

## 6.3 METER PERMANENT GROUND SATCOM TERMINAL (PGST)

Decades of proven performance delivering uninterrupted SATCOM connectivity when your mission depends on it.

The PGST is a high-throughput fixed SATCOM terminal that communicates over geostationary satellites supporting critical missions from major teleport facilities.

### PRODUCT DESCRIPTION

The 6.3-meter PGST system offers enhanced functionality including multi-band operation with ITU and FCC type-approved configurations.

The PGST ground electronics system provides world-class tracking of GEO satellites by utilizing a precision tracking system. PGST modems are connected to a configurable L-band Switch Matrix and to the ground network via Ethernet enabling remote management and targeted data dissemination.

### FLEXIBLE KU-BAND CONNECTIVITY

The L3Harris PGST terminal provides a reliable and efficient full duplex dual polarity Ku-band SATCOM capability with a modem-agnostic IF interface. The antenna delivers high gain, ultra-low noise temperature and superior interference rejection. The PGST terminal connects via L-band Intermediate Frequency

(IF) over Fiber Optic (FO) with several modems, providing an aggregate throughput on one satellite datalink. PGST provides access to both satellite signal polarizations, which doubles the number of signals possible in one aggregate throughput. Up to 16 PGSTs connect with a central matrix switch via fiber optic, creating a high capacity GEO teleport enabling any user to interface with any antenna for maximum communications flexibility. Up to 120 users can access the teleport simultaneously 24-7 using a proprietary software suite that manages the terminals full-time.



Permanent Installation.  
Maximum Performance.  
Mission Critical.

### KEY FEATURES

#### Type-Approved Design

- > Bolt-together design meeting ITU and FCC sidelobe specifications

#### Multi-Band Capability

- > Expandable to Ka-band frequencies

#### Superior RF Performance

- > High gain, ultra-low noise temperature, excellent interference rejection

#### Full Orbital Coverage

- > 240° azimuth travel (2 x 120°) and 0 to 90° elevation
- > Inclined orbit satellite tracking

#### Rugged Design

- > 125 mph wind survival, -15° to +50°C operation
- > Optional radome for enhanced environmental protection

#### Flexible Integration

- > L-band, Ethernet, SM Fiber, SNMP v3 interfaces
- > Multiple tracking modes: auto-acquire, step, OPT track, program, memory, manual

### APPLICATION

- > Intelligence, Surveillance, Reconnaissance (ISR) missions
- > Command and Control (C<sup>2</sup>)
- > Real-time data transmission

