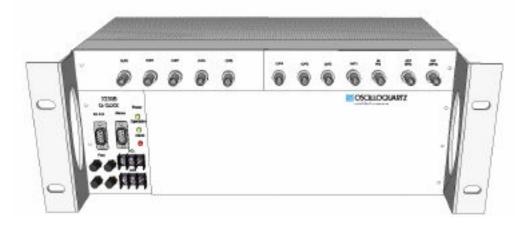
brandywine communications

OSA-3230B Cesium Clock



Features

- Performances exceeding ITU-T G.811 / Stratum 1 PRC
- Accuracy better than ±1x10-12 during entire life
- Long life 10 years cesium tube
- Extremely compact size 4U high (176mm) ETSI 240mm depth with front access connector, or 3U (132mm) 19" standards 400mm depth with rear access connectors
- 10 MHz and 5MHz low noise output
- 100kHz to 50MHz programmable sine wave analog output
- 3x Auxiliary outputs configurable between 1PPS / 1MHz / 5MHz / 10MHz TTL with the possibility to synchronize to an external reference
- PPS external synchronization input
- Optional Signal Expansion, providing 5 additional outputs: 4x configurable between 1PPS / 10MHz / 2MHz / 2Mbits/s E1 (G703) with SSM / T1, + 1x additional programmable sine wave 100kHz to 50MHz
- Redundant DC power supply inputs
- Control and monitoring via alarm contacts and RS232 communication (fully manageable locally and remotely using SyncView Plus management system).
- TCP/IP Remote management port for TL1 and/or SNMP management

The Oscilloquartz's 3230B Cesium Clock is specifically designed and produced with the latest technology to serve complex applications where an extremely accurate reference signal is needed in a minimum size.

The OSA 3230B Cesium Clock offers a unique set of operational features and performance, including greatly enhanced and easy integration into industrial, professional time and frequency host systems. With its long life cesium tube and its extremely high flexible output type capacity, the OSA 3230B is the most flexible and the most compact Primary Reference Clock Source available on the market, which will meet the most stringent requirements where any type of clock signal with G.811 performances is needed over a long period.

Typical Applications

- Primary Reference Source for PRC system requiring a signal conform to G.811 / Stratum 1
- Wireline / Wireless Operators
- Railways / Energy Companies
- Utilities

brandywine communication*s*

OSA-3230B Specifications

Typical Characteristics

Cesium performances characteristics

Frequency accuracy ±1x10-12 Reproducibility ±1x10-12 <1x10⁻¹⁵ Settability: Resolution ±1x10-9 Range

Wander generation

MTIE	$0.05s \leq \tau < 33s$	10ns
	$33s \leq \tau < 1'000s$	3x10 ⁻¹⁰ τ
400	$1'000s \le \tau < 30'000s$	300ns
99-	30′000s ≤ τ	1x10 ⁻¹¹ 7

TDEV	$0.1s~\leq~\tau~<~1s$	3ns
9	$1s \leq \tau < 2.5s$	3.2x10 ⁻⁹ τ ^{-0.5}
100	2.5s ≤ τ < 40s	2ns
	$40s \le \tau < 10'000s$	3.2x10 ⁻¹⁰ τ ^{0.5}

Warm-up time 45 minutes @ 25°C

Outputs

Direct frequency outputs

Number

Frequency 1x 5MHz + 1x 10MHz Output level & connectors 13dBm @ 50Ω, BNC Output phase noise: 10 MHz

1 Hz -95 dBc -90 dBc 10 Hz -125 dBc -120 dBc 100 Hz -140 dBc -135 dBc 1 kHz -150 dBc -145 dBc 10 kHz -154 dBc -145 dBc 100 kHz -154 dBc -145 dBc

Harmonics ≤40 dBc Distortion: ≤80 dBc Spurious

Auxiliary analog output 1x programmable 0.1 to 50 MHz

sine wave output, BNC 50 ohms,

+7dB

Auxiliary digital outputs

Number

Frequency 1PPS / 1 / 5 / 10 MHz Output level ≥3V @ 50Ω Output shape square or pulse Connector **BNC**

Synchronization input

Input type and connector 1x 1PPS TTL (≥3V) — BNC (1x on

rear side + 1x on front side in 19"

version)

Power Supply

48V DC nominal floating Voltage

(24V to 60V)

Power feeds Dual

Power consumption 50W @25°C (warm-up max. 60W)

Management / User interface

Management port RS-232C on DB-9 for local management

and / or remotely using SyncView PlusTM (1x connector on rear side + 1x connector on

front side in 19" version)

Alarms 3 x relay contacts

3x LED's on front plate for monitoring **LED Monitoring**

power supply status, operation and alarms (3x LED's on front

side + 3x LED's on rear side in 19" version)

Mechanical

ETSI: 4U 176 x 436 x 240 mm (H x W x D) with front access connectors, adapters

for 19" rack standard 1

19": 3U 132 x 436 x 400 mm (H x W x D)

with rear access connectors, adapters for 23" rack standard

<15kg (excluding packing) Weight

Telecom Signal expansion (optional)

Number

Frequency Configurable: 2.048 MHz / E1 /

T1 / 1PPS / 10MHz

Output level According to G703 Connector

BNC 75 Ω or DB9 120 Ω (T1: DB-9 100 Ω) Analog output 1x programmable 0.1 to 50 MHz sine wave output, BNC 50 ohms, +7dB

Remote management port (optional)

Management Port Ethernet TCP/IP port on RJ45 for management over TL1 and/or SNMP

Environmental Conditions

Operating conditions EN 300 019-1-3, class 3.2

(temperature range extended from

- 5°C to +55°C)

EN 300 019-1-2, class 2.2 Transportation EN 300 019-1-1, class 1.1 Storage

Humidity Up to 95% Altitude (operating) 0 — 15′000m DC magnetic field ±2 Gauss maximum EN 61010-1

Safety EMC & ESD EN 50081-1, EN 50082-1

IEC 801 parts 2, 3, 4, 5 and 6

CE compliant

