The Z-Xtreme™ from Thales Navigation 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® out-performs 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.
Thales 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 Figures³

Static, Rapid Static
- Horizontal: 0.005 m + 1 ppm
- Vertical: 0.010 m + 1 ppm

Post-Processed Kinematic
- Horizontal: 0.010 m + 1 ppm
- Vertical: 0.020 m + 1 ppm

Real-Time Code Differential Position
- <1 m (3.28 ft)

Real-Time Z Kinematic Position (Fine Mode)
- Horizontal: 0.010 m + 2 ppm
- Vertical: 0.020 m + 2 ppm

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/Pwr
- 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

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: -40° to +140°F (-47° to 284°F)

- 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.

- 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)

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

- Ashtech Solutions
- Land Surveying and Construction
  - TDS Survey Pro
  - Carlson SurvCUE
  - Ashtech Survey Control II
  - Ashtech GPS Fieldmate

- Mining and Land Seismic
  - Ashtech Mine Surveyor II
  - Ashtech Seismark II

Technical Specifications

Z-Xtreme Survey System

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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.