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Trimble Nomad 900G Series: Customer FAQs

What is the Trimble Nomad 900G series?

The Trimble® Nomad® 900G series is a family of ultra-rugged GPS field computers for data collection and mobile GIS that can provide 1 to 3 meter (HRMS) accuracy after differential correction.

The Nomad 900G series is offered in a range of configurations; optional features include an integrated 5 megapixel digital camera, an integrated barcode scanner, and an integrated cellular modem. The Nomad 900G series offers superior processing power, a high resolution outdoor-viewable screen, and a long-life battery that can run the device all day on a single charge.

All Nomad 900G series handhelds feature a huge 6 GB of Flash storage—three times larger than other similar field computers. Powered by the Windows Mobile® version 6.1 operating system and with built-in wireless LAN and Bluetooth® wireless technology, the Nomad 900G series offers powerful performance and all-in-one feature integration for high productivity in the harshest conditions.

What are the key features of the Nomad 900G series?

- All-in-one GPS device on a powerful hardware platform. The Nomad 900G series is built for superior performance in harsh conditions, and offers a range of hardware configurations to match existing workflows. The integrated GPS receiver is optimized for data collection in difficult GPS environments, including under forest canopy and near tall buildings.
- Compatible with the entire range of Trimble Mapping & GIS field and office software applications to provide a productive and professional field and office workflow.
- 6 GB of on-board data storage as standard, a Secure Digital (SD) card slot, a CompactFlash (CF) slot (900GL model), and USB port for expandability and data storage. Assurance of ample space for data and raster background maps.
- All-in-one, ultra-rugged solution. With the Nomad 900G series, there is no compromise on ruggedness by carrying additional equipment, and only one battery to charge.
- High resolution VGA display which makes raster maps exceptionally clear.
- The Windows Mobile 6.1 operating system provides maximum flexibility in software choice and a familiar, easy-to-use interface so that field crews can be quickly trained to be more productive. “Persistent storage” in the operating system ensures data is protected, even if power is lost.

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- Long-life field-replaceable Lithium-ion (Li-Ion) battery allows up to 15 hours operation with active use of GPS and wireless radios without the need to recharge.
- Optional integrated cellular modem allows users to connect to the Internet without tethering to an external modem or mobile phone. Integrated wireless LAN and Bluetooth wireless technologies provide options for connecting to the Internet and corporate networks to access data and maps, and to send and receive email and instant messages.
- Optional integrated 5 megapixel digital autofocus camera makes it easy to collect photographs in the field without compromising on ruggedness or convenience.
- Optional integrated 1D barcode laser scanner.

Note: For information on using and disposing of Li-Ion batteries, refer to the Trimble Nomad G Series Handheld Computer Getting Started Guide.

What different configurations are available for the Nomad 900G series?

The Nomad 900G series offers a choice of hardware configurations. All configurations have 6 GB flash storage, integrated GPS, integrated Bluetooth/WLAN, and numeric keypad.

The key differences between the configurations are as follows:

Model	900GL	900GLC	900GLD	900GLE	900GXE
Expansion	CF/SD	SD	SD/USB	SD	SD
Cellular Modem					✓
Camera		✓		✓	✓
Bar Code Scanner			✓	✓	✓

Note: Each model is physically different; one model cannot be upgraded to another.

Are there any language specific variants of the Nomad 900G series?

Yes. The Nomad G series is available in English, Chinese, French, German, Italian, Japanese, Korean, Portuguese (Brazilian), Russian, and Spanish. To configure additional languages, see the downloads section of http://www.trimble.com/nomadg_ts.asp.

What is the Windows Mobile 6.1 operating system?

The Windows Mobile 6.1 operating system is the Microsoft® operating system for mobile devices. With a familiar Microsoft user interface, it provides a wide range of standard software applications that work seamlessly with desktop operating systems.

