



## KeyNetGPS

[www.keynetgps.com](http://www.keynetgps.com)

800-833-9250

KeyNetGPS is designed to provide Surveying, Construction and Mapping professionals with true Network RTK solutions. It currently provides high-accuracy positioning in real time across eastern Virginia, Maryland, Washington DC, Delaware, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and southern Maine. KeyNetGPS provides the highest level of RTK performance achievable from a network of base stations. The results are centimeter accuracy and shorter initialization times

The largest Realtime Network in the Mid Atlantic and Northeast USA! From Virginia to Maine:  
See **current coverage map** at  
<http://vrs.keynetgps.com/>

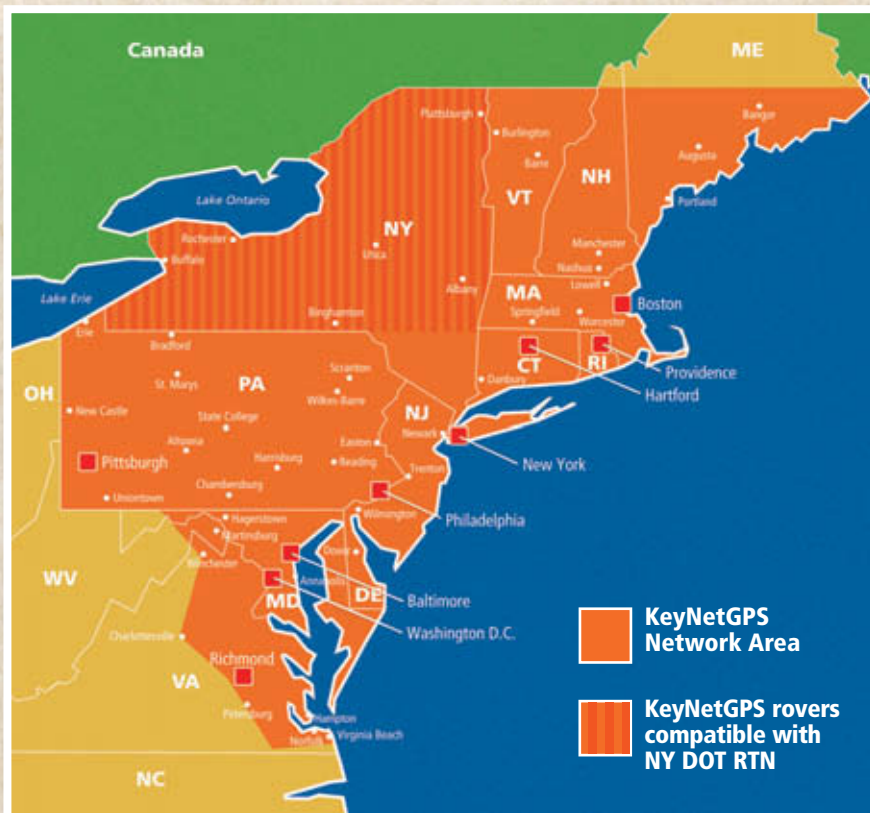
### 190 Reference Stations

#### KeyNetGPS Advantages:

- Managed by Professional Land Surveyor Emerson "Butch" Bornman with 35 years experience as a Geodetic Surveyor in private and government practice (PA. D.O.T.)
- Dedicated IT staff who monitor the network integrity and communicate with subscribers
- Redundant internet, power and servers to assure the 24/7 operation of KeyNetGPS
- Compatible with Trimble and most other GPS manufacturers
- A subscription with KeyNetGPS allows you to work through out the entire coverage area

#### Subscription Flexibility:

- Per Month — Per Year
- Rent a Trimble GPS rover, network connected



a division of Keystone Precision Instruments

**KEYSTONE  
PRECISION  
INSTRUMENTS**

## LaserAce 1000 rangefinder

**Extend your reach with high-accuracy measurement of any location**

Take the guesswork out of field work. The Trimble **LaserAce 1000 rangefinder** lets you capture remote measurements in situations where previously it would be impractical or unsafe. Now capture the measurements you need in seconds from a safe, convenient location, increasing productivity and efficiency.

