

LEOLUT-600

Search & Rescue Local User Terminal

LEOLUT-600 from Honeywell Global Tracking is a local user terminal that processes 406 MHz distress beacon alerts over Low Earth Orbit (LEO) satellites and automatically provides notification to SAR authorities worldwide. The LEOLUT-600 is part of an integrated and comprehensive search and rescue (SAR) solution from Honeywell Global Tracking.



The LEOLUT-600 automatically monitors alerts coming from LEO satellites orbiting the earth. Using precise Satellite tracking and advanced Doppler processing, the LEOLUT-600 can pinpoint the location of an alert signal, even if the beacon is not equipped with Global Positioning System (GPS).

The LEOLUT-600 is fully configurable and exceeds COSPAS-SARSAT data analysis requirements, providing fast position confirmation in distress situations.

The LEOLUT-600 can be used in conjunction with data from geostationary (GEO) satellites in a dual mode LEO-GEO system that provides unrivalled processing capabilities, optimizes beacon location accuracy and reduces SAR response times.

Honeywell Global Tracking is a global leader in the development of search and rescue technology, and has been a pioneer in the field for over 40 years.

FEATURES AND BENEFITS



Reliability: The LEOLUT-600 offers exceptional uptimes, accuracy and reliability, and has been at the heart of worldwide SAR operations for decades



Advanced Signal Processing: Using sophisticated Doppler-based signal processing, LEOLUT systems can pinpoint the location of alert beacons not equipped with GPS, enabling coordinated SAR operations



Efficient: Provides fast position confirmation of alert beacon signals, especially in geographies where fewer satellites may be seen, leading to more efficient use of SAR resources



Flexible: Fully configurable, making it possible to precisely match the needs of customers



COSPAS-SARSAT Standards Compliant: Meets and exceeds the official COSPAS-SARSAT requirements



Capabilities: Supports LEO-GEO processing. Capable of tracking MEO constellation. Supports ELT(DT) and RLS



Seamless Integration: Ease-of-integration into existing SAR systems saves time and money

LEOLUT-600 Technical Specifications

PHYSICAL

Width: Standard 19" (48.3 cm) rack enclosure

Height: 22U in standard configuration. Custom configurations available.

SATELLITE CONNECTIVITY

Satellite Type: Low Earth Orbit (LEO)

Satellite Frequency: 1544.5 MHz downlink signal

Alert Beacon Frequency: 406 MHz

TERRESTRIAL CONNECTIVITY

Ethernet: 10/100/1000 Mb/s

Data Communication to Mission Control Centre (MCC): Located and unlocated incident solution data, beacon message data (for combined LEO-GEO processing), status data, including alarm and warning messages, calibration data

Data Communication from MCC: Orbit data, calibration data, pass schedule data, operator commands

SERVERS

Number of Servers: 2 per system. One for data collection and one for beacon localization and alerting

Operating Systems: Windows Server

Processor(s): Intel Xeon-Gold 5218

RAM: 32GB in standard configuration. System supports up to 192 GB.

SIGNAL PROCESSING

Low Noise Amplifier/Down Converter (LNA/DC): Converts raw satellite downlink signal to 4.5 MHz intermediate frequency, out-of-band noise filtering. Can transmit a received satellite signal with no loss in RF performance over long distances

Data Collection: Data input control, phase unwrap and demodulation, spectrum analysis

Beacon Signal Decoding: 406 MHz beacon signal detection, signal demodulation, message validation, message archiving

Data Stream Decoding: Bit synchronization, frame synchronization, message extraction, message formatting

406 MHz Data Validation: Time, frequency, beacon message

Data Analysis: Spectrum analysis, signal enhancement

Orbit & Pass Scheduling: Automatically updates satellite orbit data after every satellite pass

Status Monitor & Display: Data collection status, data collection environment, system status, snapshot status, environmental data trends

SYSTEM MONITORING

Environmental: Rack temperature, room temperature

Security: Rack door open sensors (front and back)

Power: Rack power supply sensor

ANTENNA

Type: Mesh - Radome Encapsulated

Size: 2.3m (7.5 ft) diameter

Beamwidth: 7.9° degrees

Environmental: Can withstand winds of up to 250 km/h (155 mph)

Control Unit and Motor Drive: Yes

Antenna Control Software: Antenna device control, positioning the antenna, tracking a satellite pass, antenna diagnostics

COMPLIANCE

COSPAS-SARSAT: Meets all current COSPAS-SARSAT requirements

For more information

www.sps.honeywell.com

Honeywell Global Tracking

400 Maple Grove Road
Ottawa, Ontario K2V 1B8
Canada

E-Mail: sp_smeta@Honeywell.com