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Palisade NTP Synchronization Kit

Reliable and Precise Timing for your Network

Applications

- **E-commerce**
- **Data streaming**
- **Enterprise networks**
- **Network security**
- **Distributed systems**
- **Event time-tagging**

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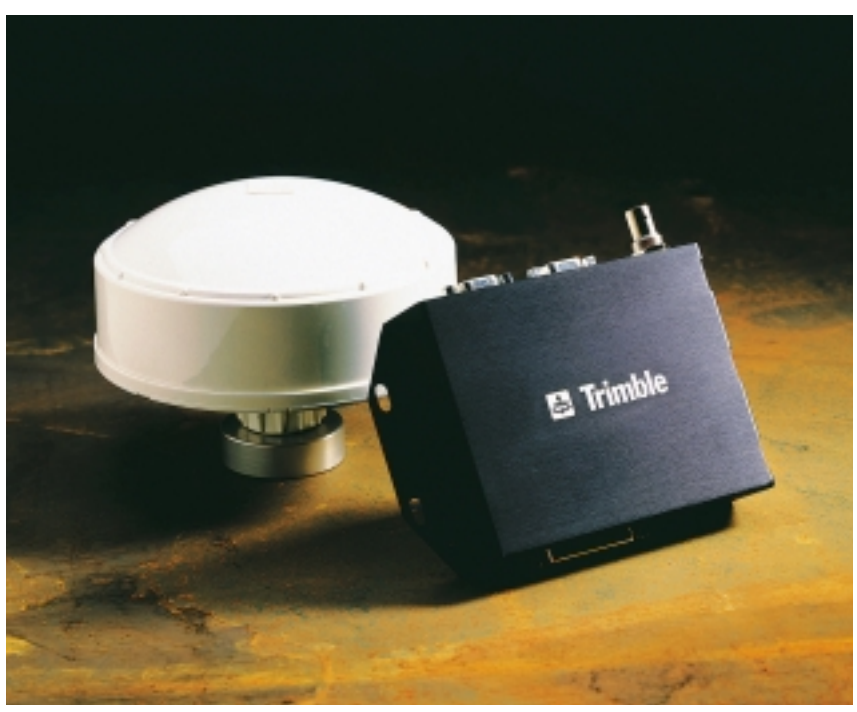
Trimble's Palisade™ NTP Synchronization Kit offers global time synchronization for any digital system. The Palisade NTP synchronizes your network by harnessing the reliability and accuracy of GPS satellite system.

The jam-resistant Palisade smart antenna is accurate to within ±100 ns of UTC. Palisade NTP time transfer allows the host computer to precisely calibrate your system clock to UTC, without degradation due to system load. Your network is synchronized with stratum one precision to a global standard available anywhere. As systems grow more complex and businesses expand worldwide, the Palisade NTP keeps your network in perfect sync.

The Palisade NTP Synchronization Kit works in conjunction with Network Time Protocol (NTP), the leading standard for time distribution over networks. The Palisade smart antenna and NTP create a low-cost solution for your network synchronization requirements.

Benefits of Synchronization

Any network can benefit from an independent precision time source. For example, in software development and file-sharing environments all records are time-stamped accurate to a global time source, ensuring integrity of the most recent copy.



Accurate time stamps in system log files can be used to effectively track the source of network failures. By capturing an accurate history of where the error originated, an administrator can use time stamps to trace back to the exact point of failure.

Ease of Integration

The Palisade NTP Synchronization Kit can be bundled with new server installations, and the modular design also facilitates integration into existing network infrastructure. Precision time transfer now only requires a single standard RS-232 on your PC's serial port. The highly compact Synchronization Interface Module combines all power and data connections into one compact unit.

Getting Started

The Synchronization Kit contains everything you need to transform your system into a precision time source. Once NTP is installed on your system, simply connect the Palisade NTP to your server's serial port.

The Palisade NTP's exceptional performance shatters the myth of high-priced network synchronization. The Palisade NTP Synchronization Kit: maximum efficiency for minimum cost.

