

GPS Time Distribution System (ENTA-R)

Features

- Versatile GPS Master Clock with Dual External GPS reference inputs
- Dual 10/100BaseT Network interface with Network Time Protocol (NTP)
- Multiple Have Quick Time Code Outputs (single ended and differential)
- Multiple 1PPS outputs (single ended and differential)
- High Stability Ovenized oscillator is standard
- Ruggedized for Shipboard Usage
- Hot-swappable Dual Redundant Power-Supplies



Introducing the ENTA-R, a ruggedized version of Brandywine's popular ENTA II, this unit is capable of delivering HaveQuick + 1PPS to a multitude of outputs. The ENTA-R is a full function Master Clock that is designed to provide a full suite of Have Quick time code and 1PPS outputs, as well as NTP, fully compliant with NENA requirements for a Master Clock.

The ENTA-R provides four single-ended outputs that are either Have Quick or 1PPS, as well as 12 differential outputs via RS422.

The unit uses dual hot-swappable power supplies for high-reliability operation. A built-in web server provides user-friendly controls for configuring the unit. All outputs include signal level monitors to enable rapid fault-detection and isolation.

Specifications

Inputs

Reference inputs: 1PPS/Have Quick:
 Format: per ICD-GPS-060
 Electrical: Single-Ended or User-selectable
 RS422
 Have Quick Connector: SMA (SE) DB15M (Differential)

1PPS SMA (SE) DB15M
 (Differential)

Control and display functions

Dual independent 10/100 Base-T ethernet ports with
 Integrated web server control
 SNMP V1 control
 HTTP web server

Display
 Front panel display of HH:MM:SS (LED colons
 indicate GPS lock status)

Holdover
 Fault LED
 GPS1 selected
 GPS2 selected

System Specifications

Accuracy

Time accuracy: GPS 1PPS < 30 ns

Holdover < 1 us / hour(std)
 <1us/day (optional)Rb Oscillator

Physical

Size: 19" rack-mount 1U high (1.75") 14" deep
 Weight: 5lbs nominal

Compliances and Interface Standards

NTP Version 3 [RFC 1305]
 SNTP compatible (RFC 2030)
 SNMP
 Ethernet / IEEE802.3
 UDP/IP
 ICMP

Outputs

All outputs include activity monitor

Single-Ended Output

No. of outputs: 4
 Connector: SMA
 User-Selectable 1PPS or Have Quick output

1PPS characteristics
 5V or 10V into 50 ohm, user-selectable
 Pulse width 20 microseconds

Have quick characteristics
 5V or 2.5V into 50 ohm, user-selectable
 Format per ICD-GPS-060

RS422 outputs

No of outputs: 12
 Connector Type: DB9 F
 User-Selectable 1PPS or Have Quick output

Alarm output

Form C relay to indicate unit fault.
 Link settings for 5V active hi or active low.
 Connector: Terminal block

Environmental Conditions

Temperature

Operating -20 to +50C
 Storage -55 to +85C

Humidity Up to 95% RH (non-condensing)

Power: 85-264VAC (50/60Hz)
 40W max
 MS3102A-10SL-3P connector with switch
 and fuse
 Fuse 1A 250V

Altitude: 20,000 ft

EMC: MIL-STD-461F, CE101, CE102, CS114,
 CS116, RE101, RE102, RS101, RS103,

Reliability:

MTBF: 3,964,600 per MIL-HBK 217C