A comprehensive measurement tool, the **LaserAce 1000 rangefinder** combines a laser distance meter, digital inclinometer, and sighting scope. Complete with Bluetooth wireless technology, remote data is automatically integrated into GNSS workflows for a wide range of mapping and GIS applications.



**8109710** LaserAce 1000 rangefinder . . . List \$2195.00

<b>Accuracy:</b>	10 cm / 4"
<b>Measurement Range:</b>	
• <b>Max to non-reflective targets:</b>	Passive range: up to 150 m / 500 ft
• <b>Max to reflective targets:</b>	Range to reflector: 600 m / 1970 ft
• <b>Minimum range:</b>	0.0 ft (0.0 cm)
• <b>Inclination:</b>	-70° to +70°
<b>Weight:</b>	464 g (1 lb) with battery
<b>Size:</b>	110 mm x 100 mm x 50 mm (4.33" x 3.94" x 1.97")
<b>Environmental:</b>	IP63 standard
<b>Battery Type:</b>	1100 mAh rechargeable Lithium-Ion, 7.2V

1. Typical accuracy, at +20°C (+113°F), unit level, and 75 m (250 ft) distance from Kodak grey target. Specifications subject to change without notice.

# Measure Faster. Measure Easier. Measure Safer.

Lightweight, low-cost laser rangefinders that measures Slope Distance, Inclination (% Slope) and Azimuth. Calculates Horizontal Distance, Vertical Distance, Height and Missing Line values. Equipped with 7x optics, in-scope data display and a RS232 serial port. Includes integrated Bluetooth wireless communication.

## TruPulse® 360°R

<b>Accuracy:</b>	Distance: short range/light colored/large target: ± 30 cm (1 ft) Distance: long range/dark Colored/small target: ± 0.3 to 1 m (1 to 3 ft)
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<b>Measurement Range:</b>	
• <b>Max to non-reflective targets</b>	3,280 ft (1,000 m)
• <b>Max to reflective targets</b>	6,560 ft (2,000 m)
• <b>Minimum range</b>	0.0 ft (0.0 cm)
• <b>Inclination</b>	+/- 0.25°, typical

<b>Azimuth:</b>	Range: 0 to 359.9° / Accuracy: ± 1°
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<b>Weight:</b>	13.6 ounces (385 g)
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<b>Size:</b>	5.2" x 2.1" x 4.5" (13 cm x 5 cm x 11 cm)
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<b>Environmental:</b>	IP 56
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<b>Battery Type:</b>	1 CR 123A
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<b>Battery Life:</b>	Minimum 8 hours continuous use
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<b>Optics:</b>	7X magnification with field of view
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**7006850** TruPulse 360°R . . . . . List \$1795.00

## TruPulse® 360°B

<b>Accuracy:</b>	Distance: short range/light colored/large target: ± 30 cm (1 ft) Distance: long range/dark Colored/small target: ± 0.3 to 1 m (1 to 3 ft)
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<b>Measurement Range:</b>	
• <b>Max to non-reflective targets</b>	3,280 ft (1,000 m)
• <b>Max to reflective targets</b>	6,560 ft (2,000 m)
• <b>Minimum range</b>	0.0 ft (0.0 cm)
• <b>Inclination</b>	+/- 0.25°, typical

<b>Azimuth:</b>	Range: 0 to 359.9° / Accuracy: ± 1°
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<b>Weight:</b>	8 ounces (220 g)
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<b>Size:</b>	5" x 2" x 3.5" (12 cm x 5 cm x 9 cm)
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<b>Environmental:</b>	IP 54
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<b>Battery Type:</b>	(2) AA or (1) CRV3
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<b>Battery Life:</b>	Minimum 8 hours continuous use
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<b>Optics:</b>	7X magnification with field of view
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**7005530** TruPulse 360°B . . . . . List \$1695.00



### Some Useful GPS Accessories

<b>85518700</b>	Quick release Adapter – 5/8 x 11 adds 23.8 mm to length of rod . . . . .	<b>SALE \$26.95</b>
<b>85511100</b>	Quick Disconnect Adapter adds 76.2 mm to length of rod (Use with 85518700 Adapter) . . .	<b>SALE \$59.95</b>
<b>5113012</b>	Quick Release Tip – male 5/8x11 threads . . . . .	<b>SALE \$25.95</b>
<b>7024736</b>	LTI TruPulse Mounting Bracket . . . . .	<b>SALE \$89.25</b>
<b>3504647</b>	LTI Quick Release Tip . . . . .	<b>SALE \$31.50</b>
<b>855198052</b>	Seco Bracket Plain Open Clamp . . . . .	<b>SALE \$62.90</b>

