

TDU -310

Multi Channel Time Distribution Unit



Features:

- ❑ **Dual inputs with automatic switchover**
- ❑ **10 individually buffered outputs of 3 signal outputs**
- ❑ **Have Quick, BCD and 1PPS outputs compliant with ICD-GPS-060**

The TDU-310 is a high output count, high performance time signal distribution amplifier. It is specifically designed to distribute the precise time code signals generated by military GPS receivers compliant with ICD-GPS-060

The TDU-310 provides 10 output channels of each of three signals – 1PPS, Have Quick and 50 bit/sec BCD time code.

Two independent input references are supported, with fault monitoring and switchover to a backup reference if the primary source fails. Manual override of source selection is possible via a front panel mounted switch

The 1PPS output pulse width is set to 20 microseconds, independent of the input pulse width.

The 1PPS outputs are individually selectable for either a low or 50 ohm source impedance drive into a 50 ohm load.

BCD time code outputs are available with either RS232 (single ended) or RS422 (differential) output buffers.

Optical isolation between the reference sources and the TDU310 output buffers is optionally available.

The TDU-310 is configured as a 1 U 19" rack mount unit.

Power supply options include 115/230 VAC, 48, 24 or 12 VDC.

Related Brandywine Products

PTS:

High performance GPS disciplined frequency standard with Network interface.

GPS8 :

Standalone GPS Time and Frequency System

FTSU-100:

Distribution amplifier with up to 2 output frequencies, time code and 1PPS. Built in low noise OCXO for hitless switching

SYNCCLOCK board level products:

Advanced board level GPS and IRIG clocks for VME, PCI, ISA PMC and PC/104 bus Displays

NTA-100GM NTP Time Server

A GPS based network time protocol server



TDU-310 SPECIFICATIONS

Outputs

1PPS
 No of Outputs 10
 Isolation Independently Buffered
 Amplitude 10V_{0-Peak} into 50 ohm or
 5V_{0-Peak} into 50 ohm load
 Output protection Short Circuit proof
 Rise time <20ns
 Delay <60ns, <100ns with opto-isolator
 Jitter <2ns
 Connector BNC

Controls and Indicators

Reference Select Indicators Select A, B or Automatic Power
 Reference A selected
 Reference A available
 Reference B selected
 Reference B available

Have Quick Time Code

No of Outputs 10
 Isolation Independently Buffered
 Amplitude 5V_{0-Peak}
 Output protection Short Circuit proof
 Output Impedance Optional 50 ohm
 Rise time <20ns
 Connector BNC

Environmental

Temperature Instrument: -10 to +50 °C
 Humidity 95% non condensing
 Power 110/230VAC
 Optional 12 VDC, 24VDC, -48VDC
 Dimensions 19" rack mount
 1.75" (1U) height, 10 " depth
 Weight 11 lb. typical

BCD Time Code

No of Outputs 10
 Isolation Independently Buffered
 Amplitude RS232 compatible - standard
 Mark +6 +/- 2V
 Space -6 +/- 2V
 Amplitude RS422 compatible - optional
 0-5V differential
 Output protection Short Circuit proof
 Propagation delay <2microseconds
 Connector DB25F

Ordering Information:

TDU -310	-AA	-BB	-CC
Opti on	Input Isolation	BCD output levels	Power
00	Optical	RS232	115 /230 VAC
01	None	RS422	24 VDC
02			-48 VDC
03			12 VDC

Inputs

Input Signals 1PPS, BCD, Have Quick Time code
 in accordance with ICD-GPS-060
 No of input references 2
 Connector BNC

e.g. TDU-310-00-00-00 is Standard Unit with optical isolation, BCD time code outputs at RS232 levels, 115/230 VAC power.

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