



# Ethernet Time Server

## Model 9388



- Stratum 1 NTP v2, v3, v4 Time Server via RS-485 from a NetClock
- Stratum 2 (up to 15) via NTP servers
- Ideal for synchronizing a separate LAN segment
- Meets regulatory compliance standards: Sarbanes-Oxley, HIPAA, Gramm-Leach-Bliley, OATS
- Supports internal audits including: audit trails, time-stamped records, log files, data archiving
- Web-based user interface
- IPv4/IPv6 dual stack
- Supports centralized user authentication (LDAP, RADIUS) and logging (Syslog)
- Remote diagnostics, flash upgrades, configuration, and control over secure communication link
- Security features: IPSec, SSL, SNMP v3, SSH, SCP, SFTP
- RoHS compliant/UL approved
- 5-year limited warranty

Share accurate time from a Spectracom NetClock throughout your network using an Ethernet Time Server Model 9388. The Model 9388 provides accurate and traceable time allowing you to share time in one of two modes: in a distributed or secure "isolated" fashion.

When the Model 9388 is synchronized to a NetClock via RS-485 once-per-second over twisted pair (up to 4,000 feet), you can operate a Stratum 1 time server on a separate LAN segment without the expense of a second GPS receiver. Each RS-485 port on a NetClock can support up to 32 Ethernet Time Servers.

Or simply set-up the 9388 as a Stratum 2 NTP server to distribute time throughout a large network with the same security and manageability features as your Stratum 1 time servers.

The Ethernet Time Server offers enhanced security features to ensure operational integrity and can be enabled or disabled based on your needs.

## PERFORMANCE

### TYPICAL ACCURACY:

When connected to a NetClock unit:  
 RS-232/RS-485: Time code ±100 microseconds to ±1 millisecond of UTC, format dependent  
 Ethernet NTP: Output jitter within ±50 microseconds relative to UTC typical

### OUTPUTS AVAILABLE:

| Type                                 | Connector             |
|--------------------------------------|-----------------------|
| Ethernet 10/100 Base-T               | RJ45 (auto sensing)   |
| RS-232 Serial Connector <sup>1</sup> | DB9 female            |
| RS-485 Once-per-Second <sup>1</sup>  | 3.81mm Terminal Block |
| Alarm Outputs (up to 3)              | 3.81mm Terminal Block |
| Programmable Timer Output (up to 3)  | 3.81mm Terminal Block |

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

### NETWORK PROTOCOLS:

- NTP v2, v3, v4: Conforms with or exceeds RFC 1305 and 4330. Supports Unicast, Broadcast, MD5 encryption, Peering, Stratum 2, Autokey
- HTTP: Browser-based configuration and monitoring
- Telnet: Remote configuration
- FTP Server: Access to logs
- SNMP: Supports v1, v2, v2c, and v3 (no auth/auth/priv) with Enterprise MIB
- IPv4/IPv6: Dual stack
- DHCP/DHCP6: Automatic IP address assignment
- LDAP: Authentication
- RADIUS: Authentication
- Syslog: Logging
- Time (RFC868)
- Daytime (RFC867)

### SECURITY FEATURES:

- Enable/block protocols
- Set SNMP community names and network access
- Password protected
- Encryption: DES, 3DES, AES
- Authentication: SHA1, MD5
- 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 (no auth/auth/priv): allows remote configuration and management over an encrypted connection.

### INPUTS AVAILABLE:

| Type  | Connector             |
|---|-----------------------|
| RS-485 Once-per-Second <sup>2</sup>         | 3.81mm Terminal Block |
| RS-232 Serial Set-up Interface <sup>3</sup> | DB9 female            |
| Power                                       | 3 pin screw terminal  |

<sup>2</sup> Accepted serial time code formats: 0, 2, 8

<sup>3</sup> Series 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 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) @ 18 watts. Rubidium, option 04 uses 24 VDC nominal (+18 – +32 VDC) @ 2.5 amps.

### FRONT PANEL:

- Status Indicators: "Power" and "Sync" multi-color LED

## PHYSICAL & ENVIRONMENTAL

### SIZE/WEIGHT:

Designed for EIA 19" rack mount. 16.75" W x 1.72" H (1U) x 14.00" D actual  
 (425 mm W x 44 mm H x 356 mm D actual)  
 Weight: 6.5 lbs. (2.95 kg)  
 Rack mount hardware included (assembly required)

### ENVIRONMENTAL:

|              | Operating                          | Storage                            | MIL-STD-810F Method |
|--------------|------------------------------------|------------------------------------|---------------------|
| Temperature: | 0° to 50°C                         | –40° to +85°C                      | 501.4, 502.4        |
| Humidity:    | 10%–95% R.H., non-condensing       | 10%–95% R.H., non-condensing       | 507.4               |
| Altitude:    | 15,000 ft                          | 40,000 ft                          | 500.4               |
| Shock:       | 15g/0.53 oz, 11 ms, half sine wave | 40g/1.76 oz, 11 ms, half sine wave | 516.5               |
| Vibration:   | 10–55Hz/0.075g, 55–500Hz/1.0g      | 10–55Hz/0.15g, 55–500Hz/2.0g       | 514.5               |

### AGENCY APPROVALS:



## WARRANTY

### 5-YEAR LIMITED WARRANTY:

- Extended warranty is available.

## ORDERING INFORMATION

Specify *Ethernet Time Server, Model 9388*

For additional Spectracom accessories, contact the Sales Department for more information.