DATASHEET

TRIMBLE GPS ANALYST EXTENSION FOR ESRI ARCGIS DESKTOP SOFTWARE

KEY FEATURES

Optimize your field-to-office workflow

Work with GNSS data directly in your personal geodatabase

Differentially correct to improve GNSS accuracy

H-Star data collection for high accuracy with the GPS Pathfinder ProXRT and ProXH receivers, or the GeoXH handheld

Supports GLONASS postprocessing for data collected with supported receivers and handhelds

Store detailed information about the quality of your GNSS data

Extend and customize with ArcObjects

STREAMLINED GPS DATA PROCESSING INSIDE ESRI ARCGIS

Take a giant leap forward in productivity and improve your data quality with the Trimble® GPS Analyst™ extension for Esri ArcGIS Desktop software. The GPS Analyst extension optimizes your field-to-office workflow by allowing you to work directly with GNSS data inside your personal geodatabase. And because the extension comes with a package of powerful GNSS postprocessing tools, incorporating the new Trimble DeltaPhase™ differential correction technology, you can be sure you have GNSS data that is consistent, reliable, and accurate.

Get the best possible accuracy

The GPS Analyst extension allows you to differentially correct your GNSS data directly inside Esri ArcGIS Desktop software. Depending on the environment and your GNSS receiver, postprocessing gives significant improvements on your autonomous accuracy all the way down to decimeter (10 cm / 4 inch) level.

Using Trimble's H-Star™ technology you can achieve decimeter accuracy with the GPS Pathfinder ProXH™ or ProXRT receiver, or with a GeoExplorer® 6000 series GeoXH™ handheld. Alternatively, with a GeoExplorer 6000 or 3000 series GeoXT™, or Juno® series handheld, or a ProXT™ receiver, you can achieve optimal GNSS code processing accuracy with the Trimble DeltaPhase technology.

The GPS Analyst extension's powerful Integrity Index grading system provides a list of monitored base data providers from around the world—helping you select the best quality base data to use when differentially correcting your data.

Have confidence in your data

You use your GIS every day to make critical decisions, so you need to know that you can trust your data.

The GPS Analyst extension allows you to specify the GNSS accuracy required for each feature class. Once you have processed your GNSS data, the extension quickly checks that features match your criteria, and helps you to fix or flag any exceptions.

Plus, the GPS Analyst extension stores detailed information about the source and quality of each and every GNSS position in the geodatabase, and provides powerful tools for querying and analyzing this information.

Maximize your productivity

Say goodbye to unnecessary file conversions—with the GPS Analyst extension you can effortlessly bring GNSS data straight from the field into the geodatabase. The extension offers a seamless workflow for Esri ArcPad software with the Trimble GPScorrect™ extension for Esri ArcPad software. Check data out; use, verify, and update the data in the field using Esri ArcPad and the GPScorrect extension; and then check updated data back in. There are no extra steps or complicated procedures to follow.

You can even work directly with data from Trimble's TerraSync™ software for an alternative data collection and maintenance solution.

Now, all your GNSS processing needs are met within Esri ArcGIS Desktop. It's the GIS environment you know—so expect to become more productive immediately, and with only minimal training.

Open up to the possibilities

As an open extension to ArcObjects, the GPS Analyst extension can easily be extended and adapted to match your data processing needs. If you have your own field solution, write a plug-in that takes advantage of GPS Analyst extension's versatile data processing tools.

Let the GPS Analyst extension for Esri ArcGIS Desktop improve your data accuracy and your field-to-office workflow by making GNSS data an integral part of your GIS.

Trimble

TRIMBLE GPS ANALYST EXTENSION FOR ESRI ARCGIS DESKTOP SOFTWARE

FEATURES AND OPTIONS

Work within the GIS

- Collect, view, and edit GNSS data inside Esri ArcGIS Desktop software
- Improve productivity by eliminating extra file conversions and processing steps outside the GIS
- Quickly and easily validate position accuracy against requirements set in the feature class

GNSS accuracy

- Improve GNSS position accuracy with differential correction of data from supported Trimble GNSS receivers, including GLONASS postprocessing
- Store complete QA/QC information for GNSS data

Extensible

- Extend and tailor core GPS Analyst extension functionality
- Develop plug-ins to support other GNSS receivers
- Customize tools and forms to suit your requirements

Required software

GPS Analyst extension for Esri ArcGIS Desktop software version 2.20 requires ArcView, ArcEditor, or ArcInfo version 9.2, 9.3, or 9.3.1 to be installed
GPS Analyst extension for Esri ArcGIS Desktop software versions 2.30 and 2.40 require ArcView, ArcEditor, or ArcInfo, version 10 to be installed

Required hardware

System requirements are determined by the Esri ArcGIS Desktop product version and platform configuration you are using. Please refer to the applicable Esri ArcGIS Desktop specifications at www.Esri.com/arcgis. In addition, GPS Analyst extension for Esri ArcGIS Desktop requires:

Free disk space . . . . . 25 MB
Input/output . . . . . RS-232 serial port and/or USB port

Available languages

- English

Field software options

- Esri ArcGIS Desktop software with Trimble GPS Analyst extension
- TerraSync software
- Esri ArcPad software with Trimble GPScorrect extension
- Applications developed using GPS Analyst extension's COM object interface
- Applications developed using GPS Pathfinder Tools Software Development Kit (SDK)

Only data collected with supported Trimble receivers can be differentially corrected with GPS Analyst extension.

