Time and Frequency
Tactical GPS Time & Frequency System
Model: 8836S

Application - Defense (Military) • SatCom • Wireless

- Mobile Radio Synchronization
- Secured Communications

Features

- GPS Disciplined Rubidium Oscillator
- Internal or External GPS Reference
- Internal SAASM GB-GRAM GPS Receiver
- Remote Control and Monitor through Ethernet or RS-232
- Network Time Server
- Outputs 10 MHz, 5 MHz, 1 PPS
- Ground Mobile Operating Environment

Options

- L1 C/A Code GPS Receiver
- Low Phase Noise 5 MHZ or 10 MHZ Cleanup Oscillator
- Low g-Sensitivity 10 MHz DOXCO in Place of Rubidium Oscillator (Optional)
- 1 Hz to 50 MHz Frequency Synthesizer 1 Hz steps

General Description:

The Model 8836S is a tactical GPS Time and Frequency System that incorporates a Selective Availability Anti-Spoofing Module (SAASM) Ground-Based GPS Receiver Module (GB-GRAM) or optional C/A Code GPS receiver, rubidium oscillator, time and frequency signal generation and control/status circuitry in a compact ruggedized enclosure. Standard outputs include 1PPS, 10 MHz, 5MHz and Network Time Protocol *(NTP) Optional outputs include a low phase noise 5 MHz or 10 MHz reference frequency, and a frequency synthesized 1 Hz to 50 MHz output in 1 Hz steps

The 8836S can be synchronized from the internal GPS receiver or from an external GPS 1PPS. Selection of the GPS reference source is automatic, with the internal GPS being the primary reference and switching to the external GPS in the absence of a valid external GPS 1PPS. Electronic override selection of the external or internal GPS is also provided.

When tracking GPS with a TFOM of 3 or better, the discipline algorithm steers the internal oscillator providing 1 PPS time accuracy of ‹ 30 nS to UTC and long term frequency stability of ‹ 1E-12 averaged over 24 hours. In the absence of GPS the unit transitions into holdover mode providing an accumulated time drift of ‹ ± 2 µS in 24 hours.

An Ethernet interface provides NTP, SNMP v1,v2 and v3, SSH, syslog, SCP and telnet. An RS-232 I/O interface is also provided for control and status.

Three GPS Standard Serial Interface Protocol (GSSIP) ports are provided from the GB-GRAM. Two ports are configured to automatically output ICD-GPS-153 messages and the third port is configured to automatically output NMEA-0183 messages.

A Have Quick TOD serial time code and external 1 PPS input are provided as an external time reference from a PLGR or DAGR.

Notice: U.S. Government policy restricts the sale of Precise Position Service (PPS) equipment to those authorized by the Department of Defense. Non-U.S. authorized users must purchase PPS equipment through the Foreign Military Sales (FMS) process.

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