

MEOLUT-600

Search & Rescue Local User Terminal

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

The MEOLUT-600 automatically monitors alerts coming from a growing constellation of MEO satellites orbiting the earth (70 planned to be installed by 2017). Using advanced signal processing the MEOLUT-600 can pinpoint the location of an alert signal in its coverage zone, even if the beacon is not equipped with Global Positioning System (GPS).

The MEOLUT 600 is fully configurable and exceeds COSPAS-SARSAT data analysis requirements, providing fast ambiguity resolution in distress situations.

The MEOLUT-600 is used in conjunction with data from geostationary (GEO) satellites. This multi-mode GEO-MEO system provides unrivalled processing capabilities to optimize beacon location accuracy and drastically reduce 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 30 years.



Features

- **Reliability:** The MEOLUT-600 offers exceptional uptimes, accuracy and reliability for SAR operations worldwide
- **Fast New Medium-Earth Orbit Technology:** MEOLUT-600 bridges existing geostationary and low-earth orbit infrastructure and can confirm the location of an emergency alert within seconds
- **Efficient:** Provides fast ambiguity resolution 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
- **Standards compliant:** Meets and exceeds COSPAS-SARSAT requirements
- **Seamless integration:** Ease-of-integration into existing SAR systems saves time and money

MEOLUT-600 Technical Specifications

Physical	
Width	Standard 19" (48.3 cm) rack enclosure
Height	42U in standard configuration; custom configurations available
Satellite Connectivity	
Satellite Type	Medium Earth Orbit (MEO)
Satellite Frequency	1544.5 MHz downlink signal
Alert Beacon Frequency	406 MHz
Terrestrial Connectivity	
Ethernet	10/100/1000 Mb/s
Network	Able to share TOA/FOA measurement data with other MEOLUTs over network connections Supports COSPAS-SARSAT XML and CSV recommended formats Can share data in real-time and/or using a node-forwarding mechanism
Data Communication to Mission Control Centre (MCC)	Located and unlocated incident solution data, status data, including alarm and warning messages
Data Communication from MCC	Orbit data
Servers	
Number of Servers	Scalable: One for data collection per antenna, one for signal processing per four antennas, one for beacon localization
Operating Systems	Windows Server 2008
Processor(s)	2 x Intel Quad-Core Xeon
RAM	4 GB 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; orbit updates are provided by a GNSS receiver
Status Monitor & Display	Data collection status, data collection environment, system status, snapshot status, environmental data trends
System Monitoring	
Environmental	Rack temperature; room temperature will be available in a future release
Security	Rack door open sensors (front and back)
Power	Rack power supply sensor
Antenna	
Type	Mesh radome
Size	2.3m (7.5 ft) diameter
Beamwidth	7.9° degrees
Environmental	Can withstand winds of up to 200 km/h (124 m/h)
Control Unit and Motor Drive	Yes
Antenna Control Software	Antenna device control, positioning the antenna, tracking a satellite pass, antenna diagnostics
Certification	
COSPAS-SARSAT	Meets all current COSPAS-SARSAT requirements

For more information:

www.gt.honeywell.com

Honeywell Global Tracking

400 Maple Grove Rd.
Ottawa, ON
K2V 1B8, Canada
www.honeywell.com



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