



# NetClock®/NTP Network Time Provider

## Model 9189



- **Stratum 1 NTP/SNTP Time Server via GPS**
- **Meets regulatory compliance standards: Sarbanes-Oxley, HIPAA, Gramm-Leach-Bliley and OATS**
- **Supports internal audits, including: audit trails, time stamping records, log files and data archiving**
- **Optional Security Features**
  - **Web-based user interface with Secure Sockets Layer (SSL) protection**
  - **Secure remote login and file transfer with Secure Shell (SSH) and Secure Copy Protocol (SCP), Secure File Transfer Protocol (SFTP)**
- **Synchronizes Security Systems, Computer Networks and other Digital or Analog Systems**
- **Ethernet 10/100 BaseT**
- **Automatic adjustment for local time, daylight saving time and leap second**
- **Web-based user interface**
- **Remote diagnostics, upgrades, configuration and control**
- **Solid State**
- **Free software updates**
- **5-Year Limited Warranty**

### New in Version 2.3

- **Security features including SSL, SSH and SNMP v3**
- **Front Panel Displays and (2) Additional Output Ports**
- **Enhanced SNMP**
- **Dial-out Modem**

Spectracom NetClock Model 9189 is based on GPS (Global Positioning System) technology – tracking up to twelve satellites simultaneously and synchronized to their atomic clocks. This enables computer networks to synchronize all elements of network hardware and software (including system logs) down to the millisecond over LANs or WANs – anywhere on the planet.

The new NetClock/NTP offers available security features that can be enabled or disabled including Secure Shell (SSH), Secure Sockets Layer (SSL), Secure Copy Protocol (SCP), Secure File Transfer Protocol (SFTP) and SNMP v1, v2c, v3 with host restriction. Two front panel displays and additional ports are also available. An optional dial-out modem provides back-up to GPS, or can function as the primary, in case of disaster recovery.

Time code outputs are included to meet the requirements of numerous systems - A 10/100 BaseT LAN port, RS-232 serial port, RS-485 data bus port. Alarm outputs and programmable timer outputs are also provided.

# NETCLOCK®/NTP MODEL 9189 SPECIFICATIONS

## PERFORMANCE

### TYPICAL ACCURACY:

**GPS:** Within 50 nanoseconds RMS of UTC time (with 3-D fix).

**RS-232/RS-485:** Time code  $\pm 100$  microseconds to  $\pm 1$  millisecond of UTC, format dependent.

**Ethernet NTP:** Output jitter within  $\pm 50$  microseconds relative to UTC typical.

### OUTPUTS:

Type	Connector
Ethernet 10/100 BaseT <sup>1</sup>	RJ45 (auto sensing)
RS-232 Serial Comm <sup>2</sup>	DB9 female
RS-485 Once-per-Second <sup>2</sup>	3.81mm Terminal Block
Alarm outputs	3.81mm Terminal Block
Programmable Timer Output	3.81mm Terminal Block

<sup>1</sup> Conforms with or exceeds RFC 1305 and 2030. Supports Unicast, Broadcast, MD5 authentication.

<sup>2</sup> Serial time code formats: 0, 1, 2, 3, 4, 7, 8, 90, IBM Sysplex

### NETWORK PROTOCOLS:

- **NTP:** Conforms with or exceeds RFC 1305 and 2030. Supports Unicast, Multicast, MD5 encryption
- **HTTP:** Browser-based configuration and monitoring
- **Telnet:** Remote configuration
- **FTP Server:** Download of upgrades
- **SNMP:** Supports v1, v2, v2c, and v3 (no authentication)

### SECURITY FEATURES:

- Enable/block protocols
- Set SNMP community names and network access
- Password protected

### OPTIONAL SECURITY FEATURES:

- **SSL Web Based Interface:** Web UI uses SSL to allow the use of the secure HTTPS protocol to access configuration and status web pages.
- **SSH:** utilizes SSL and data compression technologies to provide a secure and efficient means to control, communicate with, and transfer data to or from the master clock remotely.
- **SCP:** is used to securely transfer files to and from the time server over an SSH session.
- **SFTP:** is an FTP replacement that operates over an encrypted SSH transport.
- **SNMPv3:** allows remote configuration and management over an encrypted connection.

### INPUTS:

Type	Connector
RS-232 Serial Set-up Interface <sup>1</sup>	DB9 female
GPS Antenna	Coaxial N type
Power	2.5 mm male, center positive

<sup>1</sup> Serial set-up interface configures network settings. The port works at 9600 baud, 8N1, and can be accessed with a PC terminal emulator.

### POWER:

90-240 VAC, 47-63 Hz from supplied external CE/UL/CSA approved T00060 power supply with IEC 320 universal power cord connector. North American power cord included. Alternate type line cords or adapters may be obtained locally. Unit operates from 12 VDC nominal (+9.5 - +30 VDC) @ 1.0 amps.

### FRONT PANEL:

- Ethernet port
- Status Indicators: "Power" and "Sync" multi-color LED
- Optional selectable 12 or 24 hour display. Hour, minutes, seconds, day of year.

## PHYSICAL & ENVIRONMENTAL

### SIZE/WEIGHT:

- EIA 19" rack mount W x 1.75"H x 11.0"D/4.8 lbs (483 mm W x 44 mm H x 305 mm D/2.2 kg.)
- Rack Mount hardware included (assembly required)

### ENVIRONMENTAL:

**Operating Range:** 32°F to 122°F [-0°C to 50°C]

**Storage Range:** -40°F to +185°F [-40°C to +85°C]

**Relative Humidity:** 10% - 95%, non-condensing

### AGENCY APPROVALS:

**CE Mark:** EN60950, EN55022, EN55024

**FCC:** Part 15

**UL/CSA:** listed power adapter.

## GPS ANTENNA

### INDOOR OR OUTDOOR COAXIAL N TYPE:

**Received Frequency:** 1575.42 MHz

**Satellites Tracked:** One to twelve, GPS T-RAIM satellite error management. Single-satellite mode.

**Acquisition Time:** Cold start, 250 seconds typical

## WARRANTY

### FIVE YEAR LIMITED WARRANTY

- Extended warranty is available

## ORDERING INFORMATION

### 1. NetClock

NetClock/NTP Network Time Provider GPS Master Clock, Model 9189

Option 01: Security Features

Option 02: Front Panel Display and two additional Serial Ports

Option 03: Modem

## ADDITIONAL OPTIONS AND ACCESSORIES

### 2. Antenna

GPS Outdoor Antenna, Model 8225

GPS Indoor Window Mount Antenna, Model 8228

### 3. Antenna Accessories

Antenna Flat Roof Mount, Model 8213

Antenna Surge Protector, GPS, Model 8226

Antenna Surge Protector Grounding Kit, Model 8226-0002-0600

Antenna Pre-amplifier, Model 8227

Antenna Splitter, Model 8224

Antenna Cable, LMR-400 equivalent, CAL7xxx (where xxx=feet)

Specify CALP7xxx for plenum-rated cable

### 4. Software

Presentense Server and Client, Lan Time Analyzer, Auditor

### 5. Time Distribution

Ethernet Time Server, Model 9188, one per secure network

TimeTap® Adapter, Model 8179T, RS-485 to RS-232, one per device, includes 12 VDC power supply.

TimeBurst, Model 8185, broadcasts time to wireless devices over existing radio systems.

### 6. Redundant Systems

TimeGuard® Monitor/Selector, Model 8145, protects against single time server failure.

### 7. Display Clocks

TimeView® digital and analog clocks

### 8. Service Options

Premium Support Package

Extended Warranty

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For more information, please contact Spectracom.

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