

# OSA 5225B Time Node

Easily configurable with its outputs and dual synchronization inputs

TELECOM NETWORKS

POWER & UTILITIES

TIME & FREQUENCY

TIME DISTRIBUTION



## Highlights

- Multiple synchronization inputs & outputs
- Plug and Play installation
- IPv4 / IPv6 connectivity
- NTP v4 support
- Secure Ethernet Supervision & Configuration
- 19" 1U aluminum rack case
- Alphanumeric display
- Redundant 20-60 VDC and 230/115 VAC power supply inputs and two hours of battery autonomy

## Applications

- Air transport, airports
- Rail transport, railway stations
- Underground train
- Maritime transport
- Telecommunications
- Power stations
- Businesses, banks and schools
- Radio and television
- Hospitals and emergency services
- Fire stations
- Aircraft, trains and helicopters

The OSA 5225B Time Node is a precise time center featuring two configurable synchronization inputs for redundancy and several outputs. The OSA 5225B can be configured as a secure and redundant NTP Time Server as well as a time distributor of many other time protocols and formats (IRIG-B, PPS, ...).

## Input/outputs flexibility

Dual external synchronization can be chosen among GPS, NTP, IRIG-B/AFNOR NFS 87500 1000 Hz or DCLS signals. Up to 4 NTP ports are available. 3 NTP ports can be individually substituted with any synchronization outputs such as IRIG-B, PPS, ASCII, 10MHz sine wave, ... All phase locked to the reference clock and individually configurable in offset and time zone.

## High Accuracy

Its own base time and its synchronization algorithm guarantee and output accuracy of up to 100 nanoseconds when GPS synchronized.

## Enhanced Security

High security level: 64 bits RSA™ MD5 encryption, leap time protection, high stability time base, SNMP v3 alarm traps, static relay alarms, supervision with HTTPS and front display.

## Power

The OSA 5225B Time Node has a dual power supply 230/115VAC and 20-60VDC, allowing redundancy in case of power supply failure. The internal Ni-Mh battery ensures at least 2-hours of running reserve in case of main cut.

## Management

Set-up and configuration can be done via Ethernet (telnet or http). Thanks to the SNMP module, an automatic alarm management is provided for all inputs/outputs of the NTP server. A general alarm on relays is also available.

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## Network protocols

- NTP (v2 RFC1119, v3 - RFC1305, NTP v4 - RFC 5905)
- NTP Unicast, Broadcast, Multicast, Peering
- SNTP v4 (RFC4330)
- TIME (RFC868)
- DAYTIME (RFC867)
- HTTP / HTTPS / SSL
- SSH / TELNET with disable function
- SNMP v1, v2 and v3
- MIB II (RFC1213)
- DHCP (RFC2131) with disable function
- Telnet (RFC854)
- MD5 Authentication
- IPv4
- IPv6 and IPv4/IPv6
- FTP
- Syslog logging

## Environmental Characteristics

- **Power supply requirement:**
  - 230 VAC Max.: 0,1 A Max.
  - 115 VAC Max.: 0,2 A Max.
  - 20-60VDC Max.: 0,6 - 0,15A Max.
- **Environment:**
  - Operating temperature: 5 to 50°C (41 to 122°F)
  - Storage temperature: -40 to 70°C (-41 to 151°F)
- **Electrical autonomy:** Typ. 2 hours on internal NiMh battery, 5 to 7 years lifetime.
- **Dimensions:** 44mm (1U x 263mm x 482mm (19"))
- **Weight:** 2,3Kg
- **Certifications:** CE, EN 60950-1, EN 55022, EN 50024
- **MTBF:** 109'526 hours

## Oscillator stability

- **OSA OCXO:** ageing 2x10E10/day

Synchronization input references with automatic selection based on configurable-priorities

### Input 1

- 1x GPS (or GPS+GLONASS\*) or
- 1x NMEA0183 + 1PPS

### Input 2

- 1x IRIG-B AM / IEEE1344 or
- 1x IRIG-B DCLS
- NTP v4, IP v4/v6

### Input 3

- 10 MHz

## GPS Antenna

- GPS L1: 1575.42 MHz
- 12-channel receiver
- Accuracy: < 50 ns RMS, 150 ns peak to peak to UTC.
- Cables: LMR-400 10m, 20 m, 60 m or 120m with L/A, other length upon request upon request
- GPS+GLONASS option on demand

## Standard output

- 1x 10MHz, BNC 50Ω
- 1PPS, BNC 50Ω
- 1x , NTP v2, v3, v4, 10/100 BaseT (RFC 1305, RFC 5905), Time (RFC 868), Daytime (RFC867)

## Optional output modules (up to 3 module at choice)

- 1x NTP v2, v3, v4, IP v4/v6 Ethernet 10/100 BaseT
- 4x IRIG-B IEEE1344 AC 2.2V or 8.8V
- 4x IRIG-B/IEEE1344 DCLS (TTL, phototransistor or static relay, DTTL)
- 4x PPS, PPM, PPH, PP2S, DCF (TTL, phototransistor or static relay, DTTL)
- 4x ASCII RS232 unidirectional
- 4x ASCII RS485 / RS422 unidirectional
- 1x ASCII RS232 on DB9 + 1PPS
- 1x SMPTE / EBU format SMPTE LTC12M -1999 et EBU/ UER LTC 3097 XLR 3 pts

## NTP Client Software option

- Useful NTP/Client software to securely synchronize any Computer clock.
- Compatible with Windows® 98/NT/XP/2000/2003/Vista(32 bits)/Seven.
- User licences for installation on 10 computers.

\*Contact OSA for availability

Subject to change without prior notice.