



Positioning Leadership



Euro-L5

NovAtel's Euro-L5™ offers superior tracking of multiple L5 GPS or GEO signals in a Euro form factor card or a rugged enclosure.

Exceptional L5 GEO tracking

The Euro-L5 tracks up to four L5 WAAS GEO signals and decodes the L5 WAAS navigation message. Compliant with RTCA DO-261, NAVSTAR GPS L5 Signal Specification, the receiver also features digital pulse blanking for mitigation of in-band pulsed RF interference, resulting in improved tracking reliability.

Full range of data

The data provided by the Euro-L5 includes satellite range information, raw WAAS frame data with parity checks, automatic gain control (AGC) information, and receiver configuration and status details. A versatile ASCII or binary interface provides access to the data over two high speed RS-232 serial ports capable of 230,400 bits per second.

Multiple integration options

The Euro-L5 is available as an OEM engine in the standard Eurocard form factor, which ensures ease of integration without sacrificing flexibility. For systems requiring a ready-to-use solution, the Euro-L5 is also available in the EuroPak-L5. This rugged enclosure protects against the elements and its standard DB-9 and TNC connectors provide for quick installation.

L5 GPS positioning

In addition to superior L5 GEO tracking, the Euro-L5 features L5 GPS positioning. With a single command, the receiver can be configured for L5 GPS tracking on all four channels to generate a highly-accurate PVT solution. Position data derived from the L5 signal is expected to provide accuracy comparable to that offered by the L2 P(Y) code.

Features

Tracks up to four L5 WAAS GEO signals or four L5 GPS signals

Available in standard Euro form factor or rugged enclosure

In-band digital pulse blanking

Benefits

Offers the opportunity for research and development related to the L5 signal prior to implementation

Ensures ease of integration, either as an OEM engine designed for customization or a drop-in solution for quick installation

Mitigates pulsed RF interference for increased tracking reliability

Performance¹

Tracking Channels 4 L5 GEO or 4 L5 GPS
(user configurable)

Measurement Precision

L5 Code 1 m RMS
L5 Carrier Phase 3 mm RMS
(differential channel)

Data Rate 1 Hz

Signal Reacquisition < 60 s (typical)

Additional Features

- Compliant with RTCA DO-261 NAV-STAR GPS L5 Signal Specification (December 14, 2000)
- External oscillator input
- Two serial ports capable of 230,400 bps
- ASCII and binary command and log interface with 32-bit CRC

About the L5 Signal

- Provides a minimum received signal power of -154 dBw, +6 dB higher than the L1 C/A code
- Utilizes a chip rate ten times that of the L1 C/A code
- Features the Neuman-Hoffman code for improved signal integrity
- Offers multipath performance comparable to that of the L2 P(Y) code, with no significant multipath effects from signals more than one L5 chip in delay

Euro-L5 Engine Physical & Electrical

Size² 160 x 100 x 16 mm

Weight 150 g

Power

Input Voltage +4.5 to +18 VDC
Power Consumption 6 W (typical)

Antenna LNA Power Output

Output Voltage +5 VDC
Maximum Current 100 mA

External Oscillator Input

Input Frequency 5 or 10 MHz ± 0.5 ppm
Signal Level 0 to +13 dBm

Communication Ports

- 2 RS-232 serial ports capable of 9,600 to 230,400 bps

Input/Output Connectors

Main 160-pin five-row male header
Antenna Input SMB male
External Oscillator Input SMB male

Environmental

Temperature
Operating -25°C to +85°C
Storage -45°C to +95°C
Humidity 95% non-condensing

EuroPak-L5 Enclosure Physical & Electrical

Size 235 x 154 x 71 mm

Weight 1.2 kg

Power

Input Voltage +9 to +18 VDC
Power Consumption 6 W (typical)

Antenna LNA Power Output

Output Voltage +5 VDC
Maximum Current 100 mA

External Oscillator Input

Input Frequency 5 or 10 MHz ± 0.5 ppm
Signal Level 0 to +13 dBm

Communication Ports

- 2 RS-232 serial ports capable of 9,600 to 230,400 bps

Input/Output Connectors

Power 4-pin LEMO
Antenna Input TNC female
External Oscillator Input BNC female
COM1 DB-9 male
COM2 DB-9 male
I/O Strobes DB-9 female

Environmental

Temperature
Operating -25°C to +60°C
Storage -45°C to +95°C
Humidity 95% non-condensing

¹ Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric conditions, satellite geometry, baseline length, and multipath effects.

² Main data connector extends approximately 7 millimeters past edge of board.



Note: The L5 GPS portion of the Euro-L5/EuroPak-L5 receiver has yet to be qualified. This receiver is considered beta quality and is sold for test purposes only.

For more information, visit our website.

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