**Please Call For Other Model Numbers and Configurations**

## GPS Antenna Tripods



Features a two meter collapsible center staff with twist locking mechanism that rotates 360 degrees to check calibration of plumbing with 10 minute vial, a removable 5/8 x 11 adapter and an onboard compass. Tripod legs and the pole are electrostatically powder painted and include replaceable points. Legs have quick release and twist lock mechanisms. Dual graduated and adjusts to three heights – 2m, 1.8m and 1.5m. Collapses to 50". Aluminum hardware is anodized black. Weighs 15 lbs.



	<b>SALE</b>
<b>85511900</b> Graduated Collapsible Tripod .....	<b>\$797.95</b>
<b>85815400</b> GPS Antenna Tripod Bag .....	<b>\$ 75.95</b>
<b>511910FLY</b> Heavy Duty Collapsible Tripod .....	<b>\$874.95</b>
<b>8154120RG</b> Heavy Duty GPS Antenna Tripod Bag .....	<b>\$ 98.95</b>

## Fiberglass Pole Extension

Has 5/8 x 11 female threads on the bottom and 5/8 x 11 male threads on the top to allow more added sections.



<b>513010</b> Fiberglass Pole extension (OD 1.25") 0.200m .....	<b>SALE \$ 39.95</b>
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## GPS Rover Rod Wheel

Wheel ideally suited for RTK profiling. Keeps the rover rod on the surface that you are measuring. Go over obstacles, etc.



<b>5125056</b> 20" GPS Rover Rod Big Wheel .....	<b>SALE \$162.95</b>
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*(Requires top section of pole)*

## Magnetic Mounts

Easy to use magnetic mount system adapters.



<b>85511401</b> Triple Mag Mount .....	<b>SALE \$247.50</b>
<b>855114050</b> Single mag mount .....	<b>SALE \$ 57.50</b>

## GPS Truck Door Bracket

This new bracket holds the GPS Pole to the door of your survey truck. Easy on and off non-damaging mount. Fits all midsize to full size trucks and SUVs. Door will open and close with bracket attached to the door. Holds all RTK and GPS type poles.

Great for checking grade, Topos, estimating RTK, surveying and site preparation.



<b>511420FOR</b> Seco Truck Door Bracket...	<b>SALE \$598.98</b>
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*Std color Orange, Available in Yellow and Flo Yellow on request*

## Snap-Lock Rover Rods

Rod features a one piece design and two locking systems for stability. The snap lock prevents slippage and the compression lock centers the telescopic inner pole and maintains straightness. Come with 40 minute vial.



<b>512520FLYGT</b> Aluminum w/graduated outer pole in 10ths...	<b>SALE \$135.75</b>
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<b>512520FLYGM</b> Same as GT except Metric graduations...	<b>SALE \$135.75</b>
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<b>512520FLY</b> same as GT except not graduated .....	<b>SALE \$126.95</b>
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<b>512820</b> Carbon Fiber – not graduated .....	<b>SALE \$329.00</b>
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## Heavy Duty 2 Meter Snap-Lock System Bag

Bag holds a 2 meter Snap-Lock Pole and bipod or tripod connected. Made of tough Cordura material and Rhinotek ends. Full length zipper, full length shoulder strap and side pocket. Inside dimensions - 5.5" x 56"

<b>815102FLY</b> Heavy Duty 2 Meter Snap-Lock Bag .....	<b>SALE \$ 75.95</b>
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## GPS Rover Rods

Two meter rover rod. Has 40 minute circular vial, handgrip and replaceable steel point. Have 5/8 x 11 male tip.

<b>85512500</b> Aluminum .....	<b>SALE \$ 98.95</b>
<b>85512800</b> Carbon Fiber Rover Rod .....	<b>SALE \$287.50</b>

## Cell Phone Pole Case

Secures your cell phone to any GPS survey pole. With its grippy Toughtek and straps, this pouch will not slip. Inside dimensions are 5 x 2.5 x 1.5 inches. Flo Yellow in color.



