Trimble TDC150
HANDHELD

KEY FEATURES
► Integrated high-accuracy GNSS receiver
► Scalable positioning accuracy from meter to centimeters
► 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
DATASHEET

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
- Patentied Strobe™ Correlator for reduced GNSS multi-path
- Patentied SBAS ranging for using SBAS code & carrier observations and orbits in RTK processing
- 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
- Patentied SBAS ranging for using SBAS code & carrier observations and orbits in RTK Processing

REAL-TIME ACCURACY (RMS)\(^1,2\)
- SBAS (WAAS/EGNOS/MSAS/GAGAN)
  - Horizontal: \(< 50\) cm
  - Vertical: \(< 85\) cm
- Real-Time DGPS position
  - Horizontal: \(25\) cm
  - Vertical: \(50\) cm
- Real-Time Kinematic Position (RTK)\(^3\)
  - Horizontal: \(10\) mm
  - Vertical: \(15\) mm
- REAL-TIME PERFORMANCE
  - Instant-RTK Initialization: Typically \(2\) sec for baselines \(< 20\) km
  - RTK initialization range: \(> 40\) km

DATA LOGGING CHARACTERISTICS
- Recording interval: \(1\)–\(999\) seconds

PROCESSOR
- Qualcomm Snapdragon\textsuperscript{TM} 410
- Quad-core
- Clock frequency: \(1.2\) GHz

OPERATING SYSTEM
- Android 6.0 (Google certified)
- Recording interval: \(1\)–\(999\) seconds

MEMORY
- 2 GB SD RAM
- Storage: \(16\) GB (non volatile)
- MicroSDHC\textsuperscript{TM} memory card (up to \(64\) GB, SanDisk\textsuperscript{®}, Kingston\textsuperscript{®} 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, TD-SCDMA (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\textsuperscript{®} 4.0 dual mode
- USB (micro B USB connector)
- NFC

REAL-TIME PERFORMANCE
- Operating temperature: \(\sim-20^\circ\) C to \(+60^\circ\) C (\(-4^\circ\) F to \(140^\circ\) F)
- Storage temperature: \(\sim-30^\circ\) C to \(+70^\circ\) C without battery (\(-22\) ^\circ F to \(158^\circ\) F)
- Humidity: \(95\%\) non condensing Water & dust proof IP67
- Free drop: \(1.2\) m on concrete
- Shock: \(1200\) g
- Vibration: MIL-STD-810F (fig 514.5C-17) (01/2000)

POWER CHARACTERISTICS
- Battery: \(\sim 8\) hrs @ \(20^\circ\) C with GNSS on

PHYSICAL CHARACTERISTICS
- Size: \(29.5\) x \(12.4.5\) cm (\(11.6\) x \(4.7\) x \(1.8\) in)
- Weigh: \(850\) g (1.87 lb)
- User interface: \(2\) volume keys, on-screen touch buttons, programmable keys, standard Android touch panel buttons
- On screen keyboard display: \(5.3\) capacitive multi touch
- Bluetooth\textsuperscript{®} 4.0 dual mode
- Wi-Fi (IEEE) 802.11 b/g/n
- Cellular: GSM (850,900,1800,1900), GPRS, EDGE, UMTS, WCDMA (B1, B2, B5, B8)
- LTE-TDD (B38/B39/B40/B41)
- NFC
- USB (micro B USB connector)
- Removable battery

STANDARD ACCESSORIES
- Handsstrap
- Screen protectors (x2)
- A/C charger
- Pouch
- Battery door opener
- Monopole adapter

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)

FIELD SOFTWARE
- Trimble TerraFlex\textsuperscript{®}
- Trimble Penmap\textsuperscript{TM} for Android
- Third-party Android applications

1. Accuracy and TTTF specifications may be affected by atmospheric conditions, satellite multipath, satellite geometry and corrections availability and quality.
2. Performance values assume minimum of \(5\) satellites, following the procedures recommended in the product manual. High multipath areas, high FDDP values and periods of severe atmospheric conditions may degrade performance. Real time accuracies depend on TDC150 accuracy option.
3. SD/SDHC: memory card (up to 64 GB, SanDisk\textsuperscript{®}, Kingston\textsuperscript{®} recommended)
4. Long baselines, long occupations, precise ephemeris used.
5. Batteries can be stored up to \(170^\circ\) C.
6. Recovery convergence time series based on GNSS constellation health, level of multipaths and proximity to obstructions such as large trees and buildings. Convergence can be improved in RAM enabled regions.

Specifications are subject to change without notice.

Contact your local Trimble Authorized Distribution Partner for more information.

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