



Trimble TDC150

HANDHELD

KEY FEATURES

- ▶ Integrated high-accuracy GNSS receiver
- ▶ Scalable positioning accuracy from meter to centimeters
- ▶ Versatile GNSS corrections support
- ▶ Android™ 6.0 operating system
- ▶ 5.3-inch sunlight readable multi-touch capacitive screen
- ▶ Google Mobile™ services certified to run Google core applications and services
- ▶ Compatible with Trimble or third-party software applications
- ▶ High speed 4G LTE cellular data connectivity
- ▶ Ultra-rugged design with MIL-STD-810 certification and rated IP67
- ▶ Removable, all day battery
- ▶ Fast Qualcomm® processor with 2 GB RAM and 16 GB internal storage
- ▶ Ergonomic form factor
- ▶ Front- and rear-facing cameras

Learn more:
geospatial.trimble.com/tdc150



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GNSS CHARACTERISTICS

- 240 GNSS channels
 - GPS L1C/A, L1P(Y), L2P(Y), L2C
 - GLONASS L1C/A, L2C/A
 - BeiDou B1 (phase 2), B2
 - Galileo E1, E5b
 - QZSS L1C/A, L2C, L1SAIF
 - SBAS L1C/A
 - L-band
- Scalable accuracy from meter to centimeter (meter, sub meter (30/30), decimeter (7/2), centimeter)
- Patented Z-Blade technology for optimal GNSS performance
 - Full utilization of signals from all 6 GNSS systems (GPS, GLONASS, BeiDou, Galileo, QZSS and SBAS)
 - Enhanced GNSS-centric algorithm: fully-independent GNSS signal tracking and optimal data processing, including GPS-only, GLONASS-only or BeiDou-only solution (autonomous to full RTK)
 - Fast Search engine for quick acquisition and re-acquisition of GNSS signals
- Patented SBAS ranging for using SBAS code & carrier observations and orbits in RTK Processing
- Patented Strobe™ Correlator for reduced GNSS multi-path
- Supported data formats: RTX, ATOM, CMR, CMR+, RTCM 2.1, 2.3, 3.0, 3.1 and 3.2 (including MSM), CMRx and sCMRx

REAL-TIME ACCURACY (RMS)^{1,2}

SBAS (WAAS/EGNOS/MSAS/GAGAN)

Horizontal < 50 cm
 Vertical < 85 cm

Real-Time DGPS position

Horizontal25 cm + 1 ppm
 Vertical50 cm + 1 ppm

Real-Time Kinematic Position (RTK)³

Horizontal 10 mm + 1 ppm
 Vertical 15 mm + 1 ppm

Real-Time Performance

Instant-RTK⁴ Initialization Typically 2 sec for baselines < 20 km
 Up to 99.9% reliability
 RTK initialization range over 40 km

Trimble RTX Positioning^{4,5}

FieldPoint™ RTX 10 cm horizontal
 RTX convergence time Worldwide < 15 min
 RTX convergence time (Trimble RTX Fast regions) < 1 min

POST-PROCESSED ACCURACY (RMS)

Horizontal (baselines up to 10 km) 1 cm + 1 ppm
 Vertical (baselines up to 10 km) 2 cm + 1 ppm
 Horizontal (baselines up to 50 km) 1 cm + 10 ppm
 Vertical (baselines over 50 km)50 cm + 1 ppm

DATA LOGGING CHARACTERISTICS

Recording interval 1–999 seconds

PROCESSOR

- Qualcomm Snapdragon™ 410
- Quad-core
- Clock frequency: 1.2 GHz

OPERATING SYSTEM

- Android 6.0 (Google certified)
- Languages available: Afrikaans, German, English, Spanish, French, Italian, Portuguese (Portugal and Brazil), Japanese, Korean, Simplified Chinese, Greek, Russian, Azerbaijani, Czech, Danish, Lithuanian, Hungarian, Dutch, Norwegian (Bokmal), Romanian, Finnish, Swedish, Turkish, Bulgarian, Serbian (Cyrillic), Hindi, Polish
- Software package includes: Google Mobile Services

