



PTPv2/Time Code Synchronized Generator

Model TT-101 TimeTap

**Features:**

- Synchronizes to PTPv2
- Synchronizes to IRIG Time Codes
- AM and DCLS Time Code Outputs
- RJ-45 100base-T port for PTPv2
- Precise 1PPS Output
- N1 Rate Synthesizer
- 1PPS Time Interval Measurement
- LED Status Indicator
- LCD Display
- Rugged / Portable case
- Windows GUI for Setup, Control and Time Interval Measurement Display

General Product Description

The Model TT-101 PTP/Time Code Synchronized Generator is a low cost high performance unit that provides many features not often found on higher cost units. The TimeTap is able to synchronize to time derived from PTP two-step time packets. When operated in the IRIG mode, time and rates are precisely referenced to the IRIG generating source. In addition to IRIG B, A, G and NASA36 time code outputs, time is available on the USB port.

The Model TT-101 TimeTap is ideal for providing time and rates for applications requiring various time codes utilizing PTP synchronization or time code input. The TimeTap can provide the drive for large format wall and console time displays. This unit is ideal for use with the TTGM-101 for PTP synchronization over a network as well as time code synchronization. Computer synchronization can be accomplished with optional Domain Time II software.

The TimeTap will synchronize to the selected reference to less than 1 microsecond and supply a variety of timing outputs to the user. This unit can provide local or daylight savings time with settable timing offsets. The TimeTap can also be synchronized to a 1PPS input with time set manually.

For additional information contact your ORCA Representative at 949-361-0212 or via email at sales@orcatechnologies.com www.orcatechnologies.com

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TT-101 PTP/Time Code Synchronized Generator

Product Specifications

General Specifications

- Timing Accuracy:
 - < 1 microsecond to DCLS Time Code or 1PPS
 - < 5 microseconds to AM Time Code reference
- Internal Oscillator: 50MHz Crystal Oscillator
50PPM, DDS steering

Standard Inputs

- AM Serial Time Code Input
 - Format: IRIG A, B, G; NASA36
 - Amplitude: 1-6 Vpp into 50 ohms
 - Connector: SMA labeled CODE IN
- DC Level Shift (DCLS) Serial Time Code Input
 - Specification: IRIG A, B, G; NASA36
 - Amplitude: TTL levels
 - Connector: DB-15 multi-pin, pin 9
- 1PPS Reference Input
 - Amplitude: TTL levels
 - Connector: DB-15 multi-pin, pin 9
- 1PPS Time Interval Input
 - Amplitude: TTL levels
 - Connector: DB-15 multi-pin, pin 7

Standard Outputs

- AM Serial Time Code Output
 - Format: IRIG A, B, G; NASA36
 - Amplitude: 3 Vpp into 50 ohms
 - Ratio: factory set to 3:1
 - Connector: SMA labeled CODE OUT
- DC Level Shift (DCLS) Serial Time Code Output
 - Format: IRIG A, B, G; NASA36
 - Amplitude: 3.3V logic
 - Connector: DB-15 multi-pin, pin 10
- 1PPS Output
 - Logic Level: 3.3V logic into 50 ohms
 - Timing: Positive edge on time
 - Duty Cycle: 50%
 - Connector: DB-15 multi-pin, pin 5
- N1 Rate Synthesizer x2 Outputs
 - Logic Level: 3.3V logic
 - 0 to 16,777,215 PPS with 1PPS steps
 - Timing: Locked to the internal clock
 - Duty Cycle: 50%
 - Connector: DB-15 multi-pin, pins 3 and 6

- Selectable Output
 - 3.3V Logic, 1 of 6 signals:
Buffered DC Input, 1PPS 50%, 1PPS 20us,
N1(A), N1(B), DCLS Time Code
 - Connector: DB-15 multi-pin, pin 8
- USB Port
 - Output Data: Time and Status
 - FTDI Virtual COM Port
 - Connector: Micro USB
 - Supplies 5V unit power, CLI I/O,
Time once per second
- DC Power Level: 5 Vdc < 500 mA
powered through the USB Bus or DB-15 multi-pin
- AC Power via AC to DC converter module

Environmental/Mechanical

- Physical Dimensions
 - Size: 4.72" length X 4.07" width X 1.20" height
 - Weight: 1 pound
 - LCD Display: 2 line X 20 character - backlit
 - Operating Temperature: 0 to 50 degrees C
 - Storage Temperature: -40 to +80 degrees C
 - Humidity: To 95% non-condensing

Options include

- Breakout cable for DB-15 multi-pin connector

Rear Panel



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(Specifications Subject to Change—161101)