<b>814322FLY</b> Cell Phone Pole Case	<b>SALE \$13.95</b>
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## GPS Rover Rod Hard Shell Case

Stores 2 piece rover rod in this hard shell case. Inside Dimensions – 4 x 41 inches

<b>816220BLK</b> Hard Shell Rover Rod Case .....	<b>SALE \$ 86.95</b>
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See page 62 for additional GPS Poles / Tripods / Accessories

## Trimble R8 GNSS – Future Ready Technology!



*The Trimble® R8 GNSS System is a multi-channel, multi-frequency GNSS (Global Navigation Satellite System) receiver, antenna, and data-link radio combined in one compact unit.*

*The Trimble R8 combines advanced receiver technology and a proven system design to provide maximum accuracy and productivity.*

### **Trimble R-TRACK Technology for Comprehensive GNSS Support**

Powered by an enhanced RTK engine, Trimble R-Track technology supports the new GPS Modernization signals, L2C and the coming L5. As soon as they are transmitted, these new signals are capable of providing surveying professionals with real field benefits.



### **Proven System Design**

From the powerful Trimble field software to the receiver itself, the Trimble R8 GNSS system's overall design has been tried, tested, and proven. As a rover it is rugged, lightweight and cable free for unsurpassed ergonomics in the field. As a base it is flexible and also cable free: use the Trimble R8 as a base or rover according to each job's needs.

## Trimble R6 GPS System

### **A Base Station and Rover Receiver for RTK GPS/GNSS Surveying**

The Trimble® R6 GPS System is a multi-channel, multi-frequency GPS receiver, antenna, and data-link radio combined in one compact unit. An R-Track technology option provides GLONASS augmentation to the Trimble R6 GPS solution. Use the Trimble R6 for RTK or static surveying, or in a Trimble VRS™ infrastructure network. The Trimble R6 is ideal for multiple surveying applications, including topographic, cadastral, and stakeout.



## Trimble R4 GPS System

### **The Trimble R4 with Trimble Digital Fieldbook™ Software is a GPS solution you can count on when every point counts.**

Lightweight, ergonomic and cable free, the R4 System provides the ease of use of an integrated receiver with the rugged reliability of the Trimble Recon® Controller.

Couple the easy to learn Trimble Digital Fieldbook™ with Trimble GNSS and optical data processing and analysis software, Trimble Business Center (Optional)

to complete the system. Founded on proven Trimble GPS technology, the Trimble R4 RTK System comes standard with GPS L1/L2 with an upgrade to GLONASS available.

Please call for complete information and costs on Trimble GPS configurations. Ask for a demonstration today with our highly qualified sales force!!



### **TRIMBLE R-TRACK TECHNOLOGY**

The Trimble R8 GNSS system contains Trimble R-Track technology, which is designed to take advantage of the latest GNSS signals. Trimble engineers have designed a receiver architecture that would evolve with the changing world of global Navigation. The Trimble R8 GNSS delivers maximum productivity to the professional surveyor utilizing both the modernized GPS L2C and L5 signals and GLONASS L1/L2 signals. Both the Trimble R8 and R7 with R-Tracking technology will deliver improved tracking performance on satellites transmitting L2C. It also future proofs your investment in GNSS technology for years to come.

## EPOCH 50 GNSS System

The Spectra Precision® EPOCH® 50 GNSS System uses highly accurate GPS and GLONASS technology for cadastral, topographic, control, stakeout and other precision survey applications. Combining both these satellite services provides the user with the greatest possible satellite coverage.

The EPOCH 50 is a complete GNSS System that includes a base, rover, field software, data collector, and radio modem. Features integrated Bluetooth capability and an internal field replaceable battery. Rover includes an internal radio modem and the system runs Survey Pro software which operates on the Ranger, Nomad and Recon data collectors.

**For more information, specifications and pricing on this exciting product from Spectra Precision please call our 1-800-833-9250 toll free number.**



## Adjustable-Tilt, Stainless Steel Monument Adapters

**CORS, Co-op CORS and private GPS network reference stations are being put together all over. To make the set up simpler SECO now manufactures CORS monument adapters that fit easily to threaded pipe or mount to masonry. There's no need to fabricate adapters — we have a professional solution that is simple and will provide years of stability and accuracy. Choose between anodized aluminum (not shown) or stainless steel, pipe-fit or masonry mount.**

The adapters in the #2072-Series have 3.20-inch (8.19 cm) diameters and overall heights of 3.036 inches (7.71 cm). They each include a removable brass 5/8 x 11 male stud that is adjustable in azimuth and held in location by two set screws.

