7 December 2009

# TerraSync Software Version 4.10: Frequently Asked Questions and Answers

## What is new in the TerraSync software version 4.10?

Version 4.10 is an exciting new version of the TerraSync™ software. It provides support for the new GNSS processing engine introduced in version 4.20 of the GPS Pathfinder® Office software and version 2.20 of the GPS Analyst™ extension for ESRI ArcGIS Desktop software. Data processed through this new engine shows considerable accuracy improvement. In particular:

- H-Star™ receivers achieve decimeter (10 cm / 4 inch) accuracy in more places than ever before
- GeoXT™ and ProXT™ receivers achieve second-by-second accuracy of 50 cm
- the Juno™ series handhelds (the Juno SB handhelds and Juno SC handhelds) achieve 1 to 3 meter accuracy.

Users with other receiver types will typically also see increased accuracy as well as increased position yield with the new office and field software.

The new TerraSync software also includes a variety of other enhancements and new capabilities, including:

- Support for the Microsoft® Windows® 7 operating system
- Ability to log data for postprocessing with the new Trimble DeltaPhase™ technology for optimal postprocessed code accuracy
- Logging of GLONASS data for subsequent postprocessing when using a GPS Pathfinder ProXRT receiver (with the GLONASS option installed)
- Support for the Trimble R8 Model II running firmware version 4.10
- Support for the new Trimble Tornado™ and Tempest™ antennas
- Better waypoint handling to allow visited waypoints to be checked off a list so the waypoint list can be used as a record of work completed and work yet to do.
- The option to display coordinates as Northing/Easting or Easting/Northing.
- Increased maximum length of the attribute text field in SSF files to 230 characters.

Trimble Navigation Limited, 10355 Westmoor Drive, Suite #100, Westminster, CO 80021, USA

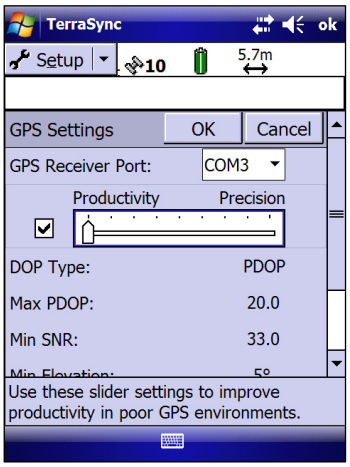
The TerraSync software version 4.10 continues to be available in two editions: Professional and Standard.

## Why have the default GPS settings changed?

Traditionally, GPS data collection software has used fixed "masks" to determine which GPS satellite signals to use, and which to ignore. Commonly used masks include a minimum satellite elevation level, a minimum SNR value, or a maximum PDOP. While using fixed masks can ensure that most "bad" GPS signals are rejected, they also cause a lot of perfectly usable signals to be discarded at the same time.

The new Trimble postprocessing engine consistently achieves better results when it has more GPS measurements to work with, including signals from satellites which may be weaker or lower on the horizon. Fortunately, the new engine is also capable of making far better decisions about which GPS signals to use and which to discard.

For this reason, the default GPS settings have been changed in this version of the TerraSync software, with the GPS slider now set to *Productivity*, as illustrated:




For best postprocessing results, Trimble recommends that you use the new default values illustrated above. Doing so has two clear benefits:

- Postprocessed accuracy will be optimal, due to the new postprocessing engine's ability to select and use the best GPS satellite measurements.
- Position yield potential will be significantly increased. If you work in an open environment, you may see little difference in yield. But if your operating environment includes tall buildings, trees, or other obstacles then the new *Productivity* settings will increase your position yield considerably. As a rule of thumb, yield in a suburban environment can increase by 20% on average; in a forested environment, yield may increase by 40% or more.

***Tip:*** *If you are not planning to postprocess your GPS data, or if you need optimal real-time accuracy, or if your organization has policies which require you to collect GPS data with one or more fixed mask values, you can still move the GPS slider to the right, or specify a particular set of mask values. Using GPS slider settings other than the new defaults may reduce both position yield and overall postprocessed accuracy.*

## Does the TerraSync software support H-Star technology?

Yes. The TerraSync software is designed specifically for H-Star data logging. A Predicted Postprocessed Accuracy (PPA) indicator on the status bar clearly shows the accuracy likely to be achieved once H-Star data is postprocessed. Back in the office, with either the GPS Pathfinder Office software or the Trimble GPS Analyst extension for ESRI ArcGIS software, it is simply a case of selecting the H-Star carrier postprocessing option in the Differential Correction wizard when postprocessing. With H-Star postprocessing, multiple reference stations may be utilized to reduce errors caused by reference station bias and distance.

## What is Trimble DeltaPhase technology?

Trimble DeltaPhase technology, introduced with version 4.10 of the TerraSync software, uses phase difference information to smooth GPS code measurements. Trimble DeltaPhase postprocessing technology ensures optimal postprocessed performance, particularly in tough conditions such as under tree canopy or in an urban canyon environment.

