

SwiftLink® DVM-100A



Fully Automated Satellite Access

Benefits/Features

- Supports transformational, highly mobile, “on-the-stop” military operations
- Easy 10-minute setup, reduces training requirements and eliminates specialized technical support field personnel
- Software-driven satellite acquisition and signal lock pointing reduce the need for special test equipment
- Fully interoperable with iDirect Technologies’ enabled VSAT teleports
- Ships in sturdy containers, eliminating the need for field re-packaging
- Plug-n-play with other SwiftLink systems via simple ethernet interface

Mission-sensitive communications for military and emergency response teams often require access to high-speed satellite services. Field operators with limited VSAT experience need simple-to-operate systems. If you lack SATCOM-trained personnel to operate satellite communications terminals, TCS offers the SwiftLink® DVM-100A, a VSAT system with intuitive software that enables non-technical users to quickly set up and access broadband satellite services.

The TCS SwiftLink DVM-100A features the AvL 1060 flyaway antenna with a state-of-the-art carbon fiber antenna. The AvL positioner is three axis and features the simple, rugged Roto-Lok® drive system that provides zero backlash, high stiffness, and high reliability. The motorized positioner allows automatic satellite acquisition. The six-piece segmented reflector is assembled with captive fasteners extending IP-based services from your central location.

Non-technical users with minimal training can easily set up the SwiftLink DVM-100A. Once the hardware is assembled, acquisition and peaking on the satellite is accomplished by the pressing of a single button mounted on the antenna. For configuration changes and diagnostics, a simple hand-held controller is included, or an optional PC-based Graphical User Interface (GUI) can be connected for more in-depth control and configuration. This automated pointing system precludes the requirement for specially trained SATCOM personnel or special test equipment.

See TCS' complete line of products and services at www.telecomsys.com.

Your Established Partner

TCS brings proven, technology problem-solving expertise to its professional service offerings for the public sector. From continuity of operations and information assurance, to cyber security and integrated logistics support, TCS solves the toughest technical challenges, under conditions that demand the highest level of reliability, availability, and security. As an ISO 9000-certified provider with many consultants holding active security clearances, TCS has an established track record over the past decade as a trusted partner providing mission continuity for the Department of Defense, Special Operations, and intelligence communities, the Department of Homeland Security, and the Department of State.

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Technical Specifications

Reflector: 1M aperture
Optics: Offset, prime focus
Reflector construction: Six-segments carbon fiber
Drive system: Patented Roto-Lok® 3-axis positioner
Mount geometry: Elevation over azimuth
Polarization alignment: Rotation of feed
Case options: 70lb/32kg suitcase, backpack, rugged shipping case
Controller: one-button auto-acquisition
Electrical RF: Gain (Midband), R/T - Receive - 39.8 dBi, Transmit 41.5 dBi
VSWR: R/T - Receive - 1.30:1, Transmit 1.30:1
Beamwidth (degrees):
• -3 dB - Receive - 1.6, Transmit 1.4
• -10 dB - Receive - 2.8, Transmit 2.3
First Sidelobe Level (Typical): Receive -22 dB, Transmit -25 dB
TX Radiation Pattern Compliance >1.5° - Receive 3 dB better than FCC §25.209, ITU-R S.528.5
Antenna noise temperature: 50° K at 30° Elevation
Polarization: Linear Orthogonal
Cross-Pol isolation:
• On-Axis (typical) - 30dB, Std Feed - Transmit 35 dB, Opt. Feed - 35 dB
• Off-Axis (within 0.3°) - 28 dB, Std Feed - 28 dB, Opt Feed - 32 dB
Satellite system compliance: FCC, PanAmSat, Intelsat, (Eutelsat with optional feed)
BUC/HPA capacity: <25W in separate case via power coax to feed
Allowable power: 14dBw/4kHz per FCC, -dBw/4kHz per ITU
Feed port isolation: TX to RX - 70 dB
Controller: one-button deploy with fully-automatic satellite acquisition, peaking, and cross-pol adjustment using GPS, compass, and level sensors inputs; certified for auto-commissioning on certain satellite systems
Operator interface: GUI interface program via CFE computer for manual/jog operation or reprogramming user/data satellite
Auto positioning accuracy: ±0.1 degree
Input power requirements: 24-28VDC, 300W peak, optional 90-256V AC power supply

Mechanical Specifications

Az/EI/Pol drive system: patented Roto-Lok® cable drive system
Azimuth: 180°
Elevation: true elevation readout from calibrated inclinometer
Mechanical: 15° to 75° of reflector boresight
Polarization: motorized ±95°
Speed: slewing/deploying - 10°/sec. Azimuth, 5°/sec.
Elevation: 5°.sec, Polarization
Peaking: 0.2°/second
Motors: 24V DC variable speed with optical encoders
RF interface: RX - L-band with Type-N at rear of antenna, TX - Ku with Type-N at feed flange

Environmental Specifications

Wind: Operational - 20 mph (32 kph), operational with anchoring weights - 30 mph (48 kph), survival with anchoring weights - 40 mph (64 kph)
Pointing loss in wind:
• 10 mph (16 kmph) 0.1 dB, 0.1° typical
• 20 mph (32 kmph), 0.5 dB, 0.3° typical
Temperature:
• Operational +15° to 125°F (-10° to 52° C),
• Survival -40° to 140°F (-40° to 60°C)
Sand and dust: Method 510.4 per MIL-STD-810F
Humidity: Method 507.4 per MIL-STD-810F
Shock and drop in shipping case: Method 514.5 per MIL-STD-810F
Solar radiation: Method 505.4 per MIL-STD-810F

Electrical Power

AC: 9 – 265 v, 50/60 Hz, 500 watts continuous
DC: 48 v, 480 watts

Field Proven Applications

TCS SwiftLink products are proven and in use in battlefield support and mobile command center applications worldwide.
INFOSEC and COMSEC, via integrated FIPS-140, 3DES, AES, or optional NSA Type 1 encryption
Network-centric deployable nodes
Voice, data, and video broadband speeds from 64 Kb/s to 4.2 Mb/s