

Features

Stand-Alone Time Server
Network Time Protocol (NTP) Support
Ethernet 10BaseT Interface
Independent Time Acquisition from GPS Satellite
Telnet and RS-232 Remote Interface
Serial Sysplex Timer Output
Network Management Tools Include:

- Simple Network Management Protocol (SNMP) with Custom MIB II Extension
- Hyper Text Transfer Protocol (HTTP) to Custom HTML Status Page
- Supports Dynamic Host Configuration Protocol (DHCP)
- Bootstrap Protocol (BOOTP)
- MD5 Access Authentication for Security

Furnished With GPS Antenna and 50-foot Cable
Rack Mount, 1U Height



TIME CODE PRODUCTS

General, Airborne and Network

TymServe 2100LD Network Time Server



Overview

The TymServe 2100LD Network Time Server addresses the need for an inexpensive, local source of international standard time within the firewall of Enterprise Network installations. The TymServe 2100LD acquires time from the Global Positioning System, GPS, orbital clock constellation, and distributes this time to network workstations using the TCP/IP Network Time Protocol, NTP. Time Synchronization over the network is typically 1 to 5 milliseconds.

The TymServe 2100LD is a complete Stratum one time server in a convenient, self-contained, 1U height, rack mountable configuration. Connections consist of a

GPS antenna (supplied) port, ethernet 10BaseT network port and RS-232 port for configuration.

Remote resource management is an important requirement within Enterprise Networks which is addressed by multiple protocols, in addition to NTP, supported by the TymServe 2100LD. These network management tools include Simple Network Management Protocol (SNMP), HTML Status Page via HTTP, TELNET for remote access, Dynamic Host Configuration Protocol (DHCP), and Bootstrap Protocol (BOOTP).

Security of time synchronization operations is enhanced with MD5 Authentication. The TymServe 2100LD can be put in an Authenticate Only Mode or Standard Mode. In the Authenticate Only Mode, only time request packets for authenticated clients are serviced. Clients can verify authenticity of time service packets returned by the TymServe 2100LD with its supplied MD5 authentication.

The TymServe 2100LD is a valuable Electronic Commerce tool. Within the security firewall of an enterprise LAN, time stamps, accurate to UTC time within 1 to 5 milliseconds can be acquired and applied to transactions and electronic documents.



Datum

Timing, Test & Measurement

Specifications



ELECTRICAL SPECIFICATIONS

Input/Output Connections

Network	10BaseT Ethernet	
Serial Port A	RS-232 / DB9	DTE, Sysplex Timer
Serial Port B	RS-232 / DB9	DCE, Configuration and status

Front Panel

Front Panel Status	LED, 'Locked', 'Tracking', 'Power'
Front Panel Display	LCD, 2x40 characters

Timing Accuracy

Network	1-10 milliseconds, typical
GPS Receiver	< 2 microsecond, relative to UTC
Internal Clock	< 10 microseconds (relative to UTC, GPS tracking)

GPS Input

GPS Receiver	Eight (8) channel, C/A code
--------------	-----------------------------

NTP Client Software

<http://www.eecis.udel.edu/~ntp/>
<ftp://ftp.udel.edu/pub/ntp>

If synchronization of local peripherals with time code, 1 PPS, or 10 MHz signals is required, please refer to the TymServe 2100 data sheet.

ENVIRONMENTAL & PHYSICAL SPECIFICATIONS

Power Requirements 85-264 VAC, 48-440 Hz, 20 W

Dimensions

	Inches	Cm
Height	1.75	4.45
Width	17	43.18
Depth	9.5	24.13
Weight	<10 lbs	<4.5 kg

Operating Temp

0° to 50° C

Relative Humidity

0 to 95% (non-condensing)

GPS Antenna

	Inches	Cm
Height	2.94	7.47
Diameter	3.04	7.72
Antenna Operating Temp.	-40° to +85° C	
Acquisition	<5 minutes	
Cable Type	50 ft; 15.25cm / RG58	

Supported Network Features

TCP/IP
NTPv2 (RFC 1119)
NTPv3 (RFC 1305)
& NTPv4 (RFC 2030)
SNTP (RFC 1361)
Daytime Protocol (RFC 867)
Time Protocol (RFC 868)
SNMPv1 w/ Custom MIB II Extension
MD5 Authentication (NTP)
BOOTP, DHCP & TFTP
Telnet
HTTP/HTML Status Page

Options	Option P/N
100-ft Belden 9913 Antenna Cable (N/N)	TS Opt 20A
AC200 - 200' Belden 9913 Antenna Cable	TS Opt 20B
AC300 - 300' Belden 9913 Antenna Cable	TS Opt 20C
AC400 - 400' Belden 9913 Antenna Cable	TS Opt 20D
AC500 - 500' Belden 9913 Antenna Cable	TS Opt 20E
LTNG1 - Lightning Arrestor + 25 ft. Cable	TS Opt 23A
LTNG2 - Lightning Arrestor + 50 ft. Cable	TS Opt 23B
BIAS - Bias-T Filter (DC Block - factory installed)	TS Opt 24
Rack Mount Slides	TS Opt 25
HGANT - High-Gain Antenna	TS Opt 26B



Specifications subject to change without notice.