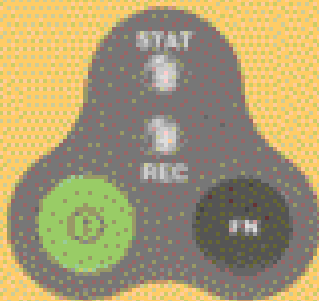Total Solutions Package
PRECISION GNSS

TOPCON

TOPCON

LEGACY-E

When Ordinary GPS Isn't Good Enough

With a Legacy-E GNSS receiver, fast and accurate solutions don't rely on when or where you're working, or how much time have. It has the world's most advanced GNSS receiving technology built-in, ready to work where others won't.

At its core is our Paradigm chip featuring 40 universal super channels that can each track all signals of either L1 or L2 GPS and GLONASS frequencies —and up to 20 GNSS satellites at once, the maximum available at any one time! It incorporates our new innovations in signal processing, multipath mitigation and co-op tracking, making Topcon GNSS the best in the field for under-canopy and low signal strength reception.

Our unique Cinderella feature activates GPS L1+L2 and GLONASS reception every other Tuesday for 24 hours so you can experience the real power of Topcon GNSS. Permanently activating these frequencies and other options 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.

The MINimum INTERface keeps operation very simple. Just two function keys and two 3-color LED's are all that's needed to record data and check status. Up to four serial ports lets Legacy-E work with a variety of accessories in all types of configurations.

Topcon offers a full line of antennas, radios, post-processing software and all the other accessories and hardware that will help ensure maximum productivity and accuracy.

Powerful, simple, versatile. Topcon Legacy-E—no ordinary GPS receiver.

TOPCON
P O S I T I O N I N G   S Y S T E M S

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Creation
TOPCON — 2002
70 years of inspired creation

Legacy-E Technical Data [1]

Description	40 channel integrated GNSS receiver with MINTER interface.

Tracking Specifications

Tracking Channels, standard	40 L1 GPS (20 GPS L1+L2+GLONASS on Cinderella [2] 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

Performance Specifications   (1 sigma)

Baseline Accuracy	Horizontal: 3mm + 1ppm for L1+L2; 5mm + 1.5ppm for L1
	Vertical: 5mm + 1.5ppm for L1+L2; 6mm + 1.5ppm for L1
RTK (OTF) Accuracy	Horizontal: 10mm + 1.5ppm for L1+L2; 15mm + 2ppm for L1
	Vertical: 15mm + 1.5ppm for L1+L2; 20mm + 2ppm for L1
Cold Start / Warm Start	<60 seconds / <10 seconds
Reacquisition	<1 second

Power Specifications

Battery	External (maximum of 2 ports)
Power input / consumption	6 to 28 volts DC / less than 3.3 watts
Continuous Operating Time	7 hours (typical w/2.3AH rechargeable battery)

GNSS Antenna Specifications

GPS / GLONASS Antenna	External
Antenna Type	Microstrip (Zero-Centered)
Ground Plane	Antenna on a flat ground plane or Choke Ring

Radio Specifications

Type	External, UHF/VHF radio modem
Base Power Output	0.5W/2.0W/35W

I/O

Communication Ports	Serial (RS232), 4 maximum, 2 standard
Other I/O Signals	1pps, event marker, frequency input, frequency output
Status Indicator	2x3-color LED's, two-function keys (MINTER)
Control & Display Unit	External: Husky FS/2, FS/3, Ranger, 3rd Party

Memory & Recording

Internal Memory	Up to 96 Mbytes
Raw Data Recording	Up to 20 times per second (20Hz)
Data Type	Code and Carrier fromL1 and L2, GPS and GLONASS

Data Output

Real time data outputs	RTCM 104 version 2.2 and/or CMR2
ASCII Output	NMEA 0183 version 2.2/2.3 (2.3 default)
Other Outputs	TPS format
Output Rate	Up to 20 times per second (20Hz)

Environmental Specifications

Enclosure	Waterproof
Operating Temperature	-40°C to 55°C / -40°F to 130° F
Dimensions	W:240 x H:110 x D:35 mm / 9.45 x 4.33 x 1.38 in
Weight	0.6 kg / 1.32 lbs

Standard Configuration

- Legacy-E Receiver (0Mb)
- Cinderella GPS L2 + GLONASS activation
- 1 Hz Update Rate
- Co-op Tracking
- NMEA 0183 output
- User Defined Outputs
- MINTER Interface
- 2x RS232 Serial Ports
- 1x External Power Port
- Power Cables
- RS232 Cable

Optional Features

- GPS L2 and GLONASS
- Update rate 5Hz,10Hz, 20Hz
- RTK @ 5Hz, 10Hz, 20Hz
- Data Recording 4Mb to 96Mb
- CMR/RTCM input/output
- Advanced Multipath Reduction

- Frequency I/O
- Event Marker
- Two additional serial ports
- Additional power port

Common Accessories

- Topcon Antennas
  LegAnt-2 flat ground plane
  RegAnt-1 SD choke-ring
  RegAnt-2 DD choke-ring
- UHF/VHF/Spread Spectrum Base or Rover radio kit
- Topcon Power Station
- 2.3AH rechargeable battery
- Lithium-ion battery
- LitePole
- Tripod, tribrach & adapter
- Pinnacle software
- Carlson GPS software
- Survey Pro software
- Backpack, carrying case

1 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.

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