

OSA 5208 OEM Series

Compact 19" 1U GPS-based Clock with 4x10MHz and 4x1PPS Outputs

Introduction

The OSA 5208 GPS Clock provides an accurate frequency derived from the Coarse Acquisition Link 1 signals transmitted by the Navstar Global Positioning System (GPS) satellites.

The GPS input is used as the reference for the tracking function.

When locked, the 5208 regenerates the reference and attenuates jitter and wander on this reference.

The time constant of the loop is programmable in the range of 100 to 50'000 seconds (2'000s default).

When no valid input reference is available, the 5208 enters hold-over mode and holds its output frequency to the one that was available just before the loss of the input.

Functions

The OSA 5208 is an Oscilloquartz GPS clock with holdover capability. When locked to GPS, the OSA 5208 GPS clock fulfils the ITU-T rec. G.811.

The OSA 5208 GPS Receiver performs the following:

- Supplies ITU-T G.811 references with valid GPS signal.
- Monitors the status of the reference input signals.
- Operates as a standby reference clock in hold-over mode if all synchronization inputs have decreased in quality or failed.
- Communicates by a serial port (RS-232) with IBM-compatible PC for alarm reporting and equipment control.
- Totally maintenance-free design.

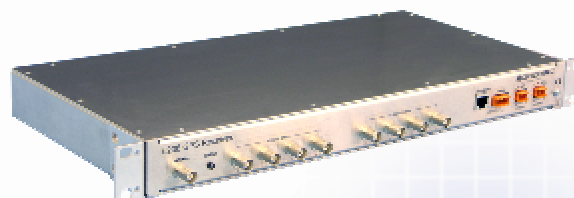
Bespoke configurations to reach minimum price for volume orders:

- **Number of outputs, type of connectors, lower grade oscillator when Holdover capability is relaxed.**

Highlights:

- Economic, reliable and compact 1U GPS Clock
- Up to 4 x 1PPS, up to 4 x 10MHz outputs
- BNC or SMA output connector type
- UTC-derived timing information through:
 - UTC-locked 1 PPS output
 - TOD compliant to NMEA0183
- Integrated high stability holdover functionality:
 - Frequency stability < 1 x10⁻¹⁰ / day (typical)
- ITU-T G.811 / ST1 compliant when locked to GPS
- ITU-T G.812 (I, V, VI) compliant holdover
- Bespoke configurations with attractive price for volume order

OSA 5208 - OEM Series



The leading partner for your
synchronisation needs

Technical specifications OSA 5208 OEM Series

Typical Applications

- Synchronization of Wireless base station wherever frequency and phase accuracy are required, e.g. UMTS-TDD, TD-SCDMA, WiMAX-TDD, WiMAX IEEE 802.16e.
- Synchronization of DAB and DVB-T and DVB-H emitters
- Sync sources for test equipment and instruments

Typical Characteristics

<p>Output:</p> <ul style="list-style-type: none"> ➤ 10 MHz : <ul style="list-style-type: none"> • Level: 1.0 VRMS \pm 20%, Sine wave, 50Ω • Connector: BNC/SMA (depends version) • Phase synchronized Zero crossing with 1 PPS ➤ 1 PPS: <ul style="list-style-type: none"> • Level: 2.4VP P \pm 20%, (AC-MOS/50w) Square wave, 50Ω • Pulse Width: 200ms • Rise Time: < 20ns • Connector: BNC/SMA (depends version) 	<p>Environmental characteristics:</p> <ul style="list-style-type: none"> ➤ Operating temperature: -5 to +55°C ➤ Storage temperature: -40° to +85°C ➤ Humidity: 95% non condensing <p>EMC, ESD & SAFETY - CE Mark</p> <ul style="list-style-type: none"> ➤ EMC: Certified to EN55022: 2005 and EN55024: 2005 ➤ Safety: Conformance to EN60950-1: 2001
<p>Hold-Over performances:</p> <ul style="list-style-type: none"> ➤ Long terme stability: 1x10⁻¹⁰/day, 2x10⁻⁸/year ➤ Frequency stability: 6x10⁻¹⁰ pp(-5 to +55°C) 	<p>Antenna cable:</p> <ul style="list-style-type: none"> ➤ Choice of antenna cable : <ul style="list-style-type: none"> • 20m (LMR-400) • 60m (LMR-400) • 120m (LMR-400 w/amplifier) • up to 300m (CellFlex cable)
<p>Management:</p> <ul style="list-style-type: none"> ➤ RS-232C local manager on DB9 or RJ-45 connector ➤ Alarm relay contacts ➤ TOD (Time-Of-Day) output compliant to NMEA0183 ➤ GUI-based Configuration and Monitoring software 	<p>Mechanical:</p> <ul style="list-style-type: none"> ➤ Constructed for working under harsh conditions, as described in ETS 300-019-2-3.2 ➤ Size (HxWxD): <ul style="list-style-type: none"> • 44.5 x 482.6 x 220mm (1.75"x19"x8.7") • 44.5 x 482.6 x 245mm (1.75"x19"x9.7") (including connectors) ➤ Weight: < 2kg (< 4.40lbs)

Oscilloquartz SA reserves the right to change all specifications contained herein at any time without prior notice.

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