

## GNSS Receiver



### Better form and function

The GNSS receiver is versatile and rugged, designed with the advanced GNSS technology delivering precise measurements in the most challenging of environments.

Patented Universal Tracking Channels technology provides the industry's most efficient approach in identifying and using satellite signals. All constellation signals are tracked automatically from any available channel. Thus, operations can reach maximum performance with a reduced number of channels.

### Smart Construction Remote

The GNSS Receiver and FC6000 can integrate seamlessly with Smart Construction Remote software. It enables you to:

- Transfer design files quickly
- Remotely support users by viewing their screens and activities

Download Smart Construction Remote Mobile to easily pair to your mobile device.

*Cellular data charges apply*



## GNSS technologies (signal tracking)

|                             |   |
|-----------------------------|---|
| GPS                         | L1 C/A, L1C, L1P(Y), L2P(Y), L2C, L5  |
| GLONASS                     | L1 C/A, L1P, L2C/A, L2P, L3C  |
| Galileo                     | E1, E5a, E5b, E5 AltBOC   |
| BeiDou                      | B1, B2  |
| IRNSS (NavIC)               | SPS-L5  |
| SBAS                        | WAAS, EGNOS, MSAS   |
| QZSS                        | L1 C/A, L1C, L2C, L5  |
| L-band                      | Yes   |
| Universal tracking channels | 226 GNSS channels Vanguard Technology with Universal Tracking Channels; 2 reserved for L-band |
| TILT                        | Topcon Integrated Leveling Technology   |
| GNSS antenna                | Integrated full wave Fence Antenna technology with internal ground plane                      |

## Positioning performance

|  |                             |                             |
|--|-----------------------------|-----------------------------|
| Precision static   | H: 3 mm + 0.1 ppm           | V: 3.5 mm + 0.4 ppm         |
| Static/Fast static*                                      | H: 3 mm + 0.4 ppm           | V: 5 mm + 0.5 ppm           |
| RTK  | H: 5 mm + 0.5 ppm           | V: 10 mm + 0.8 ppm          |
| Code differential GNSS                                   | H: <0.25 m   V: <0.50 m     |                             |
| RTK, TILT compensate                                     | H: 1.3 mm/°Tilt; Tilt ≤ 10° | H: 1.8 mm/°Tilt; Tilt > 10° |
| Maximum recommended angle for tilt compensation is 15°** |                             |                             |

## GNSS technologies (signal tracking)

|            |  |
|------------|--|
| GPS        | 405–470 MHz UHF or FH915 spread spectrum<br>Max transmit power: 1W<br>Range: 5–7 km typical; 15 km in optimal conditions.*** |
| Cellular   | Optional 4G internal cellular module   |
| LongLink™  | Up to 328.1 m / 1000 ft  |
| Bluetooth™ | Yes  |
| Ports      | 1 serial, 1 USB, 3 connectors  |

## Data format and memory

|                 |                                  |
|-----------------|----------------------------------|
| Data output     | TPS, RTCM, CMR/CMR+, NMEA, BINEX |
| Internal memory | 8 GB                             |
| Update rate     | Up to 20 Hz                      |
| BeiDou          | B1, B2                           |

## Power

|   |                                   |
|---|-----------------------------------|
| External power supply   | 9.0–27.0V DC                      |
| Battery   | Li-ion 11,600 mAh, 3.7V           |
| Operating time with radio                                       | RX mode – 10 hr TX mode 1W – 6 hr |
| Use of external 12V battery is recommended when using as a base |                                   |

## Hardware

|                       |  |
|-----------------------|--|
| Dimensions (W x H)    | 5.86 in x 3.72 in (14.88 cm x 9.45 cm)   |
| Weight                | 2.34 lb (1.061 kg)                       |
| Ingress protection    | Dust and water IP67                      |
| Vibration             | MIL-STD-810G                             |
| Drop                  | Survive 2m pole drop on concrete surface |
| Operating temperature | -40° F to +149° F (-40° C to +65° C)     |
| Humidity              | 100%                                     |

\* Under nominal observing conditions and strict processing methods, including use of dual frequency GPS, precise ephemerides, calm ionospheric conditions, approved antenna calibration, unobstructed visibility above 10 degrees and an observation duration of at least 3 hours (dependent on baseline length).

\*\* Subject to successful TILT calibration and operating environment free of magnetic disturbances.

\*\*\* Varies with terrain and operating conditions (UHF radio only).

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