## What are the differences between the Professional and Standard editions of the TerraSync software?

The Professional edition of the TerraSync software is a fully featured product, designed for high quality GIS data collection and ongoing data maintenance. The Standard edition is an ideal solution for collecting new GIS data, and therefore does not support the following functions:

- upload of data from an existing GIS database
- use of (raster or vector) background data in the map display
- connection to an Internet Map Server
- connection to a Trimble Land Survey RTK receiver
- data input from a laser rangefinder
- data input from an external sensor

## Are all of the new features available in both the Professional and Standard editions of the TerraSync software?

Yes, except for R8 Model II support which is restricted to the Professional edition.

## What field devices does the TerraSync software version 4.10 support?

The TerraSync software version 4.10 supports a number of different field computers, including Windows and Windows Mobile® devices. See Trimble's website at www.trimble.com/terrasync.shtml for an up-to-date list of supported platforms and tested devices.

***Note:*** *The TerraSync software version 4.10 is the last major release that will support the Microsoft Pocket PC 2003 platform.*

## What are the minimum hardware specifications for the TerraSync software version 4.10?

The TerraSync software version 4.10 hardware requirements are different for Windows and Windows Mobile platforms. For the most current hardware specifications, see the Trimble website at www.trimble.com/terrasync.shtml.

## What versions of the Windows operating system does TerraSync software version 4.10 support?

The TerraSync software version 4.10 supports Windows XP (Home, Professional, and Tablet PC editions), Windows Vista®, and Windows 7 (Home Basic, Home Premium, Business, Ultimate, and Enterprise editions).

## Which version of office software do I need to use the TerraSync software version 4.10?

You will need to upgrade to the GPS Pathfinder Office software version 4.20 or the GPS Analyst Extension for ESRI ArcGIS Desktop software version 2.20 to be able to transfer and postprocess files logged by the TerraSync software version 4.10.

## What GPS receivers are supported by the TerraSync software version 4.10?

The TerraSync software version 4.10 supports the following GPS receivers:

- GeoXH™ handheld
- GeoXT handheld
- GeoXM™ handheld
- GPS Pathfinder ProXT receiver
- GPS Pathfinder ProXH™ receiver
- GPS Pathfinder Pro XRS receiver
- GPS Pathfinder ProXRT receiver
- GPS Pathfinder XB receiver
- GPS Pathfinder XC receiver
- Trimble Recon® GPS XB edition
- Trimble Recon GPS XC edition
- Juno SB handheld
- Juno SC handheld
- Juno ST handheld
- Trimble Nomad® G series handhelds
- Trimble 5800 receiver
- Trimble R8 receiver

## Does the TerraSync software still support RTK receivers?

Version 4.10 of the TerraSync software (Professional Edition) supports selected RTK receivers sold by the Trimble Land Survey Division. This will be the last version of the TerraSync software to support RTK receivers, and such support will be removed from the next major release of the TerraSync software.

## Can existing TerraSync software users upgrade to version 4.10?

Existing customers whose software maintenance expiry date is on or after 1 December 2009 are eligible for a free-of-charge upgrade to the new version. Customers whose software maintenance cover has lapsed must purchase a TerraSync Software Update (P/N 45955-95).

***Note:*** *Data logged using TerraSync software version 4.10 can only be downloaded and postprocessed using GPS Pathfinder Office software version 4.20 or the GPS Analyst extension for ESRI ArcGIS Desktop software version 2.20 (or later).*

## When will the TerraSync software version 4.10 be available?

Eligible customers can now download the new TerraSync software from www.trimble.com/terrasync_ts.asp.

## What is included in the TerraSync software kit?

When you purchase the TerraSync software version 4.10, you receive the following:

- The software on CD-ROM
- A Proof-of-Purchase Number (POPN)
- A printed Quick Start Guide
- Printed Release Notes

Online documentation and support are also available.

## Is a hard-copy manual available for the TerraSync software version 4.10?

No. However, the TerraSync software version 4.10 has full context-sensitive online documentation. The CD-ROM also includes printable documentation in PDF format.

## In what languages is the TerraSync software version 4.10 available?

The software is available in English, Chinese (Simplified), French, German, Italian, Japanese, Korean, Portuguese (Brazilian), Russian, and Spanish. The TerraSync software Getting Started Guide is available only in English. The TerraSync software Help files, and Release Notes are available only in English.

## What type of support is available for the TerraSync software?

TerraSync Professional edition software now ships with one-year of software maintenance as standard. Further one- and two-year software maintenance extensions can be purchased.

TerraSync Standard edition software still ships with 90–days' software maintenance as standard. An optional 9-month software maintenance extension is also available at time of purchase.

## What other sources of information are available for the TerraSync software version 4.10?

Further information on the TerraSync software version 4.10 can be found in the following places:

- www.trimble.com/terrasync.shtml —technical specifications, supported platforms and tested devices, technical notes, and evaluation software.
- www.trimble.com/terrasync_ts.asp —information on obtaining documentation and language file downloads, as well as support notes.