**General Description:**
The Model 8461 is a Stratum 1 Network Time Server that is synchronized from an optical IRIG-B DC-level shift link or a wireline Modulated IRIG B link providing time synchronization of <1 microsecond of time reference.
The optical link provides a time synchronization bridge to Isolated Network Domains. The NTP server supports NTPv2, v3, v4 and SNTP clients. An onboard OCXO provides holdover capability in the event that synchronization is lost from the IRIG reference.

Configuration and status of the system can be done through the Ethernet interface using a Web browser, or through a command line using Telnet or SSH. An RS-232 I/O is also available for configuration and status using the command line interface. The Model 8461 can be powered from an external wall plug AC/DC power supply or from Power over Ethernet (PoE) capable switches.

Power and Status LED indicators are provided for visual status and a recessed push button reset switch to set the network port IP address to factory default.

**Specifications:**

**Input Time Reference**

**Optical:**
- **Time Code:** IRIG-B002 (year set manually) or IRIG-B006 (year set from time code)
- **Optical Wavelength:** 820 nm
- **Optical Cable:** Multimode 50/125μm, 62.5/125μm, 100/140 μm and 200μm
- **Optical Cable Length:** 2,000 meters with 62.5/125 μm optical cable
- **Connector:** ST

**Wireline:**
- **Time Code:** IRIG-B122 (year set manually) or IRIG B-126 (year set from time code)
- **Input Level:** 1.0 to 6.0 Vpp
- **Modulation Ratio:** 2:1 to 6:1
- **Impedance:** 50 ohm single ended
- **Connector:** BNC

**Ethernet Port**
- **Interface:** 10/100 BaseT
- **Internet Protocol:** IPv4, IPv6
- **Network Protocols:** HTTP, HTTPS, SSH, TELNET, SNMP, v1,v2, v3, DHCP
- **Network Time Protocols:** NTP v2, v3, v4, SNTP, MD5 Authentication
- **Connector:** RJ-45

**RS-232 Port**
- **Signal Level:** RS-232
- **Baud Rate:** 9600
- **Protocol:** 8-data bits, 1-stop bit, no parity
- **Connector:** 9-pin female D-sub

**Power:**
- **External AC/DC wall mount power supply**
- **Power over Ethernet (PoE) IEEE-802.3af-2003**
  - 7 watts max, type 1 class 3.

**Environmental:**
- **Operating Temperature:** -40°C to +85°C with PoE, 0°C to +60°C with external AC/DC power
- **Storage Temperature:** -40°C to +85°C
- **Humidity:** 0 to 95% non-condensing
- **Transportation Shock and Vibration:** Common Carrier

**Physical:**
- **Dimensions:** 5.1” L x 4.7” W x 1.6” H
- **Weight:** < 1lbs
- **Mounting:** Four # 6-32 screws in base
- **Optional Mounting:** U rack mount adapter

**Application - Defense (Military) • SatCom • Wireless**
- Range Timing
- Communications Networks
- Satellite Ground Stations
- Test and Measurement Systems