Trimble Introduces New Embedded GPS Timing Receiver to Keep Systems in Sync

Full-featured, Low Cost, 15 Nanosecond Timing in a Small Form Factor

SUNNYVALE, Calif., Dec. 6, 2004 -- Trimble (NASDAQ:TRMB) introduced today a new embedded Global Positioning System (GPS) receiver for timing applications-the ResolutionTM T receiver. With major advancements in performance, ease of integration, and software flexibility, the Resolution T receiver enables system integrators to add precise GPS or Universal Time Coordinate (UTC) time and synchronization to many products where cost or size had previously been a limitation.

The Resolution T receiver will be showcased at the Precise Time and Time Interval (PTTI) show in Washington, D.C.

Precise timing and synchronization is vital to today's wireless infrastructure, efficiently controlling the flow of network information data to maximize the use of bandwidth. Backed by Trimble's more than 20 years of experience, innovation, and long-term commitment to the market, the Resolution T provides a low-cost, easy to use, highly accurate and reliable GPS timing source for the telecommunications, broadcast synchronization, power transmission and wireless industries.

Prior to the Resolution T receiver, many timing applications used smart antennas for system synchronization. The small, 3.3 volt receiver now enables integrators to embed precise GPS timing in their actual application.

Timing features of the Resolution T receiver include: Automatic Self-Survey to ensure accurate reference position for improved timing accuracy; the Overdetermined Timing Mode provides an extremely accurate 1 PPS synchronized to GPS/UTC better than 15 nanoseconds (one sigma); Timing Receiver Autonomous Integrity Monitoring (TRAIM) to assure high PPS integrity in Overdetermined Timing Mode; and other features. The modular design also allows for reduced integration time and low implementation risk.

In addition, Trimble's Resolution T receiver can greatly increase network security. Implementation completely inside the network firewall allows for an independent, traceable and dependable GPS timing and synchronization source for the ultimate in network security without an Internet connection.

The Resolution T receiver uses a general purpose Digital Signal Processor (DSP) in lieu of a custom GPS chip to provide a true software GPS receiver. This allows for extremely flexible software since the receiver is no longer restricted by hardware design. The timing receiver is a complete all-in-view, 12-channel, parallel tracking GPS receiver designed to operate with the L1 frequency, standard position service, Coarse Acquisition mode.

Trimble's developer's kits include: the Resolution T GPS receiver mounted on an interface board in a durable metal enclosure, an active, external 5Vdc Bullet antenna, 50 feet of RG-59 cable, AC/DC power adapter, a starter kit enclosure including a motherboard that provides serial output, and a serial interface cable. A reference manual and monitor programs are provided on CD-ROM. The Resolution T receiver uses Trimble Standard Interface Protocol (TSIP) or NMEA.

The Resolution T receiver and developers kit is expected to be available in late December 2004 through Trimble's worldwide Component Technologies sales organization.

About Trimble

Trimble is a leading innovator of Global Positioning System (GPS) technology. In addition to providing advanced GPS components, Trimble augments GPS with other positioning technologies as well as wireless communications and software to create complete customer solutions. Trimble's worldwide presence and unique capabilities position the Company for growth in emerging applications including surveying, automobile navigation, machine guidance, asset tracking, wireless platforms, and telecommunications infrastructure. Founded in 1978 and headquartered in Sunnyvale, Calif., Trimble has more than 2,000 employees in more than 20 countries worldwide.

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