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Palisade NTP Synchronization Kit

Reliable and Precise Timing for your Network

DESCRIPTION

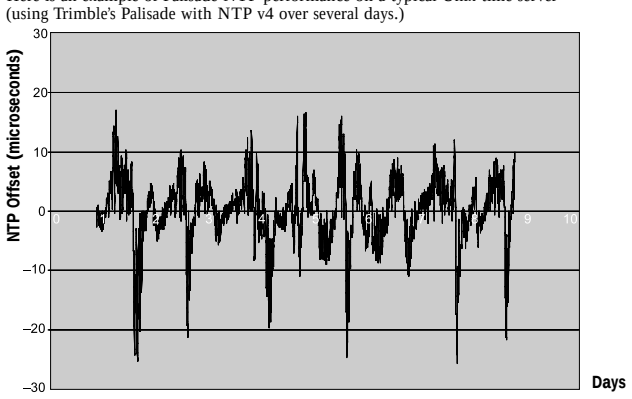
The Palisade NTP Synchronization Kit contains everything you need to transform your system into a time server:

- The Palisade Smart Antenna is an 8-channel GPS receiver and antenna capable of using over-determined time solutions to generate a timing pulse (PPS) and event time stamps which are synchronized to UTC within 100 nanoseconds.
- The Synchronization Interface Module (SIM) is CE and FCC Class B approved, and provides the following user ports:
  - Bi-directional RS-232 I/O interface to Palisade's RS-422 Control I/O Port
  - RS-232 time transfer interface supporting TSIP and NMEA protocols
  - 5 V TTL PPS, 1 microsecond wide, 50 Ω, synchronized to UTC ±100 ns (BNC)
- 100-foot (30 m) interface cable
- Power supply and AC power cord

PERFORMANCE

The timing pulse (PPS) and event time stamps are synchronized to UTC within 100 nanoseconds.

Here is an example of Palisade NTP performance on a typical Unix time server (using Trimble's Palisade with NTP v4 over several days.)



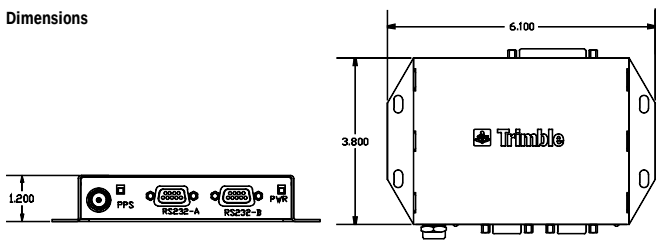
PHYSICAL CHARACTERISTICS

Palisade Smart Antenna

Dimensions	5.8″ W × 3.9″ H (147 mm × 100 mm)
Weight	13.4 oz (0.38 kg)
Connector	12-pin round, waterproof connector

Synchronization Interface Hub

Dimensions



ENVIRONMENTAL SPECIFICATIONS

Palisade Smart Antenna

Operating Temperature	–30°C to +70°C
Storage Temperature	–55°C to +100°C

Synchronization Interface Module

Operating Temperature	0°C to 70°C (Indoor use only)

ELECTRICAL REQUIREMENTS

Power Requirements	12–32 V, 3.5 Watts
Wall power supply	UL-Rated, 100–240 V AC input, 24 V output, 50–60 Hz

CONNECTIONS

Synchronization Interface Module

Power Input	Barrel Connector 2.5 mm 12–32 V DC (24 standard), UL-Rated

NTP AVAILABILITY / OPERATING SYSTEMS

HP UX, Linux, Sun OS/Solaris, Windows NT
Please see the Trimble website for updates and additions to this list:
http://www.trimble.com/oem/ntp

ORDERING INFORMATION

Palisade NTP Synchronization Kit

Palisade Smart Antenna, 100-foot interface cable, power supply, Synchronization Interface Module and User's Guide. **Part Number 38078-00**

Palisade Smart Antenna, power supply, Synchronization Interface Module, and User's Guide. NO interface cable included – see below for options. **Part Number 38078-50**

Other Accessories:

Interface Cables

User Kit Cables (12-pin/DB-25 connectors installed)

100´	**Part Number 37653**
200´	**Part Number 39227**

Standard (12-pin installed, unterminated on the host end)

50´	**Part Number 23098**
100´	**Part Number 23099**
200´	**Part Number 24017**
400´	**Part Number 24260**
User's Guide	**Part Number 39139-00**

For detailed specifications on the Palisade Smart Antenna, please refer to its datasheet at www.trimble.com

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