

GC-27 Ground CDL

High Data Rate Antenna Solutions for Mobile Communications

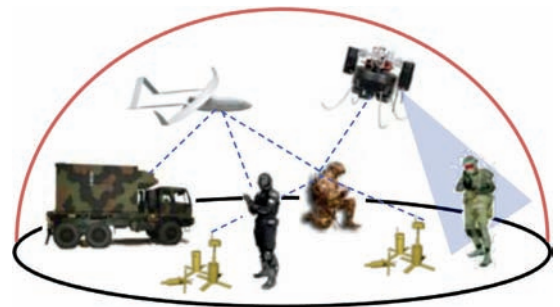
GC-27 is a high data rate, man-portable Tactical Common Data Link (TCDL) terminal featuring the Honeywell AC-27 Directional Antenna and the L-3 Mini- CDL 200 transceiver. This multi-function common datalink antenna system is designed to support high bandwidth military tactical video, voice and data by enabling real-time communication with an airborne data terminal while being deployed in a variety of battle situations.

GC-27 Key Advantages:

- Capable of symmetric data rates up to 45 Mbps
- Supports HD video, data and voice
- CDL Specification Annex B Compliant
- Supports Type 1, Triple-DES, and AES encryption
- L-3 Mini CDL 200 transceiver provides digital modem, RF electronics, encryption, video compression and networking in one enclosed unit
- High-gain directional antenna provides long range communications using an elevation over azimuth pedestal with absolute encoders for position sensing
- Omnidirectional antenna provides close range communications and acquisition
- Differential GPS system provides accurate location and heading information without lengthy setup time
- Integrated RF switch for switching between the directional and omnidirectional antennas
- Integrated power supply filtering allows for unfiltered 10-36 Vdc input
- Integrated rugged transit case and Radome to protect the directional antenna and other electronics
- Quick deploy adjustable tripod supports the entire system on uneven terrain



The Honeywell GC-27 directional antenna



Soldier Networks – Honeywell provides connectivity in theaters of operation



Honeywell High Rate Antennas provide the warfighter connectivity at the operational level

GC-27 Ground CDL Antenna System Specifications

System Performance Characteristics

RF

- Integrated EMS AC-27 Directional Antenna and L-3 Omnidirectional Antenna

- Ku-band frequency ranges
 - Uplink 15.15-15.35 GHz
 - Downlink 14.40-14.83 GHz

- Integrated Mini CDL 200 Transceiver

Data Rates and Waveforms

- CDL Rev F Annex B
 - 200 kbps, 400 kbps and 2.0 Mbps spread & unspread
 - 10.71 Mbps Waveforms A and B
 - 21.42 Mbps and 44.73 Mbps

- Tactical
 - 1.6, 3.2 and 6.4 Mbps

Range at 45 Mbps

- Greater than 100nmi with Directional Antenna

Sensor Interface Options

- RS-170 NTSC
- MPEG-2 and H.264 compression

Encryption

- AES and Type 1 encryption available

System Physical Characteristics	
GC-27 Core – Including Transit Cover	
Size	Approx. 19" x 21" x 22"
Weight	Approx. 50 lbs.
Power	200 watts max, < 6.5 amp, 10-36 Vdc
Tripod – Including Transit Equipment	
Size	Adjustable to ~48" tall
Weight	Approx. 25 lbs.
Environmental	
Humidity	0-100% condensing
Vibration	MIL-STD-810G
Shock	MIL-STD-810G
Temperature	-40 to +55°C (forced convection)
Sand and Dust	MIL-STD-810G Method 510.5, Procedure I & II
Salt Fog	MIL-STD-810G Method 509.5
Rain	MIL-STD-810G Method 506.5, Procedure I
EMI	MIL-STD-461F

Antenna Performance Characteristics	
Directional Antenna	
Antenna gain	>27 dBi
Beam width	Azimuth >4.0° Elevation >4.0°
Polarization	RHCP
Dynamic tracking accuracy radial	±0.734 deg. Beam
Maximum position error	0.25 deg.
Azimuth axis travel	360° Continuous
Elevation axis travel	-30° to +90°
Omnidirectional Antenna	
Antenna gain	3 dBi

GC-27 External Dimensions (in)