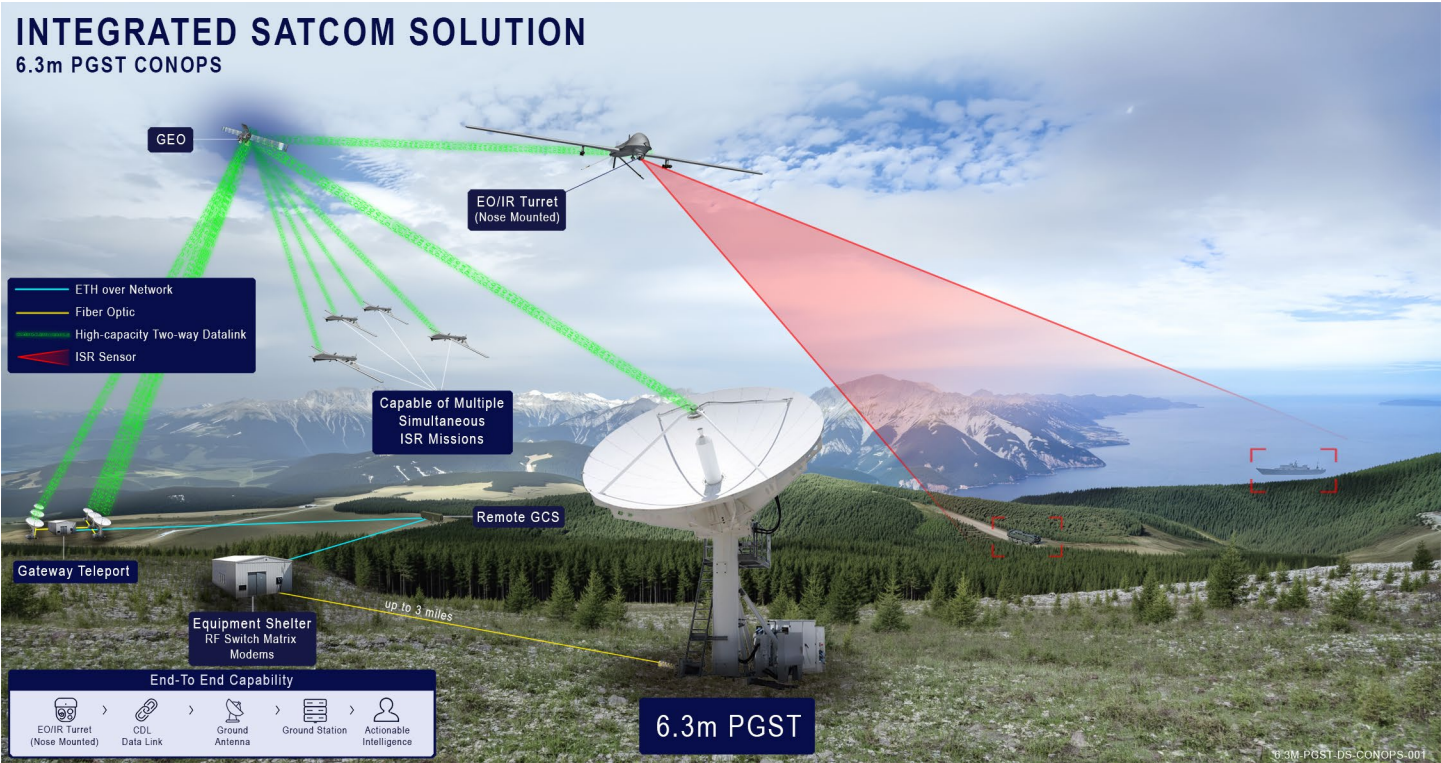
SPECIFICATIONS

| RF PERFORMANCE               |                                                                         |
|------------------------------|-------------------------------------------------------------------------|
| Ku-Band Frequency Range      | Receive: Ku-band: 10.95-12.75 GHz<br>Transmit: Ku-band: 13.75-14.50 GHz |
| IF Frequency Range           | L-band: 950-2050 MHz                                                    |
| Receive G/T                  | >29 dB/K at 10.95 GHz                                                   |
| Transmit Maximum Linear EIRP | 72 dBW                                                                  |
| Polarization                 | Rotating Linear (Tx and Rx cross-polarized)                             |
| Dual Transmit and Receive    | Both polarizations H/V                                                  |

| SYSTEM PERFORMANCE  |                                                                      |
|---------------------|----------------------------------------------------------------------|
| Antenna Diameter    | 6.3 meters (20.83 feet)                                              |
| Mount Type          | Permanent concrete pad installation                                  |
| Tracking            | Auto-acquire, step, OPT track, program, memory, manual               |
| Tracking Capability | Inclined orbit tracking system with built-in beacon receiver         |
| Pointing Range      | Azimuth: 240° (2 x 120° segments)<br>Elevation: 0° to 90° continuous |
| Prime Power         | 3-phase 208 VAC, 60 A                                                |
| Power Consumption   | <6000 W typical with RF cabinet                                      |

| ENVIRONMENTAL         |                                              |
|-----------------------|----------------------------------------------|
| Operating Temperature | -15°C to 50°C (5°F to 122°F)                 |
| Operational Wind      | 45 mph (72 km/h) gusting to 60 mph (96 km/h) |
| Survival Wind         | 125 mph (201 km/h) any position              |
| Rain                  | Up to 4 inches (102 mm) per hour             |
| Relative Humidity     | 0 to 100% with condensation                  |

| INSTALLATION            |                                                        |
|-------------------------|--------------------------------------------------------|
| Type                    | Permanent ground-based installation                    |
| Foundation Requirements | 22x22 ft (6.7 x 6.7 m) footprint                       |
| Optional Equipment      | Radome available                                       |
| Integration Interfaces  | Ethernet, SM Fiber for facility monitoring and control |
| Management Protocols    | SNMP v3                                                |



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