The adapters are leveled by three adjusting screws with a tilt range +/- 7 degrees. The height above the pivot point to the stud shoulder is 1.37" (3.50 cm). The height below the brass 5/8 stud to the shoulder is 0.463" (1.18 cm). The axis height is engraved on the outside of the monuments.

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| <b>207230</b> Use with 1.5-inch pipe with MPT 1-1/2 x 11-1/2 TPI, weighs 5.5 lb (2.5 kg) ..... | <b>SALE \$279.95</b> |
| <b>207231</b> Use with 2-inch pipe with MPT 2 x 11-1/2 TPI, weighs 6.6 lb (3 kg) .....         | <b>SALE \$299.95</b> |
| <b>207232</b> Use with 3-inch pipe with MPT 3-1/2 x 8 TPI, weighs 6.9 lb (3.1 kg) .....        | <b>SALE \$339.95</b> |



## GPS Antenna Platform

This new tripod concept creates a very stable setup using standard cinder blocks as weights (sand bags may also be used). It

is ideal for network reference station installers who want to evaluate a site for multipath before committing to the installation. The platform can be used for private network sites where the building owner does not want any permanent attachment to their building. It can be used as a temporary site for local networks, construction sites, AG sites, etc. The mast is 36 inches (91.44 cm) long with standard 2-inch pipe threads. Sections can be added for more height. It comes with a removable 5/8 x 11 adapter. This platform folds up for portability and includes tools and a system carrying bag.

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| <b>207240</b> Platform sections hold 8 x 16-in (20.32 x 40.64 cm) cinder blocks.<br>Weights (without blocks) 25 lb (11.34 kg) | <b>SALE \$694.50</b> |
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## Trimble Access for General Survey



*Trimble Business Center is a powerful surveying application that is the perfect desktop complement to Trimble's full range of survey solutions. Edit, process and adjust data from all Trimble surveying instruments with efficiency and confidence.*

*Available at two levels of productivity – Advanced and Standard, Trimble Business Center provides the key functionality needed to finish work faster.*

Latest version advances the capabilities of survey offices with key new functionality, including:

- Stake-Out Print imports
- GPSeismic Export
- Enhanced Baseline Processing

Trimble Business Center includes support for the following survey workflows:

- Import and review field data from Trimble Access, Trimble Survey Controller and Trimble Digital Field Book
- Post Process Static and Kinematic GNSS Surveys
- Visualize Trimble VX Imagery and point clouds
- Adjust GNSS, total station and digital level network
- Generate and export GIS features and CAD elements from coded field data
- Review design data from many formats to be staked in the field
- Use COGO to calculate points, lines and adjustments
- Perform Site Calibration to utilize GNSS with local coordinate systems
- Model Corridor designs, such as Roads, to stake in the field

## FARO Laser Scanner FOCUS<sup>3D</sup>

*The FOCUS<sup>3D</sup> is a high speed 3D laser scanner for detailed measurement and documentation. The FOCUS<sup>3D</sup> uses laser technology to produce incredibly detailed three-dimensional images of complex environments and geometries in only a few minutes.*

- **EFFICIENT:** The long range of up to 120m, the level sensor, the compactness and ease of use and the auto-registration at no extra cost result in up to 50% savings of scan and processing time compared to conventional laser scanners
- **PRECISE AND FAST:** The FOCUS<sup>3D</sup> creates a precise, virtual copy of reality in millimeter-accuracy at a blazing speed of up to 976,000 measurement points per second
- **ECONOMICAL:** The price is a revolution by itself. A 3D scanner has never been so affordable as the FOCUS<sup>3D</sup>
- **REVOLUTIONARY SIMPLE:** Due to its intuitive control concept with touch screen display, the unit is easy to operate as a digital camera

For more information on the FOCUS<sup>3D</sup> please contact us and we will be glad to answer your questions and provide you with additional information.

