

## 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)

Authorized Distributor:

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