

TDU-310

Multi Channel Time Distribution Unit

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.



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

Key Benefits

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.

TDU-310 Specifications

Outputs

1PPS

No of Outputs	10
Isolation	Independently Buffered
Amplitude	10V0-Peak into 50 ohm or 5V0-Peak into 50 ohm load
Output protection	Short Circuit proof
Rise time	<20ns
Delay	<60ns, <100ns with opto-isolator
Jitter	<2ns
Connector	BNC

Have Quick Time Code

No of Outputs	10
Isolation	Independently Buffered
Amplitude	5V0-Peak
Output protection	Short Circuit proof
Output Impedance	Optional 50 ohm
Rise time	<20ns
Connector	BNC

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

Inputs

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

Controls and Indicators

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

Environmental / Physical

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

Ordering Information

TDU-310	-AA	-BB	-CC
Options	Input Isolation	BCD Output Levels	Power
00	Optical	RS232	115/230VAC
01	None	RS422	24VDC
02			-48VDC
03			12VDC

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