The 4410A is a time and frequency recovery system that generates precise signals traceable to UTC. It utilizes a GPS disciplined rubidium frequency reference to provide timing outputs characterized by the short-term stability of the atomic reference and the long-term stability of GPS.

The versatility of the TSC 4410A makes it suitable for a variety of applications. It provides multiple copies of 5 different timing signals on the rear of the 1U-high, 19” rack-mount chassis.

Year, day, and time-of-day are displayed on the front panel. The standard Ethernet connection simplifies integration with complex systems by allowing health and status information to be monitored remotely.
4410A Specifications

**ELECTRICAL SPECIFICATIONS**

- **GPS Antenna input:** BNC female with 5 V on center conductor
- **10 MHz Sine output [4]**
  - Connector: BNC female
  - Level: 13 ± 1 dBm
  - Impedance: 50 ± 5 Ω
  - SSB Phase noise:
    - 10 Hz: -90 dBc/Hz
    - 100 Hz: -128 dBc/Hz
    - 1 kHz: -140 dBc/Hz
    - 10 kHz: -148 dBc/Hz
    - 100 kHz: -148 dBc/Hz
  - Long term stability in Holdover: <5 × 10^-11 per month
- **10 MHz TTL Output [1]**
  - Connector: BNC female
  - Level: 3 V into 50Ω
- **1PPS Output [4]**
  - Connector: BNC female
  - Level: 4.5 V into 50Ω
  - Impedance: 50 ± 5 Ω
  - UTC Offset accuracy: 50 ns RMS
  - Holdover accuracy: 1 µs @ 24 hours
- **IRIG-B Modulated output [4]**
  - Connector: BNC female
  - Timecode: IRIG-B 123
  - Level: 3 Vpp into 50Ω
  - Impedance: 50 ± 5 Ω
  - Accuracy: 7 ± 2 µs relative to 1PPS
- **IRIG-B DC Level shift output [2]**
  - Connector: BNC female
  - Timecode: IRIG-B 003
  - Level: 4.4 V into 50Ω
  - Impedance: 50 ± 5 Ω

**ENVIRONMENTAL & PHYSICAL SPECIFICATIONS**

- **Temperature range:** 0°C-50°C (operating)
- **Humidity:** 0-95% Non-condensing (operating)
- **AC Input:** 90 – 264 V AC, 85 W, 47 – 63 Hz
- **Dimensions:** 1.75” [4.45 cm] H x 19” [48.26 cm] W x 12” [30.48 cm] D
- **Weight:** 9 lb (4 kg)

**OPTIONS**

- 001 GPS Antenna
- 002 30 m GPS Antenna cable
- 003 60 m GPS Antenna cable
- 004 Lightning arrestor

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