



INSTANT-RTK TECHNOLOGY

Z-Xtreme Survey System

Z-Xtreme

The Ashtech® Z-Xtreme™ from Thales Navigation professional products is a rugged, weather-proof, dual-frequency GPS receiver designed to provide surveyors with cost-effective, centimeter-accurate positions in a variety of system configurations.

The Z-Xtreme receiver begins with state-of-the-art satellite electronics coupled with patented Z-Tracking™ to deliver the highest GPS signal reception level. A removable battery and flash memory card provide enough capacity to last all day for maximum utility. Components are completely integrated inside a weather-proof, high impact plastic housing, ensuring your investment is safe, rain or shine. Use the easy-to-operate interface on the front panel for important functions such as site information entry, survey status, and set-up of RTK base stations without the additional cost of a handheld controller. The result: Z-Xtreme with Instant-RTK® outperforms all other receivers in its class!

ZX-SOLUTIONS

The Z-Xtreme survey system from Thales Navigation provides a range of solutions designed for the vast array of positioning needs – from entry level static or kinematic post-processed surveys, all the way up to real-time functions such as stake out. The entry level ZX-Solutions™ system dramatically increases your productivity for control surveys and other post-processed applications. Add an optional kinematic kit to make topographic feature collection more cost effective. Use Ashtech Solutions™ software to easily process the field data, export results and



generate reports. Purchase only what you need for the job at hand because ZX-Solutions is fully upgradeable.

ZX-SUPERSTATION

Eclipse the productivity of optical instrument stake out with a ZX-SuperStation™. The ZX-SuperStation is a field-to-finish GPS surveying system that combines the Z-Xtreme receiver with a powerful data collector and wireless modems for centimeter accuracy in real-time. Instant-RTK gives you the ability to initialize the centimeter solution in a fraction of the time of conventional RTK systems. Powerful data collection software gives you the ability to efficiently perform GPS surveying techniques and to interface seamlessly with optical total stations.

Ashtech Technology

- 12 channel all-in-view operation
- Full-wavelength carrier on L1 and L2
- Z-Tracking
- Multipath mitigation
- Dual-frequency smoothing for improved code differential
- Instant-RTK

Performance Figures¹**Static, Rapid Static**

- Horizontal: 0.005 m + 1 ppm
(0.016ft+1ppm)
- Vertical: 0.010 m + 1 ppm
(0.033ft + 1ppm)

Post-Processed Kinematic

- Horizontal: 0.010 m + 1 ppm
(0.033ft + 1ppm)
- Vertical: 0.020 m + 1 ppm
(0.065ft+1ppm)

Real-Time Code Differential Position

- <1 m (3.28 ft)

Real-Time Z Kinematic Position (Fine Mode)

- Horizontal: 0.010 m + 2 ppm
(0.033ft + 2 ppm)
- Vertical: 0.020 m + 2 ppm
(0.065ft + 2 ppm)
- Azimuth (arc sec): 0.4 + 2.0/baseline (km)

RTK Occupation Time

- 2 seconds (typical - sub-centimeter accuracy with longer occupation time)

Instant-RTK Initialization

- 99.9% reliability
- Typically <2 seconds with 6 or more satellites, PDOP <5, baseline length <7 km (4.35 mi), open sky and low multipath conditions

RTK Operating Range

- Recommended: 10 km (6.21 mi)
- Maximum: 40 km (24.85 mi)

Standard Features

- 16 MB PCMCIA removable memory card
- NMEA 0183 output
- Selectable update rate from 999 sec to 10 Hz
- Event marker
- Point positioning
- 1 PPS timing signal
- Session programming

- Wide array of coordinate transformations
- Removable internal battery
- 8-character alphanumeric LED display with 4-button interface
- 3 function LED display - Radio, Memory, Satellites/Power
- Multi-function audible alarm
- Quick reference card holder
- External mount capabilities
- External power input
- 4 RS-232 ports (115200 baud max, 3 external, 1 internal)
- 1-year warranty
- Free factory technical support

Standard Accessories

- Communications software
- Padded system bag and hard case
- RS-232 data cable
- Receiver operating manual
- Quick reference field card

Technical Data**Environmental**

- Z-Xtreme Receiver
- Meets MIL-STD 810E for wind driven rain and dust
- Operating temperature: -30° to +55°C
(-22° to 131°F)
- Storage temperature: -40° to +85°C
(-40° to 185°F)

Geodetic 4 Antenna

- Meets IPX7 specifications for submersion
- Operating temperature: -55 to +75°C
(-40° to 149°F)
- Storage temperature: -55° to +75°C
(-67° to 167°F)

Physical

- Weight
- Receiver: 1.59 kg (3.50 lb)
- Antenna: 0.82 kg (1.81 lb)
- Battery: 0.43 kg (0.95 lb)
- Dimensions
- 76.2 H x 196.85 W x 222.25 D mm
- (0.25 H x 0.646 W x 0.729 D ft)
- Power
- 10 - 28 VDC, 6.0 W

Internal battery

- Capacity: 6000 mAh
- >9 hours (typical) @ 25°C (77°F)
- Operating temperature: -30° to +55°C
(-22° to 131°F)
- Storage temperature: -40 to +60°C
(-40° to + 140°F)

PC card

- ATA Type II PCMCIA memory card (16 MB standard)
 - Temperature range: -40° to +85°C
(-40° to 185°F)
 - Data capacity: 4500 epochs per 2 MB*
- * Based on one session, eight satellites' data and full measurements. This number can vary significantly depending on the conditions of the session.

Optional Features

- Real-time kinematic (base and rover modes) for cm-accuracy
- RTCM 2.2 (Types 1, 2, 3, 9, 16, 18, 19, 20, 21, 22)
- Internal UHF or spread spectrum radio for RTK rover operations
- External UHF or spread spectrum radio for RTK base and rover operations
- Geodetic 4 antenna ground plane kit
- Kinematic antenna kit
- Aircraft antenna kit
- AC power cable
- Choke ring antenna
- Long haul backpack kit
- All-on-a-pole kit

Optional Application Software**GPS data processing**

- Ashtech Solutions

Land Surveying and Construction

- TDS Survey Pro
- Carlson SurvCE
- Ashtech Survey Control II
- Ashtech GPS Fieldmate

Mining and Land Seismic

- Ashtech Mine Surveyor II
- Ashtech Seismark II

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Thales Navigation follows a policy of continuous product improvement; specifications and descriptions are thus subject to change without notice. Please contact Thales Navigation for the latest product information.

¹ Specifications assume operation follows all the procedures recommended in the product manual utilizing Instant-RTK, post processing with Ashtech Solutions or Ashtech Office Suite for Survey. High-multipath areas, high PDOP values, low satellite visibility, and periods of adverse atmospheric conditions and/or other adverse circumstances will degrade system performance. All accuracy specifications are RMS values.