

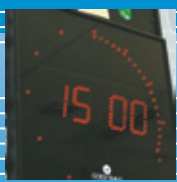
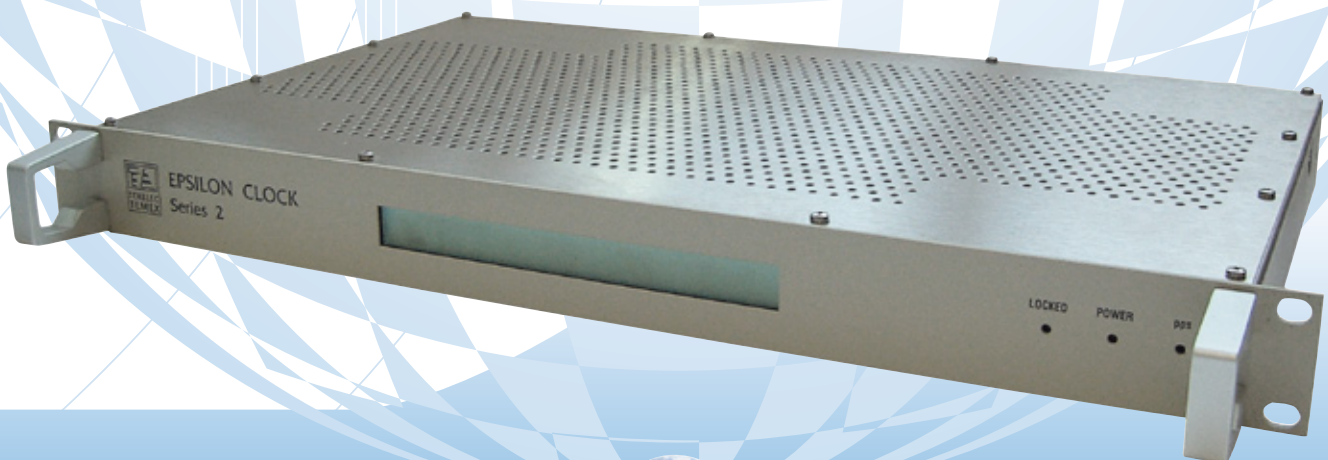


GPS EQUIPMENT

HORLOGE GPS EPSILON 2ST



- EPSILON. CLOCK 2ST est une excellente horloge GPS dotée d'un oscillateur OCXO très performant
- Les signaux de temps et de fréquence extrêmement précis et stables sont tenus dans un seul châssis compact (1U high – 19" wide)
- L'horloge EPSILON. CLOCK 2ST est synchronisée par la référence d'UTC-GPS, émise partout dans le monde par la constellation des satellites GPS
- T-RAIM (Time Integrity Monitoring) est utilisé pour supprimer des satellites GPS défectueux et assurer ainsi l'intégrité du temps
- L'algorithme intelligent prédictif d'EPSILTIME. combiné avec l'excellente stabilité de l'oscillateur interne atténue les effets du bruit inhérent au GPS et se conforme aux conditions de mode de maintien les plus rigoureuses lorsque la référence GPS est perdue
- La référence de fréquence est fermée à 1 PPS, ce qui signifie qu'il y a toujours 10 000 000 cycles entre les occurrences 1 pps



Specifications

Key Features

- Acquisition of Time Reference**
 - The EPSILON CLOCK 2ST includes a GPS C/A code receiver tracking up to 8 channels on L1 (1575 MHz) as time reference.
- Frequency & Time Keeping**
 - An internal oscillator (High performance OCXO) slaved to the GPS source brings a high level of performance to the EPSILON CLOCK 2ST.
 - In case of input reference disruption, Time & Frequency accuracies are maintained under microprocessor control thus allowing an efficient Holdover Mode.
- Frequency & Time Distribution**
 - The EPSILON CLOCK 2ST delivers frequency reference and 1 pps outputs .
 - Time of Day (TOD) is accessible by a serial interface.
 - Frequency reference output is factory selectable: 1 MHz, 5 MHz, 10 MHz.
 - IRIG-B and STANAG 4430 (Havequick) are available as options.
- Control**
 - Time of Day and Status are displayed on the front panel.
 - The selection of all the settings including the squelch of the frequency outputs, antenna cable delay, choice of time scale (UTC or GPS) are user programmable.
 - Extended status are available via the serial line interface.
 - Optional EPSILWIN32. software achieves complete remote control and supervision.

Frequency Outputs

- 10MHz**
 - Accuracy** (average over 24 hours when GPS locked)
 - < $\pm 2 \times 10^{-11}$
 - Medium Term Stability** (without GPS, at constant T°C, after 2 weeks operation)
 - 2 x 10⁻¹¹
 - Short Term Stability** (Allan Variance)
 - At 1s: 1 x 10⁻¹¹
 - At 10s & 100: 3 x 10⁻¹¹
 - Temperature Stability** (from peak to peak)
 - 1 x 10⁻¹¹ (from 0 to 60°C)
 - Phase Noise**
 - 10 Hz: -120 dBc /Hz
 - 100 Hz: -130 dBc /Hz
 - 1 kHz: -140 dBc /Hz
 - 10 kHz: -145 dBc /Hz
 - 100 kHz: -145 dBc /Hz
 - Signal waveform /Typical level**
 - 4 x 10MHz, Sine-wave > 10 dBm / 50 Ohms (BNC)
 - Harmonic Distortion /Duty Cycle**
 - 20 dBc
- 2048 kbit/s**
 - Connector**
 - BNC Female for 75 Ohms output impedance
 - BR2 Female for 120 Ohms output impedance
 - Type**
 - Synchronization frames at 2048 kbit/s in conformance with ITU-T Recommendation G.703 § 9 and G.704

Time Output (1 pps)

- Accuracy to UTC, GPS locked**
 - ± 100 ns
- Holdover mode** (at constant temperature, after 24 hours of GPS lock)
 - After 4 hours: 0.8 μ s
 - After 1 day: 12 μ s
- Signal waveform and level**
 - 1 pps TTL / 50 Ohms (BNC)

Outputs

- Remote Control Outputs**
 - Remote control and Time of Day on serial lines interface (RS232C)
- Alarm**
 - Relay contact
- Display**
 - 1 line of 20 characters display (Date and Time)

Inputs

- GPS Input for antenna amp.**
 - 1 GPS C/A code (TNC) / 5

Environment & Mechanical Data

- Operating Temperature**
 - 5°C to +60°C
- Storage Temperature**
 - 40°C to +85°C / 95% RH at 40°C, non condensing
- CE Compliance**
 - EN 50082 / EN 55022 / EN 60950
- Housing**
 - 19" instrument cabinet, 1U unit
- Dimensions**
 - 483 x 340 x 44 mm
- Weight**
 - < 5 kilos
- Power Supply**
 - DC Supply on both modules: 18-32 V
 - AC Supply on both modules: 90 to 265 V / 48 to 63 Hz
 - Power Consumption : < 25 W

