The right one.™

CONDOR GPS MODULE FAMILY

KEY BENEFITS

- Cost-competitive to chipset implementations with all costs considered.
- Lowers development risk, cost and time
- Custom form factors to suit specific integration requirements
- Shortens time-to-market for new navigation products

THE SMART ALTERNATIVE TO A GPS CHIPSET

On the surface, a chipset implementation may appear to be the optimal choice for a GPS positioning solution. However, GPS chipset implementations are fraught with risk, can delay time-to-market (TTM) and can have significant hidden costs beyond just the bill of material. Chipset implementations typically require multiple design iterations to achieve maximum performance under all operating conditions. In the production environment, chipset implementations accrue costs associated with testing, yield, re-work and warranty.

Trimble's Condor family of GPS modules represents the smart alternative to GPS chipsets for many consumer and commercial positioning applications. Trimble offers Condor modules in multiple form factors and flexible interface options. The modules in the Condor family share several common characteristics: top-tier positioning performance, the best components, and the highest production quality standards.

Condor GPS modules help you bring innovative products to market faster to capture greater market share. As a completely qualified positioning solution with full warranty, Condor modules harbor none of the development risk or hidden costs associated with GPS chipset implementations. Select a Condor GPS module and leverage Trimble's 30+ years of experience in positioning solutions.

C1011

At 10 mm x 11 mm, the diminutive Condor C1011 packs powerful positioning performance in a size well-suited to portable navigation products.

C1919A

The Condor C1919 has the 19 mm x 19 mm SMT format common with the Copernicus II and Panda GPS modules from Trimble.

C2626

Continuing Trimble's tradition of advancing technology while preserving our customer's investment, the C2626 copies the popular Lassen iQ form factor.

Trimble®

CONDOR GPS MODULE FAMILY

The Condor GPS family includes multiple modules with different form factors and interface options. All the modules in the family offer top tier positioning performance. The features and specifications listed below are typical for all Condor GPS modules in the family.

KEY FEATURES

- GPS L1 Frequency C/A Code Receiver
- NMEA Output and Input
- SBAS (WAAS, EGNOS) Capable
- aGPS Capable
- Update Rate up to 10 Hz
- PPS Timing Output
- Multiple Form Factors and Interface Options

PERFORMANCE SPECIFICATIONS

GPS performance statistics are clear view, stationary, autonomous (no aiding), 50% figures. Sensitivity based on signals measured at the antenna.

Update Rate . . . . . 1 Hz (default), up to 10 Hz

Accuracy
- Position: . . . . . 2 m
- Altitude: . . . . . < 3 m
- PPS: . . . . . ±25 ns

Acquisition
- Re-Acquisition: . . . . . < 2 s
- Hot Start: . . . . . < 2 s
- Warm Start: . . . . . 35 s
- Cold Start: . . . . . 38 s

Sensitivity
- Tracking: . . . . . -160 dBm
- Acquisition: . . . . . -146 dBm

Dynamics
- Acceleration: . . . . . 2 g
- Velocity: . . . . . 515 m/s (COCOM Limit)

ELECTRICAL INTERFACE CHARACTERISTICS

Serial Interface
- UART: . . . . . 2.8 V TTL level
- Protocol: . . . . . NMEA
- Messages: . . . . . GGA, GSA, GSV, RMC (default)
- Baud Rate: 9600, 8-N-1

PPS Interface
- Level: . . . . . 2.8 V TTL level
- Pulse Width: . . . . . Configurable 4 µs

Main Power
- DC Levels: . . . . . 3.0 V to 3.6 V
- Consumption: . . . . . < 37 mA typical @ 20 °C

Backup Power
- DC Levels: . . . . . 2.0 to 3.6V
- Consumption: . . . . . 5 µA typical @ 20 °C

ENVIRONMENTAL SPECIFICATIONS

Temperature
- Operating: . . . . . -40 °C to + 85 °C
- Storage: . . . . . -55 °C to +105 °C

Humidity . . . . . 5% to 95% non-condensing @ 60 °C

Vibration
- 5 Hz to 20 Hz: . . . . . 0.008 g^3/Hz
- 20 Hz to 100 Hz: . . . . . 0.05 g^3/Hz
- 100 Hz to 900 Hz: . . . . . -3 dB/octave

PHYSICAL CHARACTERISTICS

Dimensions
- C1011: . . . . . 10 mm x 11 mm x 2.01 mm
- C1919: . . . . . 19 mm x 19 mm x 2.54 mm
- C2626: . . . . . 26.0 mm x 26.0 mm x 6.0 mm

Connectors:
- C1011: . . . . . 36-ball surface-mount LGA
- C1919: . . . . . 28 surface-mount edge castellations
- C2626: . . . . . 8-pin interface header
H.FL antenna connector

ORDERING INFORMATION

Model	Part Number	LNA	RTC	Antenna Detection	Packaging Options	Starter Kit Part Number
C1011	68674-00				20-piece tray 100-piece reel 500-piece reel	70897-05
C1919A	67650-10	✓	✓		20-piece tray 100-piece reel 500-piece reel	70291-10
C1919B	67650-00	✓			20-piece tray 100-piece reel 500-piece reel	70291-10
C2626	70896-00	✓	✓	✓	250-piece box	70897-05

LNA: An onboard LNA compatible with both active and passive antenna implementations.

RTC: Includes an onboard 32 kHz crystal for the RTC. Modules without an onboard crystal support either an off-board crystal or a connection to the host RTC crystal.

Antenna Detection: Capable of reporting antenna faults (open or short conditions) when integrated with an active antenna.

Starter Kit: This kit includes all the tools necessary to test and evaluate the Condor GPS receiver, including: Condor GPS receiver in a rugged enclosure suitable for testing and data collection; a GPS antenna; PC-based analysis tools; and documentation.

Specifications subject to change without notice.

NORTH AMERICA
Trimble Navigation Limited
Corporate Headquarters
935 Stewart Drive
Sunnyvale, CA 94085
Phone: +1-800-787-4225
Phone: +1-408-481-7741
Email: AD_Sales@trimble.com

EUROPE
Trimble Navigation Europe
Phone: +46-8-622-12-79

KOREA
Trimble Export Ltd, Korea
Phone: +82-2-555-5361

CHINA
Trimble Navigation Ltd, China
Phone: +86-10-8857-7575

Trimble

www.trimble.com