"Smarter Timing Solutions"

RTM3204 *GPS Timing Module*

Compact Size for Portable Applications

The RTM3204 is a compact unit designed specifically for portable applications. Designed for 24V battery-powered systems, it accepts a wide range 18V to 30V power input and requires only 80 cubic inches of mounting space. In spite of its compact size, the RTM3204 provides a full time and frequency feature set as well as complete TCP / IP network connectivity.

FEATURES

- Timing Accuracy: < 20 Nanoseconds RMS to GPS Time
- Frequency Accuracy: < 1 x 10^{-13}
- 1 PPS and 10 MPPS Outputs
- IRIG-B Timecode Output
- Network Port with Telnet, FTP, DHCP, SSH, HTTPS, SNMP with Enterprise MIB

GPS Timing and Frequency Control

Utilizing a Global Positioning System (GPS) receiver with advanced algorithms, the RTM3204 uses the GPS transmissions to precisely synchronize itself to UTC to < 100 nanoseconds (< 10 nanoseconds RMS to GPS Time). The frequency of the internal oscillator is disciplined to match the frequency of the UTC timescale to a 1 part in 10^{13} level-of-accuracy over 24-hour observation intervals. The time and frequency outputs are coherent after initial GPS synchronization, and synchronization is maintained via 20-bit DAC frequency control, rather than phase stepping, to provide the ultimate in short-term stability.

Upon loss of the GPS signals, the RTM3204 (with a Rubidium option installed) operates in an intelligent hold-over mode, continuing to correct the oscillator as needed to hold the accumulated time error under 5 microseconds for up to 24 hours. With the High-Stability Rubidium option the accumulated time error can be held to under 1 microsecond for 24 hours.

Standard Features

In addition to sourcing a precision 1 PPS timing reference this unit provides a 10 MPPS and a user-selectable timecode output. Timecode choices are IRIG-B, NASA-36 or 2137. The RTM3204 can be managed via the network port or an RS-232 port.

Secure Network Interface

An ethernet port is provided as a standard feature of the RTM3204 with a wide variety of network protocols including TELNET, FTP, DHCP, SSH and SNMP with Enterprise MIB. The incorporation of SNMP v3 and SSH provides the ultimate in network security and allows the safe performance of monitoring and maintenance activities. Security-conscious users can also disable any of the risky protocols such as Telnet. In addition, access via SSH, SNMP and Telnet can be restricted to specific hosts.