



The SWE DISH® DA150K Mil Inset is a unique concept for insetable pod-less satellite systems. The Inset model is designed for mounting into a well on the vehicle roof. The antenna is protected by a roller blind when not deployed. In this way, the Inset meets the military requirement for a non-conspicuous antenna installation with a low profile. In order to achieve this, the platform has minimized dimensions and the pod has been removed. The Inset platform is a rugged welded stainless steel subframe.

HIGH PERFORMING ANTENNA

The high performing elliptical 1.5 m Gregorian offset antenna is the heart of the DA150K Mil Inset - the dual optics and carbon composite reflector surfaces provide exceptional low side lobes and good cross-polar performance. The antenna mount is a large diameter turn table, totally backlash free in elevation and azimuth.

VSAT CONTROLLER

The DA150K Mil Inset is equipped for dual carrier operation. The VSAT Controller is a combined indoor

unit for remote control of the transceiver and for selecting modems.

DE-ICING

De-icing of the antenna and platform floor is an optional feature. Operation is automatic (snow sensor) or manual. The de-icing capability carries a high enough temperature for melting already formed ice. The de-icing feature has demonstrated its reliability in harsh environmental conditions for many years.

EASE OF USE

The DA150K Mil Inset is fitted with an ACU3000M antenna control unit and navigational sensors (GPS/Compass). Automatic satellite acquisition is supported by the ACU3000M. If the same satellite and polarization are frequently used, the operation reduces to a "two button operation". When arriving at site, the "Locate" button is pressed, before leaving the "Stow" button is pressed – that's ease of use.

An integrated Remote Monitor & Control (RMC) system with a LAN interface is optional, allowing wireless worldwide remote management of the terminal.

KEY FEATURES

- Non-conspicuous and low installation on vehicle, shelter or trailer
- A tough rugged antenna complete with Auto-Acquisition and de-icing (optional)
- Operation on dual carrier simultaneously
- Full azimuth and elevation travel ranges 0° to 90°
- Standard RF configuration for meeting military program requirements
- FCC and Intelsat/ Eutelsat compliant, individual station approvals

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SPECIFICATIONS: SWE-DISH® DA150K MIL INSET

ANTENNA PERFORMANCE		(1u) combined with key operated stow prevention switch
Antenna model	SWE-DISH 150K EDD	Capability
Antenna concept	Gregorian type dual optics antenna. Elliptical main reflector in carbon composite with size 1.5x1.35m (59.1x53.1 in), folding feed arm and sub reflector	Melts already formed ice, proven performance
TRANSMIT PERFORMANCE		ELECTRICAL INTERFACE
Transmit frequency	14.0 to 14.50 GHz	Signal, control and RF
Transmit gain at mid-band	45.0 dBi	Interface panel with circular mil connectors, type N connectors for RF
Side lobe performance	29-25 Log θ dBi	Standard is 115V AC due to the de-icing system. Other equipment have switch-able or universal prime power input. 230V AC de-icing is optional
Polarization	Linear orthogonal, <1° accuracy	Prime AC power
Polarization performance	XPD >35 dB	
RECEIVE PERFORMANCE		ANTENNA TRAVEL RANGE
Receive frequency	10.95 to 12.75 GHz	Azimuth range
Receive gain	43.2 dBi	Azimuth drive
Polarization	Switchable Cross- & Co-pol, linear	Resolution: 0.05°. Fast mode: 2.0°/s. Slow mode: 0.3°/s
G/T cross-pol	23 dB/K at 20° elevation and 20°C (68°F), clear sky	Elevation range
RF CONFIGURATION		Elevation drive
Transmit	40W high power transceiver	Resolution: 0.05°. Fast mode: 2.0°/s. Slow mode: 0.3°/s
Receive	External reference PLL LNB and transceiver	Deployment and stow
Intermediate frequency	70 MHz +/- 20 MHz	Automatic, by command from Antenna Control Unit ACU3000M
User interface	M&C remote Controller or optional PC	Antenna sensors
EIRP capability	61 dBW at saturation	True Elevation Inclinator in elevation, multi-turn sensor in azimuth, pulse encoders for azimuth and elevation for fine peaking
Options	Other RF configurations, L-band	ENVIRONMENTAL SPECIFICATION
MODEM		Ambient temperature
Standard modem	DSCS certified SLM-3650, 70 MHz IF	Operational: -20°C to +55°C (-4°F to +55°F)
Controller	VSAT Controller for selection of A or B or A+B modems, with Tx/Rx monitor ports	Storage: -30°C to +70°C (-22°F to +158°F)
ANTENNA CONTROL		Solar Radiation
Antenna control unit	Military ruggedized ACU3000M for 3 axis antenna control	Operational up to 1,200 W/m2
User interface	Screen and keyboard, advisory messages for ease of use	Wind speed
Standard configuration	GPS and fluxgate compass are included, allowing automatic antenna pointing towards selected satellite	Operational up to 15 m/s (33 mph)
Antenna pointing	Final pointing based on pulse encoders, polarization compensation for vehicle tilt	Survival stowed up to 150 km/h (93 mph)
Auto-Acquisition	Conditional automatic antenna pointing and satellite identification using carrier detect	Rainfall
Step Tracking	Proven tracking of inclined orbit satellites is included, +/-10° inclination Tracking mode: Intelli-Search™, Step Track and Program Track	Maximum 100 mm/h (4 in/h), excluding link budget effects
DE-ICING – OPTIONAL FEATURE		Operating humidity
Components de-iced	Antenna reflectors, feed system, and platform plates	Up to 100% condensing
Operation	Automatic controlled by snow sensor or manual, selectable antenna only or all components. De-Ice Controller	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)
		Optional Lightning protection
		Lightning conductor around the rim of the reflector with termination point
		MECHANICAL
		Finish, paint system
		Antenna grey NCS6000-N, platform black NCS 9000-N, 2-pack polyurethane
		Interface to vehicle
		The Inset subframe can be permanently or temporarily attached to vehicle roof, shelter or trailer
		Weight
		151 kg excluding de-icing (332.9 lbs)
		Dimensions
		Platform L172xW81 cm, (L67.7xW31.8 in)
		stowed antenna L172xW150xH48 cm, (L67.7xW59xH18.8 in)
		deployed antenna max H194 cm (76in)
		APPROVALS
		Eutelsat/Intelsat compliant, individual station approvals, FCC compliant

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