



Maxiva™ GNSS-PTP

Time and Frequency Generator



The Maxiva GNSS-PTP is a time and frequency reference generator (10 MHz and 1 PPS) in a compact 1 RU form factor.

The Maxiva™ GNSS-PTP Time and Frequency Reference Generator has been designed to bring the maximum level of flexibility and reliability to a broadcast or telecom facility.

Operating at the highest level of redundancy, the GNSS-PTP features two hot-swappable power supply units, each with batteries that provide up to 30 minutes of uninterruptible operation. Two high-precision GNSS receivers support all major satellite systems.

The optional PTP module can provide another level of redundancy for the GNSS receivers. The PTP module can operate in slave and Grandmaster roles.

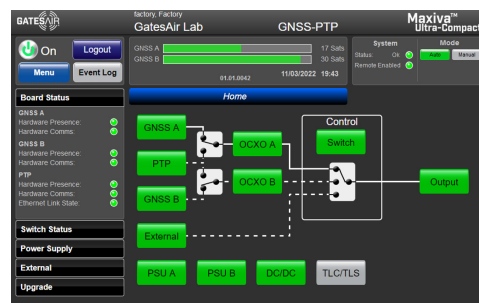
The timing source switching-controller can be programmed for manual or automatic switching with prioritization among the four sources: 2 GNSS receivers, PTP, and external 10 MHz / 1 PPS reference.

Each GNSS receiver supports all the major satellite systems (GPS, Glonass, Galileo, Beidou, QZSS) with programmable constellations for each. Each GNSS receiver has an OCXO for high precision and extended holdover.

The PTP module supports IEEE 1588-2008 and all major telecom profiles (G.8261.1, G.8275.1, G.8275.2). The PTP can be programmed for slave mode, typically backing up the GNSS or master mode, providing network timing to the facility using one of the GNSS as the reference.

The distribution module provides twelve 10 MHz and 1 PPS outputs, with the option to increase that number using an external distribution amplifier.

The GNSS-PTP provides excellent operational and management capabilities via Web and SNMP interfaces, as well as 4 General Purpose Inputs and Outputs which are user-programmable.



Product Features

Maxiva™ GNSS-PTP Features

- Compact 1RU 19" Rack chassis
- Optional double redundant GNSS receiver modules with fast signal acquisition, and back-up batteries
- Extended hold over with OCXO
- 12 separate 10 MHz outputs and 12 separate 1 PPS outputs
- Optional hot-swappable and redundant power supply units (AC+AC, AC+DC, or DC+DC) with battery backup
- Optional hardware PTP module for IEEE 1588-2008 capabilities
- Secure Web interface and Secure SNMP management
- Front panel display with status LEDs
- Remote control and GPIO



GNSS-PTP back panel

Maxiva™ GNSS-PTP

Frequency and Time Reference Sources and Selection	
GNSS A	Included
GNSS B	Optional
PTP	Optional
External 10 MHz/1PPS	Included
Source Selection	Automatic with user-defined priorities; Manual
Frequency Reference	
Output Signals	10 MHz sine wave
Output Level	0...5 Vpp (0.. +18 dBm) into 50 ohm load, user adjustable
Number of Outputs	12 independent
Output Impedance	50 Ohm
Output Connectors	BNC (f)
Noise Figure 100 Hz	-140 dBc/Hz, typical
Noise Figure 10 kHz	-150 dBc/Hz, typical
Stability	1e-12 daily average with disciplined OCXO
Initialization Time	< 4 minutes
Time Reference	
Output Signals	1 PPS, 5 V p.p. TTL, 100 µs
Number of Outputs	12 independent
Output Impedance	50 Ohm
Output Connectors	BNC (f)
PPS Accuracy	< 50 nsec
Holdover Stability	± 5 µsec after 5 hours of GNSS signal absence
GPS/Glonass Characteristics	
GNSS Systems	GPS, GLONASS, Galileo, Beidou, QZSS
Receiver	GPS: L1C/A, L2C; GLONASS: L1OF, L2OF; Galileo: E1-B/C, E5b; Beidou: B1I, B2I
Tracking	32 satellites, 184 channels
Jamming and Spoofing	Yes
SBAS Augmentation	Yes
Antenna Connectors	N (f), 50 Ohm
First Fix Time	< 32 sec. with satellite signals > -130 dBm
Available Redundancy	
2° GNSS	Yes (Optional)
2° Power Supply Module	Yes (Optional). Diode-OR
DC Power Input	18-75 V DC. Diode-OR
PTP Module	Yes (Optional)
PTPv2 (1EEE 1588-2008)	
Mode	Master or Slave
Profiles	G.8261.1, G.8275.1, G.8275.2
Interface	Separate 10/100/1000 Ethernet port
Electrical	
Network	Single Phase 90÷240 V~ 50/60 Hz, IEC320 C14 Plug
Battery	18 – 75 Vdc rear connector Phoenix contact
Backup Battery	3.7V 1020 mA (maintains functioning the GPS/GLONASS modules in case)

Maxiva™ GNSS-PTP

Environmental	
Operating Temperature Range	-5°C – 40°C
Max. Relative Humidity	90% non-condensing
Max. Operating Altitude	2500 m. a.s.l. (>2500 m. optional)
Mechanical	
Chassis	19" 1RU Rack
Width	482 mm
Height	44 mm
Depth	300 mm without connector
Controls	
SNMPv3	
HTTP/HTTPS	
Two 10/100/1000 Ethernet interfaces for control and management	
Firmware upgrade via USB or LAN/WAN	
Front panel display	
Status LEDs for system state, GNSS, Power Supply, Battery	
4 relay contacts NO,NC,COM	
4 coupled photo inputs	
<i>Specifications are subject to change without notice.</i>	