

3207A-TC GlobalTyme™ 2

Count UP/DOWN Time Code Generator



- Time Codes Locked to GPS
- Real time IRIG B, NASA 36, AM, DCLS
- IRIG A, G, and H DCLS
- Count up / Count Down Capability
- Multimode 850nm optical o/p
- Single mode 1310nm optical o/p
- Accuracy (1PPS): <20ns
- 100/10 Base T Ethernet
- Precision phase measurement (1 nano sec)
- NTP v4
- Monitor/Control i/f
 - Web Browser, Telnet, Serial
- Alarm indicator and output
- GNS antenna and cable included
- Available in 1U and 2U

The **ptf 3207A-TC** is purpose designed to provide multiple time code formats for a wide variety of timing requirements including Range Timing, launch count down, general purpose event triggering and many others.

Multiple forms of time code are available including IRIG B 123 (amplitude modulated), IRIG B 000 (pulse width modulated), NASA 36 amplitude modulated or pulse width modulated and IRIG A, G and H pulse width modulated.

If desired the instrument can be used to convert an incoming IRIG B (AM or DCLS) signal to a different time code format.

The unit includes a unique encoding system to allow simultaneous optical transmission of different time codes, including both count up and count down, in one optical fiber. The transmitted signals are received by the **ptf 1211A** which complements the ptf 3207A-TC by receiving the

optical signals, and distributing them locally in a remote location.

Generated time codes can be synchronized to UTC with an accuracy of <20ns, or can be locked to another incoming time code, or if desired can be completely free running.

In addition to the 1 pulse per second and time code outputs, the instrument can provide a wide range of output frequencies, locked to the internal GNS time base.

An optional Precision Phase measurement delivers a 1 nano second resolution for measuring the phase of an external 1PPS relative to UTC. For timing, synchronization and time keeping, the unit provides optional NTP(v4).

The monitoring /control interface gives both RS232 serial and 100/10 BaseT Ethernet (RJ 45) with protocols suited to different needs including Telnet, and a browser driven web interface.

Specifications

GPS Rx 34 parallel channel

Front Panel Display Vacuum Fluorescent

RF Outputs
10MHz sine wave 1V rms into 50 ohms

Digital Outputs
1PPS 5V CMOS into 50 ohms
Prog 5V CMOS into 50 ohms
Pulse Rates(opt)
(1PPS to 10MPPS)

Timing Outputs
IRIG B(am) 3v p-p into 600 ohm
IRIG B(DCLS) 5V into 50 ohm
IEEE 1344 compliant
NASA 36 (AM or DCLS)
Optical multimode (850nm)
Optical single mode (1310nm)

100/10 Ethernet i/f RJ-45 Connector
Telnet monitoring/configuration/control
HTTP configuration control
DHCP TCP/IP auto configuration
NTPv4, TP(TCP/UDP, RFC 868)(optional)

Serial Interface
RS232 Control/Monitor(DB9)
RS232(opt) Time Output/NMEA(DB9)

Accuracy(24hr)
10MHz <1E-12 (Locked to GPS)
1PPS <20ns wrt UTC (1 sigma)
NTP <10ms (typical)

Stability (Allan Deviation)

| | OCXO | ULN | RUB |
|------|--------|-------|-------|
| 1s | <3E-11 | 3E-11 | 2E-11 |
| 10s | <2E-11 | 2E-11 | 8E-12 |
| 100s | <2E-11 | 3E-12 | 1E-12 |

Aging per day (Holdover), micro seconds

| | OCXO | RUB |
|------|------|------|
| 24HR | <10 | <0.2 |

Front Panel Indicators

Fault Amber LED
Lock Green LED
Power Green LED

Environmental/Physical

Temperature

Operating Unit -25 to +55 deg C
Ant -40 to +85 deg C
Storage Unit -20 to +70 deg C
Ant -40 to 100 deg C
Humidity unit 0-95% RH
(non-condensing)
Ant Mil-STD-810E

Power Requirements

AC input (+/-15%) 90-264 VAC
DC input(opt) 18V to 72V DC

Dimensions

3207A 1Ux19"x16"
2Ux19"x16"
Relative Humidity 0-95% (non-cond.)