

# Topcon HiPer XR

Precision you can always trust



The HiPer XR's lightweight design ensures effortless portability, allowing professionals to work efficiently across diverse job sites. Its multi-constellation support delivers improved accuracy by tracking multiple satellite systems simultaneously, ensuring reliable data even in complex conditions.

- » Calibration-free and immune to magnetic interference tilt compensation up to 60°
- » GNSS interference monitoring and mitigation technology for anti-jamming and anti-spoofing
- » Improved RTK performance for more reliable results
- » Universal USB-C connectivity and battery charging
- » Integrated web user interface for easy access and control

## Tracking

|                  |   |
|------------------|---|
| Signals          | GPS: L1 C/A, L1P, L2P, L2C, L5<br>GLONASS: L1 C/A, L2P, L2C/A, L3<br>Galileo: E1, E5a, E5b, E5 AltBOC, E6<br>BeiDou: B1, B1C, B2, B2a, B2b, B3<br>IRNSS (NavIC): L5<br>SBAS: L1, L5<br>QZSS: L1C/A, L1 C/B, L2C, L5<br>L-band                           |
| Channels         | 448 hardware channels for simultaneous tracking of all visible supported satellite signals  |
| TILT             | Topcon Integrated Leveling Technology™<br>Calibration-free and magnetically immune IMU  |
| Signal integrity | <ul style="list-style-type: none"><li>- GNSS interference monitoring and mitigation technology for anti-jamming and anti-spoofing</li><li>- Ionospheric scintillation monitoring and mitigation</li><li>- Multipath estimation and mitigation</li></ul> |

## Positioning performance

|                                 |   |
|---------------------------------|---|
| Precision Static                | H: 3 mm + 0.1 ppm<br>V: 3.5 mm + 0.4 ppm  |
| Static/Fast Static <sup>1</sup> | H: 3 mm + 0.5 ppm<br>V: 5 mm + 0.8 ppm  |
| PPP                             | H: 3 cm RMS <sup>2</sup><br>V: 5 cm RMS <sup>2</sup><br>Convergence time: < 5 mins <sup>3</sup> |
| RTK <sup>4</sup>                | H: 5 mm + 0.5 ppm<br>V: 10 mm + 0.8 ppm   |
| RTK, TILT Compensated           | RTK + 5 mm + 0.5 mm / ° tilt<br>Compensation up to 60°  |

## Communications

|                           |  |
|---------------------------|--|
| Internal Radio (Optional) | 403-473 MHz UHF<br>902-928 MHz spread spectrum<br>Max Transmit Power: 1 W                                    |
| Cellular                  | Integrated 4G/LTE cellular modem   |
| LongLink™                 | Up to 300 m range,<br>with clear line of sight<br>Supports up to three (3)<br>simultaneous rover connections |
| Bluetooth®                | v5.3 BR/EDR and low energy long range  |
| Wi-Fi                     | 802.11a/b/g/n/ax 2.400 to 2.500 GHz  |
| Ports                     | USB-C  |

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## Data format and memory

|                 |                               |
|-----------------|-------------------------------|
| Output formats  | RTCM 3.1, RTCM 3.2, NMEA      |
| Input formats   | RTCM 2.x, RTCM 3.x, CMR, CMR+ |
| Internal Memory | 20 GB                         |
| Update Rate     | Up to 20 Hz                   |

## Power

|                       |   |
|-----------------------|---|
| External Power Supply | USB Type-C Power Delivery 3.0, 5-20 VDC<br>60 W maximum   |
| Battery               | Two internal, non-removable, Lithium-Ion battery packs each battery pack rated at 7.2 V, 3.5 Ah   |
| Operating time        | 15 hours – STATIC (1 Hz data logging)<br>7 hours – RTK BASE STATION (1 W UHF/FH)<br>10.5 to 13 hours <sup>5</sup> – RTK ROVER (UHF/FH, internal cell or LongLink) |

## Hardware

|                        |   |
|------------------------|---|
| Dimensions (L x W x H) | 13.9 x 13.9 x 9.7 cm (5.47 x 5.47 x 3.82 in.) |
| Weight                 | 995 g (2.19 lb.)                              |
| Ingress Protection     | Dust and water IP67                           |
| Vibration              | MIL-STD 810G                                  |
| Drop                   | Survive 2 m pole drop on concrete surface     |
| Operating Temperature  | -40°C to 65°C (-40°F to 149°F)                |
| Humidity               | 100%  |

<sup>1</sup> Performance specifications assume optimal conditions, including dual-frequency GPS, precise ephemerides, low ionospheric activity, approved antenna calibration, unobstructed visibility above 10°, and ≥3-hour observation durations (dependent on baseline length).

<sup>2</sup> Specifications are derived from field and lab testing. Accuracy and convergence may vary with hardware, GNSS geometry (PDOP), and site conditions.

<sup>3</sup> Performance may degrade under high ionospheric activity, severe multipath, or dense vegetation. Adherence to GNSS best practices is recommended for optimal results.

<sup>4</sup> Applicable to baselines <40 km.

<sup>5</sup> Operating time varies by communication method.