



Transporting and Measuring Time

TimePort™ is a low power, light weight, portable device that maintains time to typically within a few tens of nanoseconds of Coordinated Universal Time (UTC) during the first hour of testing despite being disconnected from both GNSS and external power source.

TimePort™ is ideal for power utilities, financial institutions, telecom network operators and where time delay errors caused by cables, equipment and networks must be quantified and removed to enable services to operate effectively.



Conventional methods to calibrate time involve transporting a very heavy Caesium atomic clock or running a GNSS cable from a convenient outside location into the equipment room and using other test equipment.

Markets

- Fixed line telecom operators
- Mobile operators
- Power generation, transmission distribution
- Banking / financial institutions

Benefits and Features

- GNSS-denied portable time
- Nanosecond accuracy
- GNSS system benchmarking
- Chipscale atomic clock technology
- Portable, battery operated
- Multi-constellation GNSS engine



The hand-held TimePort™ enables time measurement or calibration at less than 5% of the power, weight and size of transportable atomic clocks and removes the need to provision new or additional GNSS cables.





TimePort - Reverse Panel

Specification

1PPS Holdover

500 nanoseconds typical over 8 hours (+/-10°C temp change). The best holdover performance is achieved by locking the unit to GNSS for at least 24 hours before use and maintaining continuous power to the unit when in use following the GNSS lock period

Inputs

GNSS antenna: SMA
1PPS: BNC

Outputs

1PPS: BNC G.703-17 (switchable to Hi-Z and 3V or 5V level)
Frequency 1: 2.048 MHz / 10 MHz; BNC G.703
Frequency 2: 2.048 MHz / 10 MHz; BNC G.703
IRIG-B: BNC (5V level)
NMEA: RS232 - 9 way D-Type 9600 band
1PPS & ToD: RS422 - 15 way D-Type 9600 band
Ethernet (PTP and SNTP) (Max 10 clients): RJ45 10/100/1000
Default Profile (IEEE 1588-2008 J.3 or J.4)
Telecom Profile (ITU-T G.8265.1)
PTP Power Utility Profile (IEC 61850-9-3:2016) (optional version)
PTP Power Profile (IEEE C37.238-2011) (optional version)
SyncE

Communications

Ethernet (management): RJ45 10/100
Serial communications over USB-B

GNSS

72 Channel Multi-constellation

Environmental

Operating temperature: 0°C to +50°C
Maintain holdover tolerance down to: -10°C for 15 minutes
Storage temperature: -20°C to +80°C

Physical

Size: 190 x 57 x 170mm (WxHxL)
Weight: 1150g

Compliance

CE Mark: RoHS & WEEE; UL60950; EN 61000; EN 55022
EN 60068-2-1 (cold)
EN 60068-2-2 (dry heat)
EN 60068-2-30 (damp heat)
EN 60068-2-6 (vibration)
EN 60068-2-27 (shock)