GNSS RECEIVERS AND ACCURACY (HRMS)[1] SPECIFICATIONS

Typical autonomous accuracy for all GNSS receivers is around 10 meters. The following table shows differentially corrected accuracy specifications for supported receivers:

Receiver/Handheld	Postprocessed
GPS Pathfinder ProXRT receiver	decimeter[2]
GPS Pathfinder ProXH™ receiver	50 cm / decimeter[2]
GPS Pathfinder ProXT receiver	50 cm
GeoXH handheld	50 cm / decimeter[2]
GeoXT handheld	50 cm
GeoXM™ handheld	1–3 m
Juno series handheld	1–3 m
Trimble Nomad® 900G series handheld	1–3 m
Trimble Nomad 800G series handheld	2–5 m
Trimble Yuma® rugged tablet computer	2–5 m

Refer to relevant datasheet for full details.

SUPPORTED DATA FORMATS

Data storage format

- Esri ArcGIS personal geodatabase (Microsoft® Access MDB only)

Check out/check in formats

- Esri Shapefiles from ArcPad with Trimble SSF files from GPScorrect extension[3]
- Esri AXF files from ArcPad with Trimble SSF files from GPScorrect extension[4]

Import formats

- Esri Shapefiles from ArcPad with Trimble SSF files from GPScorrect extension
- Trimble SSF files

Export formats

- Trimble SSF files

SUPPORTED BASE FILE AND COMPRESSION FORMATS

Base file formats

- Hatanaka (Compressed RINEX)
- RINEX
- Trimble DAT format
- Trimble SSF format

Compression types

- GZip (.gz)
- Self-extracting executable (.exe)
- Zip (.zip)

GNSS RECEIVERS SUPPORTED BY THE GPS ANALYST EXTENSION FIELD TOOLS

Trimble GNSS receivers

Versions 2.20 and 2.40 of the GPS Analyst Extension continue to support direct connection to the following Trimble GNSS receivers for in-field data collection:

- GPS Pathfinder ProXH receiver
- GPS Pathfinder ProXT receiver

This capability is not supported for newer GNSS receivers.

NMEA-compliant GNSS receivers

GPS Analyst extension also supports GNSS data collection using a NMEA-compliant GNSS receiver. Any NMEA receiver that meets the following requirements is supported:

- Outputs both the GPGSA and GPGSV sentences
- Outputs one of the following sentences: GPGGA, GPGLL, GPRMC
- Outputs positions in the WGS-84 datum

GNSS data from NMEA receivers cannot be differentially corrected.
The accuracy obtained with an NMEA GNSS receiver depends on the model of receiver and the method the receiver uses to calculate the GNSS position. For information about real-time correction capabilities and accuracy specifications, refer to the documentation for the NMEA GNSS receiver.

1 Horizontal Root Mean Squared accuracy. Specifications apply except in conditions where most GNSS signals are affected by trees, or buildings, or other objects. The Trimble Nomad 800G series receivers must be held horizontally; the Juno and Nomad 900G series handhelds must be held vertically. Postprocessed code accuracy varies with proximity to base station by +1 ppm.

2 The following factors increase the availability of specified H-Star accuracy: availability of GPS & GLONASS data at the base station(s) used for corrections, longer elapsed time tracking uninterrupted L1/L2 carrier phase data, use of the optional external Tornado™ or Zephyr™ Model 2 antennas, tracking of more satellites with L2 measurements, shorter distance to the base station(s), and use of more (than one) base stations for postprocessing. Specified H-Star accuracy can normally be achieved for baseline lengths of 100 km or less. H-Star accuracy is typically achieved within 2 minutes. Except when using VRS corrections, accuracy varies with proximity to base station by +1 ppm for code postprocessing and real-time. The ProXH receiver will only achieve decimeter postprocessed accuracy with the optional Tornado or Zephyr Model 2 external antenna.

3 Esri ArcPad software version 8 only.

4 Esri ArcPad software version 8 and 10 only. Esri ArcGIS Desktop software version 9.2, 9.3, 9.3.1, and 10 only.

Specifications subject to change without notice.

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