

## 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

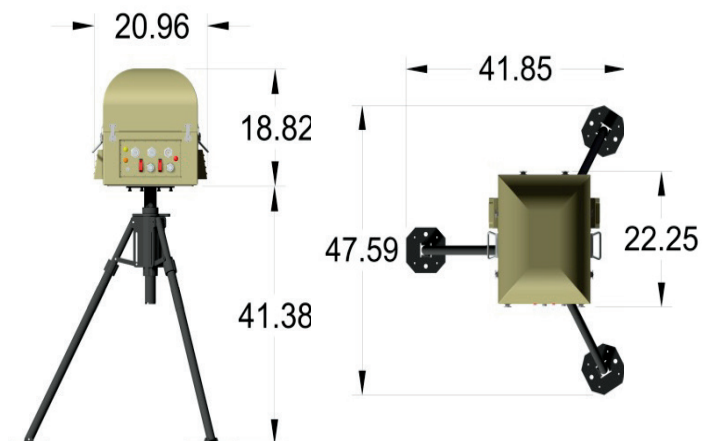
### Directional Antenna

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
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## GC-27 External Dimensions (in)



## Honeywell Aerospace

1944 E. Sky Harbor Circle  
Phoenix, AZ 85034  
aerospace.honeywell.com

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