



The SWE-DISH DA90K Mil Drive-Away antenna system is designed for worldwide Ku-Band uplink operation, as part of a dedicated uplink vehicle or temporary on top of e.g. a command post vehicle or on an incident respond vehicle. The DA90K Mil is compact, yet efficient and powerful enough to match the performance of larger antennas.

RUGGED AND COMBAT PROVEN

The antenna dish is fully encapsulated during transportation. When stowed it becomes an integral part of the housing, thus providing a low profile and minimum drag. The antenna deploys and stows automatically. The antenna controller provides high or low speed azimuth, elevation and polarization adjustments as a minimum. A number of alternatives are also available:

- Semi-automatic - antenna aligns automatic after vehicle heading and site area location is entered
- Fully automatic - antenna aligns fully automatic based on GPS and fluxgate compass input

COMPACT YET HIGH PERFORMANCE

The dual reflector Gregorian optics and the accurate reflector surfaces provide high efficiency with good side lobe and cross-polar performance, allowing high power operation. This also results in a high G/T which is essential for maximum receive performance for duplex communications. The antenna pod can accommodate an amplifier up to a maximum of 200W.

FLEXIBLE AND EASY INSTALLATION

The antenna system is designed to be fixed to the standard roof rails of the vehicle thereby minimizing vehicle integration. This also permits the use of different command post vehicles without structural modification. Mounting or dismounting is done through a simple four man lift. Minimal interconnect cabling is required due to on-board antenna motor drivers. The DA90K Mil can be packaged in a purpose built flight case for shipping over long distances. The indoor equipment can be rack mounted or mounted in a flight case.

KEY FEATURES

- Rugged and encapsulated design
- Flexible and easy installation - mounts on roof rails of any military vehicle through a four man lift
- Available in configurations for duplex IP, voice & data, DVB, DSNG, radio, encrypted data, etc. or any multiple combination
- Satellite communication up to 8 Mbps
- Air transportable - small size and low weight
- High performance, high EIRP operation thanks to high antenna performance, yet a small aperture
- Remote PC GUI for interface with Antenna Control Unit

JULY 2004 VERSION 1.1

SPECIFICATIONS: SWE-DISH® DA90K MIL DRIVE-AWAY

ANTENNA PERFORMANCE

Antenna type no	90K CDD
Antenna concept	Gregorian type dual offset antenna, circular main reflector with 90cm aperture, folding feed arm with fixed sub reflector
Transmit frequency	13.75 – 14.50 GHz
Transmit gain	42.2 dBi at 14.25 GHz
Receive frequency	10.7 - 12.75 GHz
Receive gain	40.0 dBi at 11.7 GHz
Antenna noise temp	23K at 20° elevation
G/T with 58K LNB	20dB/K at 20° elevation
Cross-polar rejection	> 35 dB within a - 1 dB cone
EIRP capability	Single thread 55 dBW at 20 W 64 dBW at 200 W

ANTENNA DRIVES AND TRAVEL RANGES

Azimuth drive mechanism	Backlash-free large diameter precise drive
Azimuth range	Maximum +/-182°
Azimuth / elevation travel rate	High speed: 3°/sec Slow speed: 0.3°/sec, adjustable
Elevation range	12° to 90°
Polarization range	>+/-100° skew range, <1° accuracy, motor driven
Deployment and stow	Automatic, by command from ACU3090
Power supply	12V DC

MECHANICAL DESCRIPTION

Antenna structure	Aluminum
Pedestal structure	Aluminum
Pod, finish	Carbon-fiber. Painting to customer specified color
Interface to vehicle	Roof mounts under antenna are permanently or temporarily attached to standard vehicle roof rails or directly to vehicle roof
Size when stowed	L 120 x W 110 x H 50 cm (47.2x43.3x19.7 in)
Weight	83 kg typical (183 lbs)

ENVIRONMENTAL SPECIFICATION

Wind speed operational	~20 m/s, under worst wind approach angle
Wind speed survival	~30 m/s
Wind speed survival stowed	~150 km/h
Ambient temperature operational	- 20° to + 50°C (-4° to 122°F)
Ambient temperature survival	- 40° to +60°C (-40° to 140°F)
Rain operational and survival	Heavy rainstorms
Relative humidity	0% to 100% with condensation

ENVIRONMENTAL TESTS AND COMPLIANCE

ETSI EN 300 019-2-5 V3.0.0 (2002-12)	Environmental conditions and environmental tests for telecommunications equipment
IP65	Water and dust
Space segment	Fully compliant with Eutelsat, Intelsat and all major worldwide satellite operators



Photo montage

Specifications are subject to change without notice.

SWE-DISH SATELLITE SYSTEMS AB
HÅLSINGEGATAN 40 PO BOX 6495
S-113 82 STOCKHOLM SWEDEN
P +46 8 728 50 00 F +46 8 728 50 50
SALES@SWE-DISH.SE WWW.SWE-DISH.COM

SWE-DISH SATELLITE SYSTEMS INC
12343 SUNRISE VALLEY DRIVE, SUITE D
RESTON, VA 20191 US
P +1 703 476 1826 F +1 703 476 5423
US-SALES@SWE-DISH.COM WWW.SWE-DISH.COM

SWE-DISH SATELLITE SYSTEMS ASIA LTD
SUITE 2813-15, ONE INTERNATIONAL FINANCE CENTER
1 HARBOURVIEW STREET, CENTRAL HONG KONG SAR
P + 852 2295 2623 F +852 2525 9508
SALES@SWE-DISH.SE WWW.SWE-DISH.COM