FEI-Zyfer

GPS Time and Frequency Systems

NTPSync II™

NTPSync II Model 383

The NTPSync II™ is a Stratum-1 standalone network time server which provides a high-accuracy time reference to IP networks via the Network Time Protocol (NTP). It synchronizes systems that are either NTP or SNTP compatible and uses a built-in GPS receiver as its reference time source. The NTPSync II can also be utilized as a precision 1PPS/10MHz time and frequency reference.

The NTPSync II is composed of a 6-channel GPS C/A-code receiver, a single-board computer, a high performance oscillator and power supply. The highly stable and precise oscillator allows the NTPSync II to continue to provide accurate time and frequency by bridging a temporary loss of GPS reception. In addition to NTP, the NTPSync II supports other network services like SSH, HTTP(S), and SNMP traps. The system supports both IPv4 and IPv6 network protocols.

Configuration of the NTPSync II is accomplished via menus on the backlit LCD display and keypad in the front panel, or remotely using a web browser or Telnet. RS-232 ports on the front and rear panels provide additional monitoring and configuration options. Front panel USB connector allows for easy software updates and configuration upload / download. Alarms are available via automatic emails, Windows Pop-up messages, SNMP traps, and an Alarm relay output connector in the rear panel.

Rear Panel View

2 10/100 Ethernet Ports | 1PPS / 10 MHz | Antenna, Alarm and RS-232 Ports | AC Power

System Features:

- **NTP and SNTP:**
  NTP version 4
  SNTP version 4
- **3 RS-232 ports:**
  Configure / monitor
- **USB connector:**
  Software update and Configuration upload / download
- **10/100 Ethernet:**
  IPv4, IPv6
  2 ports
- **Outputs:**
  1PPS / 10MHz
  10/100 Ethernet
- **Alarms:**
  Email, SNMP Traps, Relay Output, Windows Popup Message
- **Support:**
  Software upgrades included

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NTPSync II™ Specifications

GPS Receiver

6 Channel C/A Code
Optional antenna kit (L1 GPS antenna/converter with
Mounting kit and 20m / 65.6 ft. RG58 cable)

Input, Output, and Control

2 independent 10/100 Mb Ethernet ports (RJ45)
1 RS-232 port, front panel, 9 pin D-Sub male, VT100
2 RS-232 ports, rear panel, 9 pin D-Sub female
1 USB version 1.1 port in front panel
Alarm relay output, 3 pin DFK connector
LCD display, backlit, 40 character, 2 row
Lockable front panel keypad
4 Status LED's in front panel

Output Signals

1PPS, TTL into 50Ω, active high, duration 200ms (BNC)
10 MHz, TTL into 50Ω (BNC)

Accuracy of Frequency

+/- 1 x 10^{-11} GPS synchronized, avg. over 24 hours
+/- 1 x 10^{-7} +/- 1 Hz (not synchronized, 24 hours) (a)
+/- 1 x 10^{-6} +/- 10 Hz (not synchronized, one year) (a)
+/- 1 x 10^{-6} +/- (-20° - 70°C, Temp. Dependent Drift, not synchronized) (a)

Accuracy of PPS and Time

< +/- 250ns for 1PPS, GPS synchronized
+/- 8.6ms for Time (not synchronized, 24 hours) (a)
+/- 32 sec for Time (not synchronized, one year) (a)

SSB Phase Noise

1 Hz:	-60 dBc/Hz
10 Hz:	-90 dBc/Hz
100 Hz:	-120 dBc/Hz
1 KHz:	-130 dBc/Hz

Supported Network Protocols

SNTP v3, v4
NTP v2, v3, v4
FTP
IPv4, IPv6
DHCP (client)
HTTP, HTTPS w/OpenSSL
SNMP v1, v2, v3
SSH v1.3, v1.5, v2
TIME (RFC 868)
DAYTIME (RFC 867)
SYSLOG
Telnet
MD5 Authentification
With AutoKey

Chassis Dimensions

Height:	43 mm (1U)
Width:	483 mm (19" EIA Rack)
Depth:	290 mm

Power Options

AC power: 85-264 VAC, 50-60 Hz, 20W

Notes:

(a) After 24 hours of GPS locked operation.

FEI-Zyfer, Inc. is an ISO 9001 certified company.

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