MEMORY

- 2 GB SDRAM
- Storage: 16 GB (non volatile).
- microSDHC™ memory card (up to 64 GB, SanDisk®, Kingston® recommended)

INTERFACE

- USB 2.0 (micro)
- External antenna connector (TNC)
- Audio jack 2.5 plug (CTIA/AHJ standards)

COMMUNICATIONS

- Cellular: GSM (850,900,1800,1900), GPRS, EDGE, UMTS, WCDMA (B1, B2, B5, B8), HSPA, TDSCDMA (B34, B39), LTE-FDD (B1, B3, B4, B5, B7, B8, B20), LTE-TDD (B38/B39/B40/B41)
- Wi-Fi (IEEE) 802.11 b/g/n
- Bluetooth® 4.0 dual mode
- USB (micro B USB connector)
- NFC

ENVIRONMENTAL CHARACTERISTICS

Operating temperature –20 °C to +60 °C (–4 °F to 140 °F)
 Storage temperature –30 °C to +70 °C without battery (–22 °F to 158 °F)⁶
 Humidity 95% non condensing
 Water & dust proof IP67
 Free drop 1.2 m on concrete
 Shocks MIL STD 810 (fig 516.5-10) (01/2000)
 Vibration MIL-STD-810F (fig 514.5C-17) (01/2000)

POWER CHARACTERISTICS

Battery Li-Ion, 6400mAh
 Battery life > 8 hrs @ 20 °C with GNSS on
 Charging time 4 hours
 Removable battery

PHYSICAL CHARACTERISTICS

Size 29.5 x 12 x 4.5 cm (11.6 x 4.7 x 1.8 in)
 Weight 850 g (1.87 lb)
 User interface 2 volume keys, on/off/reset key, 2 programmable keys, standard Android touch panel buttons

On screen keyboard display

Size 5.3" capacitive multi touch
 Resolution 1280x720 pixels
 Brightness 450 Cd/m²
 Gorilla Glass damage-resistant
 Auto rotate between Portrait and Landscape

MULTIMEDIA & SENSORS

- Rear camera 13 MP pixels with flash light
- Front camera 2 MP pixels
- E-Compass
- G-sensor
- Speaker
- Microphone
- Light sensor

STANDARD ACCESSORIES

- Handstrap
- Screen protectors (x2)
- A/C charger
- USB cable
- Pouch
- Battery door opener
- Monopole adaptor

OPTIONAL ACCESSORIES

- External GNSS antenna
- Pole bracket
- Monopole

OPERATING MODES

- RTK rover: Direct IP, NTRIP (VRS, FKP, MAC networks)
- Post-processing (if supported by the field application)
- Trimble FieldPoint RTX support (IP and L-band)

FIELD SOFTWARE

- Trimble TerraFlex™
- Trimble Penmap® for Android
- Third-party Android applications

1 Accuracy and TTFF specifications may be affected by atmospheric conditions, signal multipath, obstructions, satellite geometry and corrections availability and quality. Always follow recommended GNSS data collection practices.
 2 Performance values assume minimum of five satellites, following the procedures recommended in the product manual. High multipath areas, high PDOP values and periods of severe atmospheric conditions may degrade performance. Real time accuracies depend on TDC150 accuracy option.
 3 TDC150 centimeter used with Monopole accessory.
 4 68% (RMS) horizontal performance based on repeatable in field measurements. Achievable accuracy and initialization time may vary based on type and capability of receiver and antenna, user's geographic location and atmospheric activity, scintillation levels, GNSS constellation health and availability and level of multipath including obstructions such as large trees and buildings.
 5 FieldPoint RTX accuracy is typically achieved within 5 minutes in select regions, and within 15 minutes worldwide.
 6 Batteries can be stored up to +70 °C.
 7 Long baselines, long occupations, precise ephemeris used.

Specifications are subject to change without notice.

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