



**PACIFIC CREST**  
CORPORATION

# Wireless Communications and GNSS

Product Brochure



# Wireless Data Links

## Introduction

Radio modems from Pacific Crest provide wireless data links for RTK positioning and remote sensing. These broad spectrum transceivers offer up to 35 Watts of power and over-the-air link rates as high as 19,200 bps. Pacific Crest is the leading provider of high-performance data links for the Geomatics industry based on the acceptance of its communications protocols as the standard for RTK surveying.



**PDL LPB**

Surveyors utilizing Global Navigation Satellite Systems require rugged radio modem data links for precise positioning information. PDL products are compact, lightweight and offer power-efficient operation. They are easy to use and provide high performance and rugged dependability for the toughest survey environments. PDL products have an enhanced user interface that allows the users to view status information and also to change channels in the field in order to find the best one for transmission.

The PDL Low Power Base (LPB) offers 2 W of output power. The PDL High Power Base (HPB) has a high output power of 35 W which makes it the most powerful radio of its type anywhere. With a fast over-the-air data rate, the PDL HPB also offers reduced latency for improved GPS positioning.



**PDL HPB**



**PDL RXO**

The PDL RXO is a high-quality, narrow-band radio modem receiver module designed for integration into products that require a one-way radio communication link. This sophisticated receiver is completely compatible with the entire PDL family of radio modems. System costs are lowered due to the PDL's high level of integration, meaning a significant reduction of the amount of cables, enclosures, and power supplies.

## EDL II

The EDL II is a power-efficient, low-maintenance solution for all environmental monitoring applications. The EDL II connects directly to N-type omnidirectional and directional antennas, eliminating the requirement for RF cables. A TNC connector option allows the use of a rubber duck antenna directly on the unit for portable/mobile applications.

A fully sealed design allows the EDL II to be used in harsh environments. Connecting the EDL II directly to the antenna allows the best performance and highest reliability. This also reduces potential interference and cost issues that may result from mounting a radio modem inside the instrumentation enclosure. rugged dependability for the toughest survey environments.



## SITECOM

The PDL Sitecom™ is a rugged, reliable radio modem that enables high-precision GPS locating and tracking—machine control—for bulldozers, tractors, and other high-value assets used in construction, agriculture, and other applications.

The Sitecom radio incorporates unique features to guarantee reliable and cost-effective operation in demanding construction environments. The rugged unit features an enclosure and design that allow direct mounting of an omni-directional flexible antenna and RS-232 interface for connectivity to the GPS receiver and power supply. Mountings are specially designed to isolate the Sitecom from vibration and shock that could degrade its performance.

The PDL product line is compatible with GPS/GNSS RTK equipment worldwide allowing for easy integration with other equipment or systems. They are completely sealed, waterproof, and corrosion resistant to make them environmentally secure.



# GNSS Receivers

## Introduction

Pacific Crest offers Trimble's latest centimeter-level positioning technology to system integrators. The Trimble BD960 GNSS receiver module harnesses GPS L1/L2/L5 and GLONASS L1/L2 signals in an easy-to-integrate module that provides fast RTK initialization with proven low-elevation tracking. It also includes decimeter positioning with OmniSTAR XP/HP support. The BD950 L1/L2 GPS module provides outstanding reliability in a wide range of guidance or control applications. This receiver is also designed to allow easy integration into specialized or custom hardware solutions. The receiver's small size and exceptionally low power requirements make it especially suitable for portable solutions.



### BD950

The Trimble® BD950 GPS receiver provides an exceptional level of accuracy, ease of integration, and component life. Following the Eurocard form factor, the receiver is specifically designed to allow easy integration into specialized or custom hardware solutions. Accurate to the centimeter, the BD950 provides outstanding reliability in a wide range of guidance or control applications. The receiver's small size and low power requirements make it especially suitable for portable solutions.

This 24-channel dual-frequency GPS/WAAS/EGNOS receiver achieves horizontal accuracies of 20 mm and vertical accuracies of 30 mm. This accuracy is matched with extremely fast responsiveness. The BD950 delivers positions to guidance or control loop software with a latency of less than 20 milliseconds at 20 times per second. For the most precise applications, it provides horizontal accuracies of 10 mm at a 10 Hz rate with a small increase in latency.

### BD960

The Trimble® BD960 GNSS system is a multi-channel, multi-frequency, OEM GNSS receiver, in a compact Eurocard form factor. The latest, Trimble centimeter-level positioning technology is an easy-to-integrate module. With the Trimble BD960, OEMs and integrators can easily harness both the modernized GPS L2C and L5 signals and GLONASS L1/L2 signals. For land and air applications where decimeter-precision is required, onboard OmniSTAR satellite service is a convenient option. The Trimble BD960 supports the three levels of Differential GPS Service provided by OmniSTAR: VBS, HP, and XP.



Customers benefit from the Ethernet connectivity available on the board, allowing high speed data transfer and configuration via standard web browsers. The compact, Eurocard form-factor is suitable for many of the most ambitious designs and easy to use software commands simplify integration and reduce development times.



### BX960

The Trimble® BX960 GNSS receiver enclosure is a multi-channel, multi-frequency, OEM GNSS receiver. Harnessing the power of the Trimble BD960 module, the receiver allows OEM's and system integrators to rapidly integrate centimeter-level positioning into their application. Industry standard D-sub connectors provide access to all power and communications. Both serial and Ethernet connectivity are supported. Multiple configurations are available from L1 DGPS to the fully loaded RTK unit tracking GPS L1/L2/L5 and GLONASS L1/L2 signals.

The Trimble BX960-2 GNSS receiver packages two Trimble BD960 modules in a single rugged enclosure. This allows a Moving Baseline RTK solution to be calculated between two antennas. The resulting centimeter accurate vector and heading information can be output to the serial port in ASCII or binary format. This addresses a range of precise navigation applications where both centimeter accurate positions and precise heading is required.

Trimble's GNSS receivers from Pacific Crest are designed for easy integration and rugged dependability. Just like other Trimble embedded technologies, easy to use software commands simplify integration and reduce development times. All software features are password-upgradeable, allowing functionality to be upgraded as your requirements change. Industry professionals trust Trimble embedded positioning technologies as the core of their precision applications. The latest Trimble-precise Maxwell® technology provides assurance of long-term futureproofing and trouble-free operation.

**The Gold Standard in Communication and Positioning**



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