	Linear < 1° accuracy
Elevation drive	Harmonic driven gear Resolution: 0.05° Fast mode: 2.0°/s Slow mode: 0.2°/s	Polarization performance	XPD >35 dB within 1dB cone
Deployment and stow	Automatic, by command from Antenna Control Unit SWE-ACU3000	Transmit frequency	13.750 to 14.500 GHz
Antenna sensors	True elevation inclinometer in elevation, multi-turn sensor in azimuth. Antenna position displayed on ACU	Transmit gain at mid-band	45.0 dBi
Ambient temperature	Operational -30°C to +55°C (-22°F to +131°F) Storage -30°C to +70°C (-22°F to +158°F)	Receive frequency	10.700 to 12.750 GHz
Solar radiation	Operational up to 1,200W/m²	Receive gain at mid-band	43.2 dBi
Wind speed	Operational up to 20m/s (44mph) Survival stowed 200km/h (124 mph)	G/T	23 dB/K at 20° elevation and 20°C (68°F), clear sky
Operational humidity	Up to 100% condensing	EIRP capability	68.6 dBm with 325W TWTA
Rainfall	Maximum 100 mm/h (2 in/h), excluding link budget effects	X-BAND ANTENNA PERFORMANCE (OPTIONAL)	
Sealing	All part/units are sealed to IP65	Sidelobe performance	32-25 Log θ dBi
Altitude	Operational up to 3,000m (9,850 ft) Survival up to 10,000m (32,800 ft)	Polarization	Circular polarization, RHC Tx and LHC Rx
Finish, paint system	Pod in glass-fiber reinforced polyester. All visual parts on pod are painted NATO green or black anodized. Paint system is compliant with STANAG 2338	Polarization performance	Axial ratio <1.1 dB
Interface to vehicle	Roof bars under the antenna can be permanently or temporarily attached to standard vehicle roof rails or directly to vehicle roof	Transmit frequency	7.900 to 8.400 GHz
Weight	190 kg (420 lbs) for heavy-duty version with de-icing, power amplifier and other customer equipment. Lower weight versions are optional	Transmit gain at mid-band	39.5 dBi
Dimensions	231.2x153.5x45.1 cm (91.0x60.4x17.8 in)	Receive frequency	7.250 to 7.775 GHz
Antenna concept	Gregorian type dual optics antenna on Ku and X bands. Prime focus offset on C band. Elliptical main reflector in carbon fiber with size 1.5x1.35 m (59.1 x 53.1 in), folding feed arm and subreflector.	Receive gain at mid-band	39.0 dBi
Approvals	R&TTE/SNG/TES Eutelsat/Intelsat compliant, station approval. FCC, CE, Mil-Std 461D, & Mil-Std 461E	G/T	16.5 dB/K at 20° elevation and 20°C (68°F) and clear sky
		EIRP capability	65.5 dBm with 450W TWTA



Specifications are subject to change without notice.