



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

RUGGED AND FULLY ENCAPSULATED

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 a wide range of solid state and TWT amplifiers and block up converters up to a maximum of 200W.

FLEXIBLE AND FITS ANY VEHICLE

The antenna system is designed to be fixed to the standard roof rails of the vehicle thereby minimizing coach building. This also permits the use of leased or rental vehicles without structural modification. Minimal interconnect cabling is required due to on-board antenna motor drivers. The DA90K can be packaged in a purpose built flight case for shipping over long distances where a host vehicle can be rented. The indoor equipment can be rack mounted or mounted in a flight case.

KEY FEATURES

- Rugged - antenna is fully enclosed in carbon fiber pod during transport
- Available in configurations for duplex IP, voice & data, DVB, DSNG, radio, encrypted data, etc. or any multiple combination
- Flexible and easy installation - mounts on roof rails of any SUV, minivan or trailer thus avoiding the coach building costs
- DSNG communication up to 60 Mbps
- Antenna can be operated and pointed using vehicle 12V DC supply
- High performance, high EIRP operation thanks to high antenna performance, yet a small aperture
- Remote PC GUI for interface with Antenna Control Unit

FEBRUARY 2005 VERSION 1.2

SPECIFICATIONS: SWE-DISH® DA90K 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	10.95 - 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 54 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 without amplifier (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,
Ambient temperature survival	- 40° to +60°C
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 tele-communications equipment
IP65	Water and dust
Space segment	Fully compliant with Eutelsat, Intelsat and all major worldwide satellite operators



Specifications are subject to change without notice