OSA 5230 GLONASS + GPS Receiver

A high quality GLONASS & GPS-based Synchronization Clock solution

Introduction

The OSA 5230 offers combined GLONASS and GPS signal reception to supply highly reliable synchronization clock from the two world's largest Global Navigation Satellite System (GNSS); the renowned Global Positioning System (GPS) and the promising Russian Federation's **GLO**bal'naya **NA**vigatsionnaya **S**putnikovaya **S**istema or **GL**Obal **NA**vigation **S**atellite **S**ystem (GLONASS).

The OSA 5230 GLONASS+GPS is a solution designed for the synchronization of 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 and mobile switches.

Functions

The OSA 5230 supplies synchronization on 8 outputs individually configurable, as below:

- 2.048 Mbit/s (E1) compliant with ITU-T G.703-9
- 2.048 MHz compliant with ITU-T G.703-13
- 1 PPS, phase-locked to UTC
- 10 MHz, phase-locked to UTC

When locked, the OSA 5230 regenerates the reference and attenuates jitter and wander. When no valid GPS and/or GLONASS reference input is available, the OSA 5230 enters in hold-over mode and holds its output frequencies to supply long hours of frequency and phase accuracies.

The OSA 5230 is also fully locally (RS-232) and remotely (TCP/IP) manageable thanks to its user-friendly Configuration Manager software.

Furthermore, the OSA 5230 is very reliable and totally maintenance-free.

Highlights

- ➢ Combined GLONASS + GPS Reception
- ➢ High frequency stability and long term accuracy
- ➢ Various Auxiliary input types (MHz, E1, PPS)
- ➢ 8 configurable BNC outputs
- ➢ UTC-derived 1PPS
- ➢ ITU-T G.812 (I, V, VI) compliant holdover
- ➢ Remotely (TCP/IP) and Locally (RS-232) Manageable

Typical Applications

- ➢ Mobile telecommunication networks
- ➢ SDH/SONET transport networks
- ➢ Base stations
- ➢ ATM, LAN/MAN/WAN and Utilities
- ➢ DAB and DVB broadcasting systems

Typical Characteristics

Inputs

Antenna, BNC 50Ω:

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

Auxiliary, BNC 50Ω:

- 5, 10 or 2.048MHz
- 1 PPS
- 2.048 Mbps/E1

Outputs

8x BNC outputs configurable by switch:

- 1 PPS: 200ms width, rise time <20ns, AC-MOS, 50Ω
- 10 MHz: 1 V rms ±20% sine, 50Ω
- 2.048 MHz: compliant to G.703-13, 75Ω unbalanced
- 2.048 Mbps/E1 : compliant to G.703-9, 75Ω unbalanced

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

Other oscillators on demand (Rubidium, BVA)

Power supply

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

Management

- RS-232C local management on frontal on DB9
- Optional Ethernet 100 Base-T on rear RJ-45 connector
- 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)
- Up to 300m (CellFlex cable)
- other lengths on demand

Mechanical

Size (HxWxD):

- 89 x 483 x 280mm (1.75"x19"x9.7")
- 2U / 19"

Weight: < 5.5kg

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

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