The Nomad 900G series is powered by the Windows Mobile 6.1 operating system, allowing the choice of the most comprehensive range of software available to meet field requirements. In addition, this operating system features security enhancements, for more robust use when connected to a network, and persistent storage memory so data is protected from unexpected power loss.

Will software applications developed for other Windows Mobile-based software run on the Windows Mobile 6.1 operating system?

Applications developed for Windows Mobile-based software (Windows Mobile 2003 software for Pocket PCs or Windows Mobile version 5.0 software), should run on the Windows Mobile version 6.1

operating system. However, some of the new functionality in the Windows Mobile 6.1 operating system may not be available or compatible with software developed for other Windows Mobile-based software.

Will software applications developed for QVGA screens run on the Nomad 900G series VGA screen?

In general, applications developed for a QVGA screen will scale correctly on a device with a VGA screen. All Trimble Mapping & GIS software will display correctly on either QVGA or VGA devices. For more information, contact the software vendor.

What Mapping & GIS software versions support the Nomad 900G series?

For a definitive list of supported Mapping & GIS software versions, refer to the [Mapping & GIS Product Compatibility List](#).

What GPS technology is used in the Nomad 900G series?

The Nomad 900G series has an integrated SiRF Star III GPS receiver. The receiver firmware has been customized for Trimble, to ensure the best possible performance in the field for data collection, and full compatibility with Trimble field and office software.

Can I use postprocessed differential correction with the Nomad 900G series?

Yes. When using a Nomad 900G series handheld, data for postprocessing can be collected with the Trimble TerraSync™ software, or the Trimble GPSCorrect™ extension for Esri ArcPad software. Data collected in GPS field software using the NMEA protocol cannot be postprocessed.

The internal GPS receiver does not output carrier data, so it is not possible to use carrier postprocessing techniques. For standard differential postprocessing, use the Trimble GPS Pathfinder® Office software, or the Trimble GPS Analyst™ extension for Esri ArcGIS Desktop software.

What real-time options are available for the Nomad 900G series?

The Nomad 900G series handhelds support SBAS correction services (WAAS correction services in North America and EGNOS in Europe). In open GPS environments, the Nomad 900G series handhelds typically achieve 2 to 5 meter accuracy using SBAS.

Can I connect the Nomad 900G series to a higher accuracy receiver?

Yes. The Nomad 900G series is compatible with all Trimble Mapping & GIS GPS receivers, including the GPS Pathfinder ProXH™, ProXT™, and Pro XRT receivers. The Nomad 900G series allows a Bluetooth connection to the GPS Pathfinder Pro series receivers for cable-free use. The Nomad 900G series also allows connection to older Trimble receivers through serial cable on COM1 with the standard serial boot accessory. For a definitive list of supported receivers, refer to the [Mapping & GIS Product Compatibility List](#).

What GPS output protocols are supported by the Nomad 900G series?

The Nomad 900G series can output the NMEA and SiRF binary protocols. If connected to the receiver using Trimble GPS field software, NMEA output is switched off. To re-enable NMEA output, use the Trimble GPS Controller software. The internal GPS receiver communicates in NMEA by default at 9600 bps.

Can I use an external antenna with my Nomad 900G series?

No. The Nomad 900G series does not have an external antenna option. The device is designed to achieve 1 to 3 meter (HRMS) accuracy with the integrated antenna, after postprocessed differential correction.

How do I use the Nomad 900G series to ensure best performance?

The internal antenna within the Nomad 900G series is located under the top protective cap. To ensure optimum GPS accuracy the unit should be held vertically over the feature that is being mapped.

When collecting point features or vertices, Trimble recommends logging GPS data for at least 30 seconds, using a 1-second logging rate. Collecting multiple positions for a static feature helps to improve accuracy by averaging out the errors in individual GPS positions. In heavy canopy, or other difficult environments, logging for 1 to 2 minutes is recommended.

Pausing briefly (5 to 10 seconds) before logging a point feature or vertex also helps to get the best performance from the receiver. This ensures that the internal GPS receiver is vertical and correctly located over the feature that is being mapped, and allows it to settle so that positions are not influenced by the recent movement of the handheld.

