

Rover System Specifications

1. Trimble BX982 Receiver or Equal

Size: 261 mm x 140 mm x 55 mm; Power: 9 V DC to 28 V DC; Maximum 4.1 W; Weight: 1.6 kg;
Antenna LNA Output: Voltage: 5 V DC

2. Trimble LV59 Base Station or Equal:

Dimensions: 14.62 cm diameter x 6.25 cm height (5.75 in diameter x 2.46 in height); Weight:
0.48 kg (1.06lb); Operating Temp: -55 °C to +85 °C (-67 °F to +185 °F) Finish:

UV resistant white radome with aluminum base; Compliance: ROHS; Broad

GNSS Frequency Tracking Band Including:

GPS: L1, L2, L5

GLONASS: L1, L2, L3

Galileo: E1, E2, E5,

SBAS: WAAS, EGNOS, QZSS, Gagan, MSAS, and OmniStar

Quality signal tracking

TNC female signal connector

Small cross-sectional area to reduce wind loading Low

voltage, low power consumption

Integral low noise amplifier

5/8" x 11UNC female threaded aluminum mounting point

Powered by GNSS receiver via coaxial cable

High gain for reliable tracking in difficult environments

3. 10m TNC-TNC Antenna cable

4. ADL Vantage Pro Radio, 430-473 MHz or Equal:

Compatible with both 12.5 and 25 kHz licenses; Cunication: 1 RS-232 port, 115.2 kbps maximum;
User Interface: 2-row, 16-character LCD display with 5 navigation on buttons; External Power: 9.0
– 30.0 VDC, 2 Amp maximum; During RX: 0.6 Watts nominal @ 12.0 VDC; During TX: 7 Watts
nominal @ 12.0 VDC, 1 W RF output; 13.4 Watts nominal @ 12.0; VDC, 4 W RF output

Link Rate/Modulation:

19,200 bps/4FSK, 9600 bps/4FSK, 19,200 bps/GMSK, 16,000 bps/GMSK, 9600 bps/GMSK, 8000 bps/GMSK, 4800 bps/GMSK.

Link Protocols: Transparent EOT/EOC, Transparent FST, Packet-switched, TRIMMARK™, TRIMTALK™, TT450S (HW), SATEL®

Weight: 705 grams (1.55 lbs.); Data Power Connector: 5-pin, #1-shell LEMO-style; RF Connector: 50 Ohm, TNC female; Enclosure: IP67 (Water tight to depth of 1 meter for 30 minutes); Operating Temperature (Receiver): -40° to +85° C (-40° to +185° F) ; Operating Temperature (Transmitter): -40° to +65° C (-40° to +149° F); Storage Temperature (Receiver/Transmitter): -55° to +85° C (-67° to +185° F); Vibration Specification: MIL-STD-810F

5. ADL Vantage Pro Field Accessory Kit w/Tripod (82218-01) or Equal consisting of:

- Transport case
- Battery for 35W radio
- Battery charger for 35W radio
- Charger power cord + plug adaptors
- 9' SAE-to-SAE battery cable
- NMO-to-TNC antenna cable 2.7 m / 9ft.
- Tripod with telescoping antenna mast
- Battery tips card

— Charger manual

6. 450-470 Unity Gain Antenna

7. DE9 Serial Connector

8. Trimble 8D930-UHF, GPS, L1RTK Base/Rover, 20Hz or Equal:

• 220 Channels:

- GPS: L1 C/A, L2E, L2C, L5
- BeiDou B1, B2
- GLONASS: L1 C/A, L2 C/A, L3 CDMA13
- Galileo: E1, E5A, E5B, E5AltBOC2
- QZSS: L1 C/A, L1 SAIF, L2C, L5
- SBAS: L1 C/A, L5

Custom Survey GNSS Technology; High precision multiple correlator for GNSS pseudorange measurements; Unfiltered, unsmoothed pseudorange measurements data for low noise, low multipath error, low time domain correlation and high dynamic response; Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth; low elevation tracking technology; 1 USB 2.0 Device port

1 LAN Ethernet port:

- Supports links to 10BaseT/100BaseT auto-negotiate networks
- All functions are performed through a single IP address simultaneously—including web GUI access and raw data streaming

Network Protocols supported

HTTP (web GUI), NTP Server, NMEA, GSOF, CMR over TCP/IP or UDP, NTripCaster, NTripServer, NTripClient, mDNS/uPnP Service discovery, Dynamic DNS, eMail alerts, Network link to Google Earth

Support for external modems via PPP

4 x RS232 ports

- Baud rates up to 115,200

Up to 20 Hz raw measurement & position outputs; Reference outputs/inputs: CMR, CMR+, sCMRx, RTCM 2.1, 2.2, 2.3, 3.0, and 3.112; Navigation outputs: ASCII: NMEA-0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GGA, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS; Control Software: HTML web browser, Internet Explorer, Firefox, Safari, Opera, Google Chrome; 1 Pulse per Second Output; Event Marker Input Support; Supports Fault Detection & Exclusion (FDE), Receiver Autonomous Integrity; Monitoring (RAIM); 10 MHz External Frequency Input

9. Trimble 8D930-UHF Evaluation Kit or Equal:

Interface board and power supply (receiver not included)

10. 5m TNC-TNC antenna cable

11. Trimble AV33 L1/G1 Aviation Antenna or Equal:

Dimensions: 8.9 cm diameter, 2.1 cm height (3.5" diameter, 0.84" height); Weight: 0.200 Kg (0.44 lb.); Operating Temperature: -55°C to +85°C (-67°F to +185°F); Altitude: ≤16,764 m (55,000 ft.); Finish: UV resistant, high impact thermoplastic white radome with aluminum base; ROHS compliant