

GPS-600-LB



Positioning Leadership



GPS-600-LB

NovAtel's GPS-600-LB is a lightweight antenna designed to take advantage of GPS plus technology by providing access to GPS L1 and L2 as well as OmniSTAR and Canada Wide Differential GPS (CDGPS) L-band frequencies with one common antenna.

Positioning Accuracy

When used in combination with NovAtel's ProPak-LB*plus* and either the OmniSTAR or CDGPS service, decimeter to sub-meter level accuracies can be achieved.

OmniSTAR service is accessible worldwide with a subscription in both VBS (standard) and HP (high performance) modes offering real-time DGPS positioning from meter to decimeter level accuracy.

CDGPS is a free utility well suited to the real-time data collection of North American users. The data signal is structured to perform well in difficult or foliated conditions and provides sub-meter accuracy.

Rugged and lightweight

The GPS-600-LB is smaller, lighter, and more economical than a separate GPS and L-band antenna solution. With a sealed radome to protect against severe weather and hostile environments, the rugged, compact housing of the GPS-600-LB is well suited to diverse applications, including marine environments, precision agriculture, and mobile applications. Additionally, it features a wide operational temperature range and functions well in high vibration applications.

Versatile

The GPS-600-LB offers flexibility in site selection and inclination by tracking satellites low on the horizon. For increased ease of use, a single TNC connector is used for both input power and output of the RF signal. Additionally, the GPS-600-LB can be used for both RTK and L-band tracking, making it a single antenna that can utilize any mode of GPS positioning.

Features

Provides access to OmniSTAR and CDGPS L-band technology

GPS and L-band tracking with one antenna

Rugged, environmentally sealed housing

Benefits

Sub-meter to decimeter-level accuracy without the need of a separate base station

Versatility and utilization of any mode of GPS positioning

Suitable for extreme environments and high vibration applications

Performance¹

3 db Pass Band

L1	1575 ± 10 MHz (typical)
L2	1228 ± 10 MHz (typical)
L-band	1520 - 1565 MHz (typical)

Out-of-Band Rejection

L1, L-band	
1420 MHz	40 dBc (typical)
1470 MHz	20 dBc (typical)
1635 MHz	20 dBc (typical)
1675 MHz	45 dBc (typical)

L2	
$f_c - 100$ MHz	50 dBc (typical)
$f_c - 50/+100$ MHz	30 dBc (typical)
$f_c + 50$ MHz	20 dBc (typical)

LNA Gain

L1, L2	26 ± 3dB (typical)
L-band	29 ± 3dB (typical)

Gain at Zenith (90°)

L1	6 dBic (minimum)
L2	6 dBic (minimum)
L-band	5 dBic (minimum)

Gain Roll-Off (from Zenith to Horizon)

L1	12 dB
L2	10 dB
L-band	11 dB

Noise Figure	≤ 2.6 dB (typical)
VSWR	≤ 2.0 : 1

Nominal Impedance	50 Ω
-------------------	------

Altitude	3,000 m
----------	---------

¹ All performance specifications are based on typical operating conditions.

Physical & Electrical

Size

Diameter	20.3 cm
Height	9 cm

Weight	500 g
--------	-------

Power

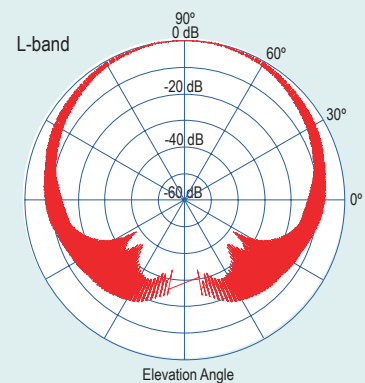
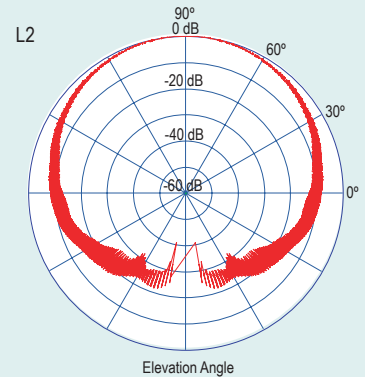
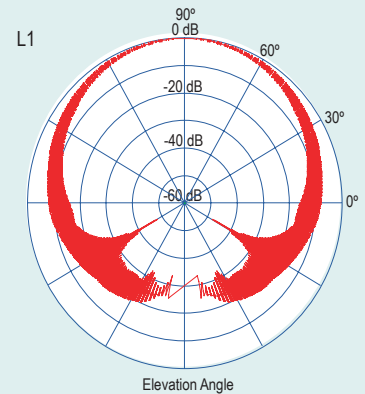
Input Voltage	+4.5 to +18 VDC
Current	40 mA (typical)

Connector	TNC female
-----------	------------

Temperature	-55°C to +85°C
-------------	----------------

Elevation Gain Patterns

The plots below represent the typical right-hand polarized (RHP) radiation patterns for the L1 frequency, the L2 frequency and the L-band respectively.



For more information, visit our website.

U.S. & Canada	1-800-NovAtel
Europe	+44 (0) 1524 848 374
Other	+1-403-295-4900
Fax	+1-403-295-4901
Email	sales@novatel.ca
Web	www.novatel.com

