

## 4600LS

*Economical, fully integrated single-frequency GPS survey unit*

### Key features and benefits

- High productivity at an affordable price
- Portable and simple to use
- Less than 1 watt power consumption
- Integrated GPS receiver antenna
- 12 Channels
- Dual ports

The 4600LS™ is a cost-effective GPS survey instrument for productive control, topographic and GIS surveys. This unit does not require line-of-sight between points and can be operated day or night in virtually any weather. The 4600LS can be used effectively for static, L1 FastStatic, and kinematic surveys over short to moderate baselines.

### Portable

The 4600LS is extremely portable and very simple to use. The GPS receiver, antenna and C-cell batteries are integrated into a single unit weighing only 1.7kg. For postprocessed surveys, no external batteries or cables are required. The unit features one-button operation and three LED indicators let you easily monitor your entire survey.

The 4600LS is the world's first survey grade receiver to run on less than 1 watt power consumption and use standard C-size batteries. For postprocessed surveys, one set of C-cells lasts four days.

For control surveys, the 4600LS mounts on a tripod and can be started with a single button press. To perform productive topographic surveys, the 4600LS mounts on a range pole and can be controlled using the optional TSC1™ data collector with Trimble Survey Controller™ software. The TSC1 can also be used to input point information and adjust receiver settings.



*Simple to use for productive control, topographic and GIS surveys.*

### Rugged

Designed for extreme field conditions, the 4600LS operates from  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$  and is fully sealed. It is also designed to be rugged and it will withstand a fall onto a hard surface from either a tripod or rangepole. Valuable survey data is logged either to internal memory or the optional handheld TSC1 with Trimble Survey Controller software.

### Postprocessing

The 4600LS incorporates high quality L1 carrier phase and C/A-code measurements for reliable and productive static, L1 FastStatic and kinematic surveys.

The 4600LS can store over 64 hours of L1 FastStatic data, which is compatible with Trimble's other survey grade GPS receivers.

When used with Trimble's powerful Trimble Geomatics Office™ processing

software, control surveys can be performed with short occupation times to generate sub-centimeter results.

The 4600LS postprocessing bundle includes the TSC1 data collector with Trimble Survey Controller software and Trimble Geomatics Office software. Trimble Geomatics Office is used to process and adjust the data and then export it to many popular survey design and CAD packages.

An alternative low-cost solution for static surveys is to combine the 4600LS with Trimble's free GPS Configurator software that runs on a CE or iPAQ device.

The 4600LS from Trimble, is the first integrated GPS receiver and antenna for survey work. The system combines quality, performance and high-productivity, at a very affordable price.

# 4600LS

## Economical, fully integrated single-frequency GPS survey unit

### STANDARD FEATURES

- RTCM Version 2 input
- NMEA-0183 output
- Internal memory

### TECHNICAL SPECIFICATIONS

#### Physical

Size:	22.1 cm (8.7") Dia. x 11.8 cm (4.64") H
Weight:	1.4 kg (3.1 lbs)
	1.7 kg (3.7 lbs) with batteries for >32 hours

#### Electrical

Receiver power:	<1 Watt receiver only 5 VDC with C-size batteries. 9 to 20 VDC external supply
Battery life (typical):	>32 hours continuous receiver operation on 4 standard C-size alkaline batteries
Certification:	FCC & CE mark approved

#### Environmental

Operating temp:	-40°C to +65°C (-40°F to +149°F)
Storage temp:	-55°C to +75°C (-67°F to +167°F)
Humidity:	100%, fully sealed. Buoyant
Shock:	2 m (6ft) accidental pole drop

### PERFORMANCE SPECIFICATIONS

#### Static Survey Performance

Modes:	Quick-Start, L1 FastStatic
Accuracy:	
Horizontal:	±5 mm + 1 ppm (≤10 km)
Vertical:	±10 mm + 2 ppm (≤10 km)
Azimuth:	±1 arc second + 5/baseline length in kilometers

#### Kinematic Survey Performance (Postprocessed)

(Requires TSC1 data collector with Trimble Survey Controller at rover)

Modes:	Continuous, Stop-&-go
Accuracy:	
Horizontal:	±1 cm + 1 ppm
Vertical:	±2 cm + 1 ppm
Occupation:	
Continuous:	1 measurement
Stop & go:	2 epochs (min) with 5 satellites

Fastest datalogging rate: 1 Hz

#### General Performance

Start-up:	<30 seconds from power-on to start survey with recent ephemeris
Measurements:	L1 C/A-code, L1 full-cycle carrier
Number of channels:	12
Datalogging:	In internal memory; in optional TSC1 data collector; or on TSC1 optional removable PC card
Receiver data storage:	64 hours internal memory of L1 data, 5 satellites, 15 second interval (typical) 4.5 hours internal memory of L1 data, 5 satellites, 1.0 seconds (minimum) Unlimited data storage using optional TSC1 and PC data card

### OPTIONS AND ACCESSORIES

Survey options:	2 m rangepole 2 m adjustable height tripod Rugged transit cases
Datalogging options:	TSC1 data collector with Trimble Survey Controller software GPS Configurator software
Batteries:	Camcorder battery (24 hours of operation) 6 Ah battery (72 hours of operation) 10 Ah battery (120 hours of operation)
Support:	Extended hardware warranty Firmware and software update agreement Training on-site or at factory
Software:	Trimble Geomatics Office — <i>The total GPS and conventional survey data processing solution.</i> GPS Configurator software — <i>Free software that runs on a CE or IPAQ device to control static surveys.</i>

### ORDERING INFORMATION

For further information please contact your nearest Trimble Authorized Distributor or Trimble Office. You may also visit our website at <http://www.trimble.com>.



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