TESCOM

TiemPo GPS Network Clocks

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TiemPo 6400A

The TiemPo 6400A is a fully integrated and modular system for use in advanced Next Generation Network NTP packet synchronization applications. The TiemPo 6400A system also provides flexible and cost effective solutions to Stratum 1/PRC, Stratum 2E, 2/TNC, and Stratum 3E/LNC digital and packet transmission timing and synchronization applications.

The TiemPo 6400A is designed to provide timing for DACS, SONET equipment, digital switches, VoIP media gateways, soft switches, DWDM equipment and vocoders.

Precision Timing For providing precise time through ethernet packet networks, a low cost integrated SNTP solution can be ordered. The optional DigiTimeTM module provides Precision Time Protocol (PTP-1EEE-1588v2) to support the most demanding time-stamping requirements. The installed DigiTime module can take accuracy to UTC down to the low single digit microsecond range.

An optional GPS Stratum 1 receiver module is available for ultra precise network timing requirements, and two can be installed per system for complete redundancy.

The TiemPo 6400A offers internal system monitoring and performance measurement combined with remote and local reporting in standard TL1 format or accessed with a new web browser-based Graphical User Interface (GUI).

The system can be utilized in either DS1 or E1 environments. Simply select the appropriate software menu selections, port-by-port. The TiemPo 6400A circuit card

provisioning settings and operating functions are software generated, affording both speed and flexibility in system application changes, testing, and monitoring.

If your GPS antenna has to be located farther than 500 feet from the TiemPo 6400A system, consider the optional DUC GPS Antenna Extender Kit to avoid the hassles and cost of running expensive special low loss cable.

Outputs

- Each output card provides 8 outputs

- Master shelf can accommodate 8 output cards equating to 64 potential outputs per Master shelf, and those can be incorporated into 1:1 protected outputs via an external Y cable.

-(Optional) Expansion Shelf provides up to 128 additional outputs (or 64 1:1 protected), for a total of 192 outputs (96 1:1 protected).

-A total of 4 expansion shelves can be combined to provide up to 576 total outputs (288 1:1 protected).

The available output card options include a universal output card supplying DS1, E1, CC and 2.048 Square Wave on a single card, programmable port-by-port.
Other cards include IRIG-B, 5/10 MHz, Time Code with outputs of 1 PPS, 1PPM and 1PPH, 1.544 MHz/ 8KHz RS-422, and a Retiming Timing Insertion Unit (RTIU) that will re-time 2 DS1s per card to Stratum standards.

TiemPo 6400C Mini

Why a Mini-Version Clock?

We have had multiple requests for a smaller footprint version of our popular 19-inch TiemPo 6400A platform. We were listening, and we now offer the 8.5-inch wide TiemPo 6400C Mini , utilizing the same antenna, management, output cards and alarm features. The TiemPo 6400C Mini features two output slots, offering a wide range of output signals. Most cards provide 8 outputs, configurable by port for a range of output types. An inboard NTP server provides reliable, accurate time stamps via Ethernet.

Best in Class

Management:

-Ethernet internal web server GUI
-Ethernet Telnet TL1
-Serial TL

Dual Power Connections

Discrete Alarm Connections

Dedicated Fuse Alarms

Mounting: Bottom arrangement or

19/23 Inch Rack

Wide range output types - hot swappable in field

Can mix 6400C and full 6400 chassis in same networks (comparison picture of both units below)

Can serve as mini-clock distributor (w/T1/E1/CC inputs) for remote use where a full size clock is not economical.


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TiemPo 6400C
FREE RUN
TRACK
HOLD
CLOCK STATUS
OUTPUT
CRIT
MAJ
MIN
FUSE
ALARM STATUS
ACO
LOCAL
SERIAL PORT
STATUS
A
B
RF REF
1
2
3
4
5
INPUT STATUS


OUTPUT T1/E1/CC/SQ
6413
BFA AFA
POWER B
POWER A
FUSE A 2A
FUSE B 2A
GPS IN
INPUT
MAJ VIS
RIT AUD
CRIT VIS
MAJ AUD
MIN VIS
MIN AUD
ETH
NTP
ToP
ALARM OUT

TiemPo 6400 N Nano

Having limited rack space doesn't mean sacrifying performance.The cost-effective TiemPro 6400N Nano GPS timing clock provides similar functionality as our full-size TiemPo 6400A but is just 1.75" (44.45 mm) high (1 rack unit) by 8.5" (216 mm) wide. Designed for small remote sites or field cabinets in rugged environments, the TiemPo 6400N can withstand wide temperature ranges and provides the outputs necessary for transitioning to packet-based networks.

