4800 Specifications

Unless otherwise noted, specifications are for configuration with internal radio modem.

### STANDARD FEATURES
- RTCM Version 2 input
- NMEA-0183 output
- Internal memory
- RTK/OTF

### TECHNICAL SPECIFICATIONS

**Physical**
- **Size:** 23 cm (9") D x 17.8 cm (7") H
- **Receiver weight:** 2.1 kg (4.6 lb) with internal radio
- **Receiver weight:** 3.9 kg (8.5 lb) as full RTK rover

**Electrical**
- **Receiver power:** 6 Watts, receiver only
- **7 Watts as full RTK rover**
- **10.5 to 20 VDC**
- **Battery life (typical):** >4 hours as full RTK rover including internal radio and TSC1, with 1 Li-Ion battery.
- **Certification:** FCC & CE mark approved

**Environmental**
- **Operating temp:** -40°C to +55°C (-40°F to +131°F)
- **Storage temp:** -20°C to +75°C (-40°F to +167°F)
- **Humidity:** 100%, fully sealed. Buoyant
- **Shock:** 2m (6ft) accidental pole drop

### PERFORMANCE SPECIFICATIONS

#### Static Survey Performance
- **Modes:** Continuous, Stop & go
- **Accuracy:**
  - **Horizontal:** ±5mm ±0.5ppm
  - **Vertical:** ±5mm ±1ppm
  - **Azimuth:** ±1 arc second + 5/baseline length in kilometers

#### Kinematic Survey Performance (Postprocessed)
- **Modes:** Continuous, Stop & go
- **Accuracy:**
  - **Horizontal:** ±1cm ±1ppm
  - **Vertical:** ±2cm ±1ppm
- **Occupation:**
  - **Continuous:** 1 measurement
  - **Stop & go:** 2 epochs (min) with 5 satellites
- **Fastest datalogging rate:** 1 Hz

#### Real-time Survey Performance
- **Modes:**
  - **Real-time Kinematic (RTK),**
  - **Real-time Differential (DGPS)**
- **Real-time accuracy:** 0.2m ± 1ppm RMS
- **RTK accuracy:**
  - **Mode:** Mode
  - **Accuracy:** ±1cm ±1ppm
  - **Horizontal:** 1Hz fine 0.4 second
  - **5Hz fine 0.1 second**
  - **Vertical:** 1Hz fine 0.4 second ±2cm ±1ppm
  - **5Hz fine 0.1 second ±5cm ±2ppm**
- **Range:** Range varies depending on radios used, local terrain and operating conditions. Multiple radio repeaters may be used to extend range, depending on type used.

### Initialization
- **Mode:** Automatic while stationary
- **Time:** <1 minute (typical)
- **Reliability:** >99.9%

### General Performance
- **Start-up:** <30 seconds from power-on to start survey with recent ephemeris
- **Measurements:** L1 C/A code, L1/L2 full cycle carrier
- **Number of channels:** 18
- **Datalogging:**
  - In internal memory; in TSC1 data collector;
  - or on TSC1 optional removable PC card
- **Receiver data storage:** 50 hours internal memory of L1/L2 data, 6 satellites, 15 second interval
- **Unlimited data storage using optional TSC1 and PC card**

#### Internal Radio Modem and Antenna Performance
- **Start-up:** <5Hz fine 0.1 second ±5cm ±2ppm
- **Internal:** <5Hz fine 0.1 second ±4.5cm ±1.5ppm
- **Optical:** <10 seconds (typical for known points or RTK initializer)
- **Range:**
  - **Base Radio Modem:**
    - **TRIMTALK™ 450S:** 10km
    - **TRIMMARK™ IIe:** 15km
- **Varies with terrain & operating conditions. Repeaters may be used to extend range depending on type of radio used.**
- **Radio Modem:**
  - **Freq. range:** 40–420 MHz, 430–440MHz, 440–450MHz, 450–460 MHz or 460–470 MHz
  - **Channels:** Up to 20 (factory pre-set)
  - **Channel spacing:** 12.5 KHz or 25KHz (only one per system)
  - **Wireless data rates:** 4800 and 9600bps
  - **Modulation:** GMSK

#### Broadcast frequency, transmit power, channel spacing and antenna gain are regulated by country-of-use. These are unique on a per country basis. The broadcast frequencies, channel spacing and country-of-use for the radio modem must be specified at time of order. Contact your Trimble representative for further information.

### OPTIONS AND ACCESSORIES

#### Survey options:
- PowerLiTE™ GPS pole
- TSC1 data collector with Trimble Survey Controller software
- 4 or 10 Mb PC cards for TSC1

#### Receiver firmware options:
- RTCM SC-104 output Version 2
- Internal radio modem/radio antenna
- Event marker
- Extended hardware warranty
- Firmware and software upgrade agreements
- Training on-site or at factory

#### GPS Software:
- Trimble Geomatics Office - The total GPS and conventional survey data processing solution.

### 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](http://www.trimble.com).