# OSA 5201 GLONASS + GPS Clock

## A high quality GLONASS & GPS-based Synchronization Clock solution

## Introduction

The OSA 5201 GLONASS+GPS is a reliable and high performance clock capable of referencing the world's two largest Global Navigation Satellite System (GNSS): the renowned GPS network and the promising Russian Federation's GLONASS network. An additional backup input port (2.048MHz) is also available to ensure a continuous synchronization reference when no GPS and/or GLONASS signal is available.

The OSA 5201 regenerates outstanding stability and accuracy signals. When no valid input reference is available, the system enters in holdover mode and holds its output frequencies to supply long hours of frequency and phase accuracies thanks to its embedded Oscilloquartz-made double oven controlled quartz crystal oscillator (DOCXO).

Alarms and events, configuration, input priority selection as well as several additional settings can be managed locally (RS-232) and remotely (TCP/IP, SNMP) thanks a user-friendly Configuration Manager software.

The OSA 5201 supplies synchronization on 11 outputs:

- 1x 2.048 Mbit/s (E1) compliant with ITU-T G.703-9
- 1x 2.048 MHz compliant with ITU-T G.703-13
- 4x 1 PPS, phase-locked to UTC
- 4x 10 MHz sine wave
- 1x Time-of-day (NMEA0183)

This very compact 1U/19" stand-alone solution can suit several applications such as 2G, 2.5G, 3G and 4G mobile telecommunications networks, SDH/SONET transport networks, ATM, LAN/WAN, DAB/DVB, utilities as well as synchronization source for UMTS, WCDMA, CDMA, GPRS and TDMA base station, mobile switches and Synchronous Ethernet (Sync-E) network elements.



## Highlights

- ➢ Combined GLONASS + GPS Receiver
- ➢ Backup sync input (2.048/5/10 MHz, E1, 1 PPS)
- ➢ High frequency stability and long term accuracy
- ➢ 11 Synchronization Outputs
- ➢ ITU-T G.812 (I, V, VI) compliant holdover
- ➢ Remotely (TCP/IP) and Locally (RS-232) Manageable
- ➢ RoHS Compliant
- ➢ SNMP management

## Typical Applications

- ➢ Mobile telecommunication networks
- ➢ SDH/SONET transport networks
- ➢ Synchronous Ethernet (Sync-E)
- ➢ Base stations WiMAX, LTE
- ➢ ATM, LAN/MAN/WAN and Utilities
- ➢ DAB and DVB broadcasting systems

OSCILLOQUARTZ
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### Typical Characteristics

**2x Inputs Ports**

**1x Antenna, BNC 50 Ω:**

- GPS L1: 1575.42 MHz
- GLONASS L1: 1602.0 MHz for Fk=0

**1x Auxiliary Synchronization input, DB9 75 Ω:**

- Software configurable amongst:
    - 5 MHz, 10 MHz or 2.048 MHz *(ITU-T G.703-13)*
    - 1 PPS
    - 2.048 Mbit/s (E1) *(ITU-T G.703-9 - AMI or HDB3)*

### 11x Synchronization Output Ports

**8x BNC 50 Ω unbalanced connectors:**

- 4x 1 PPS, 200ms width, rise time <20ns, AC-MOS, 50 Ω
- 4x 10 MHz, 1 Vrms ±20% sine wave, 50Ω

**1x DB9 75 Ω unbalanced connector:**

- 1x 2.048 MHz *(ITU-T G.703-13)*
- 1x 2.048 Mbit/s (E1) *(ITU-T G.703-9 - AMI or HDB3)*

**1x DB9 connector:**

- 1x Time-of-day, NMEA0183

### Hold-Over performances

| OCXO | 8663 |
|---|---|
| **Long term stability** (Freq.Variation per day) | **1x10E-10** |
| **Thermal stability** (Freq. var. peak-peak over full temp. range) | **6x10E-10** |

### Power supply

- -20 to -60 VDC
- < 20W during warm-up, < 15W steady state at 25°C

GLONASS constellation status: www.glonass-ianc.rsa.ru

### Management

- RS-232C local management on front via DB9 connector
- SNMP remote management on 10/100 Base-T, RJ-45 connector (optional)
- Alarm dry relay contacts
- GUI-based Configuration and Monitoring software
- Software upgradeable

### Environmental Characteristics

- Operating temperature: -5 to +55°C
- Storage temperature: -40° to +85°C
- Humidity: 95% non condensing

### EMC, ESD & SAFETY - CE Mark

- EMC: Certified to EN55022:2005 and EN55024:2005
- Safety: Conformance to EN60950-1: 2001

### Antenna cable

**Choice of antenna cable:**

- 20m (LMR-400)
- 60m (LMR-400)
- 120m (LMR-400 w/amplifier)
- other lengths on demand

### Mechanical

Size (HxWxD):

- 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 connector

Weight: < 2 kg

**Customized configurations can be offered with attractive prices for volume orders:**

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

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

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