How does the Nomad 900G series perform in harsh GPS conditions?

The Nomad 900G series has a significantly improved antenna design with increased sensitivity, ideal for productive capture in difficult GPS conditions.

Can I use other GPS software with the Nomad 900G series?

The Nomad 900G series can connect to other applications that accept NMEA messages. If connected to the receiver using Trimble GPS field software, NMEA output is switched off. To re-enable NMEA output, use the GPS Controller software.

What connectivity options does the Nomad 900G series support?

The Nomad 900G series has integrated Bluetooth wireless technology and integrated wireless LAN support for connecting to a variety of peripheral devices, or to the Internet and corporate networks for sending and receiving data, files, and email. The 900GXE handheld is equipped with a cellular modem for connecting to the Internet without the need for a separate device. The standard serial boot has a DB9 serial port and a mini-USB client for connecting and synchronizing the device with an office computer.

The optional USB boot has a mini-USB client for connecting and synchronizing the device with an office computer, and a USB-host port and audio jack wired for a mono speaker and microphone combination headset. USB-host supports USB human interface devices (for example keyboards, and some barcode scanners) and USB mass storage devices.

What can I use the Nomad 900G series' wireless LAN capabilities for?

Nomad 900G series handhelds have an integrated wireless Local Area Network (LAN) radio, compliant with IEEE 802.11 b/g, that can be used to receive data anywhere within the range of a wireless LAN access point. Wireless LAN is often referred to as Wi-Fi.

There are many publicly available wireless LAN access points (also known as “hotspots”) available. To find publicly available access points, use locator Internet sites such as www.jiwire.com.

Using the wireless LAN radio in a Nomad 900G series handheld does not impact GPS performance. But battery power is consumed faster when there is an active connection to a wireless LAN access point.

What can I use the Nomad 900G series' cellular modem capabilities for?

The Nomad 900GXE handheld is equipped with an integrated cellular modem. Devices with a cellular modem are also described as having wireless WAN (Wide Area Network) capability as the modem can be used to transmit or receive data anywhere within the range of the mobile phone carrier's cellular network. Use the cellular modem to:

- Receive real-time corrections from VRS™ networks for use with the GPS Pathfinder ProXRT receiver for high accuracy GIS data collection
- Exchange or synchronize data with a remote server without returning to the office
- Access background maps from an Internet map server in the field
- Send or receive email in the field

Can the Nomad 900G series cellular modem be used for voice calls?

No. The modem is for data only and voice calls are not supported.

Will the cellular modem work in my region?

The Nomad 900GXE handheld is equipped with a quad band GSM module that operates in the 850/900/1800/1900 MHz frequency bands. The GPRS/EDGE cellular modem on these devices will work on any GSM network operating in these bands that does not require carrier certification. The Nomad 900GXE handheld is AT&T certified. Other carriers may also require certification.

The Nomad 900GXE handheld is certified for use in the USA, Canada, and the European Union. Outside the European Union, distributors are responsible for determining radio type approval requirements.

For advice on local network coverage and whether the Nomad 900G series will work on a local network, consult with the carrier.

What can I use a Nomad 900G series' Bluetooth capabilities for?

The Nomad 900G series has an integrated Bluetooth radio that can be used to establish cable-free connections to other Bluetooth devices that are within 10 meters.

Using a Bluetooth connection, the device can communicate with Bluetooth-enabled devices such as mobile phones, desktop computers, and many more. It can also communicate with peripheral devices that use Bluetooth adaptors instead of serial or USB connections. In particular, high-accuracy GPS capability can be added by using a Bluetooth wireless connection to a GPS Pathfinder Pro series receiver.


Using the Bluetooth radio in a Nomad 900G series has no impact on GPS performance. However, when there is an active connection to another Bluetooth device, battery life is shortened.

What are the functions of the integrated digital camera?

