



Superior 16 Channel, Multi-Frequency GNSS Receiver in Durable EuroPak Enclosure

Benefits

Enhanced positioning through increased satellite tracking

Digital pulse blanking on GPS L1 and L5 and Galileo L1, E5a and E5b for radar and pulsed DME interference mitigation

Features

Euro form factor

GPS L1 & L5, SBAS L1 & L5 and Galileo L1, E5a & E5b

External OCXO input and enclosure option (EuroPak-15a only) with internal OCXO

Receiver Configurations

GPS L1 and L5 capability is available, alongside full access to SBAS L1 and L5 signals. Galileo configurations require the inclusion of GPS for precise timing until a usable Galileo constellation is available. The following receiver configurations are selectable by the user:

| | GPS L1 Channels | GPS L5 Channels | GEO L1 Channels | GEO L5 Channels | Galileo L1 Channels | Galileo E5a Channels | Galileo E5b Channels |
|----------|-----------------|-----------------|-----------------|-----------------|---------------------|----------------------|----------------------|
| Config 1 | 8 | | 4 | 4 | | | |
| Config 2 | 6 | 6 | 2 | 2 | | | |
| Config 3 | 8 | 8 | | | | | |
| Config 4 | 6 | | | | 5 | 5 | |
| Config 5 | | | | | 8 | 8 | |
| Config 6 | 8 | | | | 8 | 8 | 8 |

These configurations have been selected to allow the user maximum flexibility. GPS L1 position or L5 position (user selectable) is available with SBAS GEO tracking on L1 and L5. Sufficient GPS L1 and L5 channel capacity is available as the L5 constellation grows and for simulation testing in the interim. GPS position provides timing for initial Galileo satellite signal tracking until a usable constellation is available. The GIOVE-A test signal is tracked on its data signal using configurations 4 and 6.

Superior Tracking

NovAtel's Narrow Correlator® technology enhances the reception of satellite data for highly accurate range measurements. A NovAtel proprietary algorithm is used to detect and eliminate side-peak tracking for the Galileo Binary Offset Carrier (BOC) signal on L1. On L5 GPS and all Galileo channels the receiver tracks the dataless pilot signal and extracts the navigation message from the data signal. Pseudorange and carrier phase measurements are computed using the pilot signal for GPS L5 and Galileo IOV.

Full Range of Data

The data provided by the EuroPak-15a and EuroPak-15ab receiver includes satellite range information, raw 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 data over two high speed RS-232 serial ports capable of 230,400 bits/second.

If you require more information about our enclosures, visit novatel.com/products/enclosures.htm



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Europe 44-1993-85-24-36

SE Asia and Australia 61-400-833-601

Note: The EuroPak 15a and 15ab receivers have not undergone qualification testing and should be considered prototypes.

Performance¹

| | |
|------------------|-------------|
| Frequency | |
| L1 | 1575.42 MHz |
| L5/E5a | 1176.42 MHz |
| E5b ² | 1207.14 MHz |

Tracking Channels

| | |
|-----------------------|--------------------------------------|
| Default Configuration | 6 L1 GPS + 5 L1/E5a |
| Default Configuration | 8 L1 GPS + 8 L1/E5a/E5b ² |

Pseudorange Measurement Accuracy

| | |
|-------------|-----------------------------------|
| Galileo L1 | 7 cm at 44 dB-Hz, 0.05 Hz DLL BW |
| Galileo E5a | 4 cm at 44 dB-Hz, 0.05 Hz DLL BW |
| Galileo E5b | 4 cm at 44 dB-Hz, 0.05 Hz DLL BW |
| GPS L1 | 10 cm at 44 dB-Hz, 0.05 Hz DLL BW |
| GPS L5 | 4 cm at 44 dB-Hz, 0.05 Hz DLL BW |

Signal Channel Phase Accuracy

| | |
|-------------|-------------------------------|
| Galileo L1 | 3 mm at 44 dB-Hz, 3 Hz PLL BW |
| Galileo E5a | 3 mm at 44 dB-Hz, 3 Hz PLL BW |
| Galileo E5b | 3 mm at 44 dB-Hz, 3 Hz PLL BW |
| GPS L1 | 3 mm at 44 dB-Hz, 3 Hz PLL BW |
| GPS L5 | 3 mm at 44 dB-Hz, 3 Hz PLL BW |

Data Rate

| | |
|------------------|------|
| Raw Measurements | 1 Hz |
| Status Data | 1 Hz |

EuroPak Enclosure

Size 235 x 154 x 71 mm

Weight

| | |
|--------------|--------|
| EuroPak 15a | 1.2 kg |
| EuroPak 15ab | 2.0 kg |

Power

Input Voltage +9 to +18 VDC

Power Consumption

| | |
|-----------------------|----------------|
| EuroPak 15a | 6 W (typical) |
| EuroPak 15a with OCXO | 13 W (typical) |
| EuroPak 15ab | 14 W (typical) |

Antenna LNA Power Output

| | |
|-----------------|--------|
| Output Voltage | +5 VDC |
| Maximum Current | 100 mA |

External Oscillator Input³

| | |
|-----------------|---------------|
| Input Frequency | 10 MHz |
| 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 |
| Oscillator | BNC female |
| COM 1 | DB-9 male |
| COM 2 | DB-9 male |
| I/O | DB-9 female |

Environmental

| | |
|-------------|--------------------|
| Temperature | |
| Operating | 0°C to +40°C |
| Storage | -45°C to +95°C |
| Humidity | 95% non-condensing |
| Altitude | 3,000 m |



Version 1 -Specifications subject to change without notice.

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For the most recent details of this product:

novatel.com/Documents/Papers/EuroPak15ab.pdf

¹ Typical values. Performance specifications subject to GPS and Galileo system characteristics, operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.

² EuroPak-15ab only.

³ Not available for OCXO models. Required for EuroPak-15ab.

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