

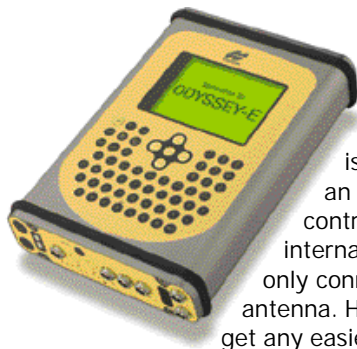
Total Solutions Package  
**PRECISION GPS+**

**TOPCON**



# ODYSSEY-E

Integrated GPS+ Receiver / Data Collector



The perfect blend of power and convenience, Odyssey-E is the first GPS+ receiver with an integrated Windows® CE controller. Combined with its internal batteries and radio, the only connection you need is an antenna. High-power RTK just doesn't get any easier.

- Only receiver in the industry that can house two separate radio boards simultaneously
- 100 percent compatible with all existing upgrade options, including dual-frequency GPS+GLONASS
- USB and Ethernet communication support
- Easiest, most powerful RTK solution available
- Ultra visible controller display is easy to see in all conditions

At its core is our **Paradigm** chip featuring 40 universal super channels that can each track all signals of either L1 or L2 GPS frequencies. It incorporates our new innovations in signal processing, **multipath mitigation** and **co-op tracking**, making Topcon GPS+ the best in the field for under-canopy and low signal strength reception.



Activating optional features, like adding GPS L2, GLONASS or both is easy with simple password commands entered via a PC. Options can even be added on a pay-per-use basis—only when you need it.

Combined with a Topcon LegAnt-3 with integrated RF antenna, Odyssey-E gives you a true all-on-the-pole RTK rover. No backpacks, no dangling cables.

Topcon GPS+—no ordinary GPS.



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## Odyssey-E Technical Data <sup>1</sup>

<b>Description</b>	40 channel integrated GPS+ receiver/data collector with MINTER interface.
<b>Tracking Specifications</b>	
Tracking Channels, standard	40 L1 GPS (20 GPS L1+L2+GLONASS on Cinderella <sup>2</sup> days)
Tracking Channels, optional	20 GPS L1+L2 (GD), 20 GPS L1 + GLONASS (GG), 20 GPS L1+L2+GLONASS (GGD)
Signals Tracked	L1/L2 C/A and P Code & Carrier
<b>Performance Specifications (1 sigma)</b>	
Baseline Accuracy	3mm + 1ppm for L1 + L2 5mm + 1.5ppm for L1
RTK (OTF) Accuracy	10mm + 1.5ppm for L1 + L2 15mm + 2ppm for L1
Cold Start	<60 seconds
Warm Start	<10 seconds
Reacquisition	<1 second
<b>Power Specifications</b>	
Battery	Internal Lithium-Ion batteries plus 1 x external power port
External power input	6 to 28 volts DC
Power consumption	Less than 4.3 watts (with integrated data collector)
<b>GPS+ Antenna Specifications</b>	
GPS / GLONASS Antenna	External
Antenna Type	Microstrip (Zero-Centered)
Ground Plane	Antenna on a flat ground plane or Choke Ring
<b>Radio Specifications</b>	
SpSp	Internal 900 MHz or 2.4 GHz SpSp transceiver
UHF Radio Modem	Internal Rx or External Tx/Rx
Base Power Output	0.5W/2.0W/35W
<b>I/O</b>	
Communication Ports	4x serial (RS232)
Other I/O Signals	1pps, Event Marker
Status Indicator	2x3-color LED's, two-function keys (MINTER)
Control & Display Unit	Internal Window® CE w/touch screen and keyboard
<b>Memory &amp; Recording</b>	
Internal Memory	Up to 96 Mbytes
Raw Data Recording	Up to 20 times per second (20Hz)
Data Type	Code and Carrier from L1 and L2, GPS and GLONASS
<b>Data Output</b>	
Real time data outputs	RTCM SC104 version 2.2
ASCII Output	NMEA 0183 version 2.2
Other Outputs	TPS format
Output Rate	Up to 20 times per second (20Hz)
<b>Environmental Specifications</b>	
Enclosure	Aluminum extrusion, waterproof
Operating Temperature	-10°C to 50°C / 14°F to 122° F
Dimensions	W:159 x H:242 x D:49 mm / 6.25 x 9.53 x 1.93 in
Weight	1.9 kg / 4.19 lbs

Standard Configuration	Optional Features	Common Accessories
<ul style="list-style-type: none"> <li>• Odyssey-E Receiver (0Mb)</li> <li>• Internal PDL/UHF Radio</li> <li>• Internal Windows® CE controller w/touch screen and keyboard</li> <li>• 1 Hz Update Rate</li> <li>• Co-op Tracking</li> <li>• NMEA 0183 output</li> <li>• User Defined Outputs</li> <li>• MINTER Interface</li> <li>• 2x RS232 Serial Ports</li> <li>• 1x External Power Port</li> <li>• Power Cables</li> <li>• RS232 Cable</li> </ul>	<ul style="list-style-type: none"> <li>• GPS L2 and GLONASS</li> <li>• Internal 900 MHz SpSp radio</li> <li>• Internal 2.4 GHz SpSp radio</li> <li>• Internal GSM module</li> <li>• Update rate 5Hz &amp; 10Hz</li> <li>• RTK @ 5Hz, 10Hz &amp; 20Hz</li> <li>• Data Recording 4Mb to 96Mb</li> <li>• CMR/RTCM input/output</li> <li>• Advanced Multipath Reduction</li> <li>• Frequency I/O</li> <li>• Event Marker</li> <li>• Two additional serial ports</li> <li>• Additional power port</li> </ul>	<ul style="list-style-type: none"> <li>• Topcon Antennas</li> <li>• LegAnt-2 flat ground plane</li> <li>• LegAnt-3 flat ground plane w/integrated RF antenna</li> <li>• RegAnt-1 SD choke-ring</li> <li>• RegAnt-2 DD choke-ring</li> <li>• AirAnt</li> <li>• UHF Base or Rover radio kit</li> <li>• LitePole</li> <li>• Tripod</li> <li>• Tribrach &amp; adapter</li> <li>• Pinnacle software</li> <li>• Carlson GPS software</li> <li>• Survey Pro software</li> <li>• Soft or hard carrying case</li> </ul>

<sup>1</sup> Specifications are subject to change without notice. Performance specifications assume a minimum of 6 GPS or 7 GPS/GLONASS satellites above 15 degrees in elevation and adherence to procedures recommended by TPS in the appropriate manuals. In areas of high multipath, during periods of high PDOP and during periods of high ionospheric activity performance may be degraded. Robust checking procedures are highly recommended in areas of extreme multipath or under dense foliage.

<sup>2</sup> Cinderella feature activates GPS L2 and GLONASS reception at GPS midnight every other Tuesday for 24 hours.