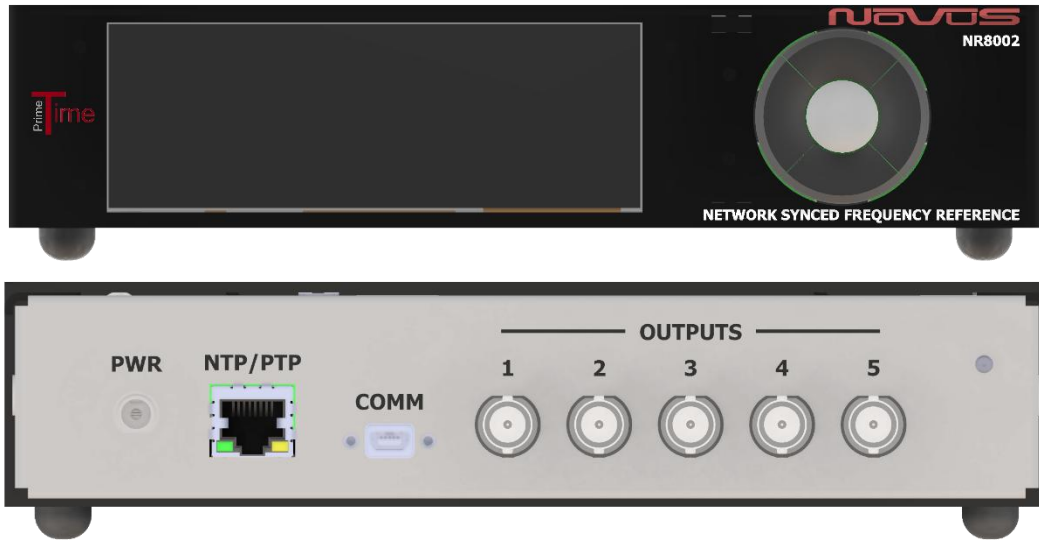


NS8002

Product Specification Network Synced Frequency Reference



PTP/NTP client network-based precision frequency reference.
Local network synchronization eliminates coax cabling complexity.
User selectable 5 channel timing outputs with options for 10MHz, PPS, or IRIG signals.

Key Features:

- PTP, NTP Client
- +/-50ns sync accuracy
- DC powered (12 Vdc)
- Compatible with Novus Network timing references
- PPS accuracy 5ns 1 sigma
- Supports Unicast, Multicast or Broadcast
- Benchtop or Rackmount hardware

Typical Applications:

- ITU Profiles: ITUG82651, ITUG82751, ITUG82752
- IEEE802.1AS-REV: including IEEE802.1CB tag handling
- Utility: including HSR and PRP tag handling
- 5 channels: 10 MHz Sine or PPS or IRIGB
User selectable outputs



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Technical Specifications

Reference Frequency Output	
10.0 MHz Sine	1 Vrms ± 0.2 , into 50 Ohms
Locked stability	5E-11
First year frequency stability	+/-40 ppb (unlocked)
Temperature stability	+/-100 ppb (unlocked)
10.0 MHz Phase Noise	(dBc/Hz)
1 Hz	- 86
10 Hz	-116
100 Hz	-134
1 kHz	-145
10 kHz	-157
100 kHz	-159
PPS Output	
Amplitude	3.3 Vdc CMOS (5 Vdc option)
Accuracy	5 E-12
Pulse width	Programmable 1 to 500ms in 1 μ sec steps
Rise time	<5 ns
Load Impedance	50 Ohm
Connector	BNC

Front panel Indicators and Control	
System status display	Channel status, system status - front panel display LCD color
5 button selector switches	Round momentary switch assembly, up, down, left, right, enter. Selects active display mode, system status.
Remote interface	
Rear Panel Serial Port	USB mini-B to serial interface for system status and system configuration 115200 baud default
Standard Serial Baud Rates	Selectable baud rate 19200, 38400, 57600 or 115200 (default), 8 data bits, 1 stop bit, no parity, no flow control
Network Connectivity	Ethernet: 10/100/1000mb RJ-45 Rear panel
Power	
DC input	+12VDC @ 2A AC to DC Adapter, 25W Power Supply (9 to 36V)

**PRODUCT DATASHEET**

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Environmental and Mechanical

Mechanical

Height	1.77" (45mm) 1RU EIA 19" rack compatible
Width	7.97" (202.4mm)
Depth	8.0" (203.2mm)
Weight	3.0 lbs.

Environmental

Operating temperature	-10 to 65°C
Storage temperature	-40 to 70°C
Humidity	0% - 90% RH non-condensing
Agency Certifications	UL / FCC Part 15
EU compliance	RoHS, REACH, WEEE
EMC Compliance Emissions/Immunity	CISPR 32 Emissions CISPR 35 Immunity IEC 61000-4-2 ESD IEC 61000-4-3 Radiated IEC 61000-4-4 Transient/burst immunity IEC 61000-4-5 Surge immunity IEC 61000-4-6 Immunity to conducted
Safety	UL 62368-1

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Revision History

Rev.	Date	Nature of Changes	Approved By
1	December 15, 2025	Initial release.	Christian Cochran

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