The TiemPo 6400N universal output cards provide 4 DS1 outputs, configurable by the port as T1, E1, Composite Clock (CC) or 2.048 MHz Square Wave, along with an optional NTP server, which provides reliable, accurate time stamps via Ethernet.

Management options include Ethernet internal web server GUI, Ethernet Telnet TL1 or Serial TL1. Dual power and discrete alarm connections provide needed flexibility to meet various timing and synchronization applications.

Ideal for field cabinets and "rough service" locations, our hardened GPS clocks have extended temperature ranges and just the right number of outputs for companies transitioning to packet-based networks.

TiemPo 6400N Nano is particularly well suited for companies looking for cost-effective solutions to support small, remote sites.

Key Features

GPS/Stratum 1 Primary Reference Clock (PRC) with Stratum 3E/Local Node Clock (LNC) holdover, or as Clock Distributor only

Synchronization Status Messages (SSM) meet Bellcore GR-378 and ANSI T1X1.3 TR-33

Fully Network Equipment-Building System (NEBS) Level 3 compliant: GR 63, 78, 1089 CORE, 19 in. ANSI or ETSI rack mounting. (23 in. optional)

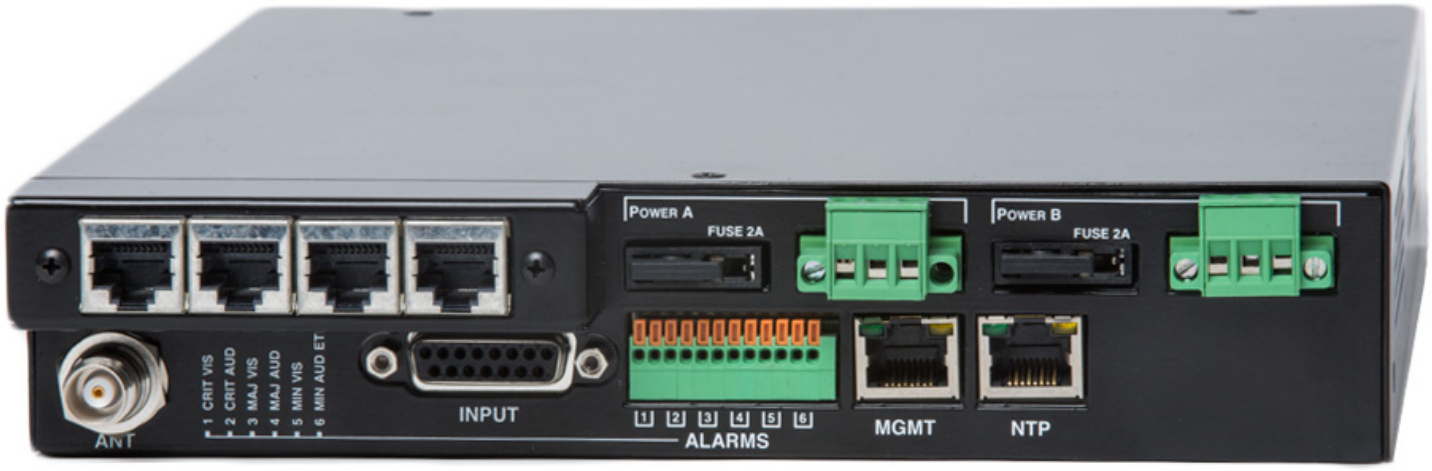
Wide Operating Temperature range of -25°C to +50°C

Ethernet TCP/IP and craft RS-232 ports for remote system configuration and reporting, with optional SNMP (v2c).

DProTM Graphical User Interface

SNTPv4 available for Ethernet Network Timing

Optional kits: GPS Ant Kit and Lightning Protection Kit



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