Enclosures

DL-V3™

Flexible GNSS Receiver with Enhanced Connectivity Ideal for Base Station and Rover Applications

Benefits

Extra hardware not required for sub-metre accuracy

Connectivity options ease integration

Positioning enhanced with increased signal availability

Excellent data security and portability

Features

Robust, reliable RTK performance

Serial, Ethernet, USB and Bluetooth® capable

Integrated support for OmniSTAR®

Removable Compact Flash card

GPS+GLONASS

The DL-V3 features GPS-only or GPS+GLONASS functionality providing maximum flexibility and enhanced positioning in challenging environments. It is also capable of tracking GPS L2C and L5.

NovAtel's World-Class OEMV® Performance

NovAtel's OEMV-3® receiver drives the DL-V3's precision performance. For high-precision applications, NovAtel's RT-20® and RT-2™ AdVance® RTK options provide real-time centimetre-level positions at a rate of up to 50 Hz. For sub-metre positioning, the DL-V3 is capable of receiving OmniSTAR L-band correction services.

Flexible Functionality and System Design

The DL-V3 provides numerous interfaces beyond the serial stand. Bluetooth® is available for close-in wireless connectivity, while Ethernet is available for remote network-based access to your receiver. Highly visible colored LEDs indicate receiver status at a glance. A removable Compact Flash card provides combined storage for up to two GB of logged data and the added convenience of data portability.

If you require more information about our enclosures, visit novatel.com/products/gnss-receivers/enclosures

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DL-V3

Performance[1]

Channel Configuration
72 Channels

Signal Tracking

GPS	14 L1, 14 L2, 6 L5
GLONASS	12 L1, 12 L2
SBAS	2
L-band	1

Horizontal Position Accuracy (RMS)

Single Point L1	1.5 m
Single Point L1/L2	1.2 m
SBAS[2]	0.6 m
DGPS	0.4 m
OmniSTAR[2]	
VBS	0.6 m
XP	0.15 m
HP	0.1 m
RT-20[3]	0.2 m
RT-2	1 cm+1 ppm

Measurement Precision

	GPS	GLO
L1 C/A Code	4 cm	15 cm
L1 Carrier Phase	0.5 mm	1.5 mm
L2 P(Y) Code	8 cm	8 cm
L2 Carrier Phase	1.0 mm	1.5 mm

Data Rate

Measurements	50 Hz
Position	50 Hz
OmniSTAR HP/XP	20 Hz

Time to First Fix (L1, L2)

Cold Start[4]	60 s
Hot Start[5]	35 s

Signal Reacquisition

L1	0.5 s (typical)
L2	1.0 s (typical)

Time Accuracy[6] 20 ns RMS

Velocity Accuracy 0.03 m/s RMS

Velocity[7] 515 m/s

Physical and Electrical

Dimensions 185 x 162 x 76 mm

Weight 1.3 kg

Power

Input Voltage	+9 to +28 VDC
Power Consumption	3.5 W (typical)

Antenna Port Power Output

Output Voltage	+5 VDC
Maximum Current	100 mA

Connectors

Power	4-pin LEMO
Antenna Input	TNC female
External Oscillator	BNC female
COM1	DB9 male
COM2	DB9 male
AUX	DB9 male
I/O	DB9 female
Ethernet	RJ-45
USB	Type B

Communication Ports

- 3 RS-232 serial ports
- 1 Bluetooth® port[8]
- 1 Ethernet capable port[8]
- 1 USB 1.1 port, USB device only

Environmental

Temperature	
Operating	-40°C to +75°C
Storage	-50°C to +95°C
Humidity	95% non-condensing
Waterproof	IEC 60529 IPX7
Dust	IEC 60529 IP6X
Vibration (operating)	
Random	MIL-STD-810F, 514.5, Procedure1
Sinusoidal	IEC 68-2-6
Shock	IEC 68-2-27
Compliance	FCC, CE, Industry Canada

Included Accessories

- Automotive 12 VDC power cable
- Mounting bracket
- Serial cable
- Null-modem cable
- I/O interface cable
- Compact Flash

Optional Accessories

- GPS-700 series antennas
- ANT series antennas
- RF Cables—5, 15 and 30 m lengths
- AC adapters—International and North American

Features

- Multiple software models, including L1 and L1/L2 GPS or GPS+ GLONASS and carrier phase positioning with RT-20 or RT-2 options
- Auxiliary strobe signals including a configurable PPS output and two mark inputs
- Supports RTCM SC-104 version 3.0, CMR version 3.0, CMR+, NMEA 0183 version 3.01, and RTCA DO-217 message types
- Field-upgradeable firmware

Firmware Options

- RT-20
- ALIGN®
- GL1DE®
- OmniSTAR HP, XP, VBS, G2
- L5 signal tracking
- Pseudo Range/Delta-Phase (PDP) Positioning

NovAtel

Version 6 -Specifications subject to change without notice.

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For the most recent details of this product:
novatel.com/assets/Documents/Papers/DL-V3.pdf

RoHS COMPLIANT

ISO 9001:2000 FM 92323

[1] Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.
[2] GPS only.
[3] Expected accuracy after static convergence.
[4] Typical value. No almanac or ephemerides and no approximate position or time.
[5] Typical value. Almanac and recent ephemerides saved and approximate position and time entered.
[6] Time accuracy does not include biases due to RF or antenna delay.
[7] Export licensing restricts operation to a maximum of 515 meters per second.
[8] The DL-V3 is user-configured for either Ethernet or Bluetooth, but not both simultaneously.