The Nomad 900GLC, 900GLE, and 900GXE models include a 5 megapixel integrated digital camera. Access to the camera is provided through an application that is pre-installed with the operating system. The camera features a variety of shooting modes and an integrated flash to make it easier to capture images in different lighting conditions, and it can also record video with audio. The 5 megapixel sensor can capture images with low, medium, or high compression, and in a choice of resolution from 320x240 to 1600x1200 pixels. The camera uses the standard Windows Mobile API for camera control, and it is

compatible with other field software applications such as Esri ArcPad, which has integrated camera functionality. You can use the camera while logging GPS positions with the internal GPS receiver.

What are the functions of the barcode scanner?

The Nomad 900GLD, 900GLE, and 900GXE models include an integrated barcode scanner. Use your own barcode scanner software or the pre-installed ScanAgent application included with the device. To access the scanner, either press the arrow button  on the keypad, or open the scanner SIP (soft input panel). The scanner can collect up to four scans per second, and features a bright scan line and aim mode. The scanner has a programmable scan angle, and supports most symbologies.

How is the Nomad 900G series handheld powered?

The Nomad 900G series is supplied with a rechargeable, field-removable Li-Ion battery that provides up to 15 hours of battery life in normal use (including wireless radios and GPS). The battery is internally rechargeable using the international power supply that comes with the system. Spare rechargeable batteries, an external battery charger, and a 12 V vehicle adapter are also available as optional accessories. Charging the battery takes approximately 4.5 hours.

What can I do to prolong battery life?

To maximize battery life, Trimble recommends the following:

- Turn off wireless radio services such as the cellular modem, Bluetooth and Wireless LAN, when not in use
- Disconnect from the GPS receiver, when positioning is not required
- Turn off the screen backlight; reduce the backlight brightness
- Try to avoid using the handheld in very cold conditions ($-20^{\circ}\text{C}/-4^{\circ}\text{F}$ and below)

What is in the box?

The Nomad 900G series is supplied as standard with the following components and accessories:

- Rechargeable Li-Ion battery module
- Rugged stylus with spring-loaded tip
- Stylus lanyard
- AC Power supply with International adapter kit
- USB data cable
- Quick Start Guide
- Hand strap
- Screen protectors (2-pack)
- Getting Started CD with ActiveSync[®] technology
- Serial boot with RS232 and USB client connectors

What optional accessories are available for the Nomad 900G series?

The following optional accessories are available for the Nomad 900G series:

- Nylon carry case
- USB boot with USB host, client, and audio jack
- Spare battery charger
- Extended cap
- 12 V vehicle charging cable
- Vehicle mount
- Serial interface cable
- AA Battery Module

What expansion options are available on the Nomad 900G series?

The Nomad 900G series contains a fully sealed SD/SDHC slot that you can use with a memory card with up to 8 GB capacity. Use the integrated camera to log directly to an installed SD/SDHC card. Some applications may also support storage of data directly to SD/SDHC. To access the card slot, simply remove the top cap with the supplied screwdriver/stylus tool. The 900GL model also has a CF slot.

Can I use the Trimble Nomad broadband cellular modem accessory?

You can use the Trimble Nomad broadband modem (part number: 66254-00) with a Nomad 900G series handheld by inserting it into the USB host port at the top of the Nomad 900GLD handheld under an extended cap, or using the optional USB boot in the base of the device (this is a non-rugged configuration).

Are the camera or barcode scanner removable?

No. For models with an integrated barcode scanner and/or digital camera, these components are hardwired into the device.

Are accessories from the Trimble Recon or Trimble Ranger handhelds compatible with the Nomad 900G series?

The following Trimble Recon[®] and Trimble Ranger[™] handheld accessories are also compatible with the Nomad 900G series:

Trimble Recon handheld	Trimble Ranger handheld
Null Modem Cable	Cable
Vehicle Charger	
AC Charger	

Where can I get more information?

Go to www.trimble.com/nomadg.shtml or contact your local [Trimble Mapping & GIS reseller](#).