

LX-1 L-Band Option Board



Improve GPS positioning accuracy by adding differential capability with Hemisphere GPS's LX-1 OEM Board. Coupled with Hemisphere GPS's exclusive Crescent OEM board, the LX-1 receives OmniSTAR differential signals that improve positioning to less than a meter. OmniSTAR broadcasts via satellite differential signal corrections covering most land areas worldwide. It is an ideal alternative or back-up to other differential sources such as SBAS (WAAS, EGNOS, MSAS, etc.) and radiobeacon especially in regions where those signals are difficult or impossible to track.



The LX-1 automatically tracks the best differential satellite broadcast if more than one is available in a particular region or tracks a specific satellite manually set by the user.



The LX-1 comes paired with the Crescent OEM board for optimal performance. Integration of the two boards is simplified as they are exactly the same size and connect directly to each other.



Key LX-1 Advantages

- Sub-meter accuracy and versatility when combined with our Crescent GPS board.
- Automatic differential satellite tracking - no manual tracking frequency adjustment
- OmniSTAR subscriber access permits remote activation via satellite uplink
- Convenient integration with Crescent GPS board

LX-1

Operating Specifications

Channels: Single channel
Frequency Range: 1530 to 1560 MHz
Channel Spacing: 7.5 KHz
Satellite Selection: Manual or Automatic
(based on location)

Start Up and Satellite

Reacquisition Time: 15 seconds typical
Sensitivity: -130 dBm
Adjacent Channel
Rejection: 15 kHz spacing >30dB,
300kHz spacing >60dB

Processor: DSP for demodulation and protocol
decoding (Crescent board provides
processing for differential algorithms)

Command Support: Reports OmniSTAR region and satellite
information, allows input and status
of OmniSTAR subscription, Bit Error
Rate output for reception quality
indication, manual frequency tuning

Communications: Serial – through Port D on the Crescent
board.

Environmental

Operating Temperature: -32°C to +74°C (-25°F to +165°F)
Storage Temperature: -40°C to +85°C (-40°F to +185°F)
Humidity: 95% non-condensing

Power

Input Voltage Range: 3.3 VDC \pm 3%
Power Consumption: 625 mW @ 3.3 VDC (no antenna)
Current Consumption: 190 mA @ 3.3 VDC (no antenna)

Mechanical

Dimensions: 71.1 mm L x 40.6 mm W x 12 mm H
(2.8" L x 1.6" W x 0.5" H)
Weight: 14 g (0.5 oz.)
Header Connector: 17 pin, 2-row, 0.05" pitch
RF Connectors: MCX straight socket (Male and Female)