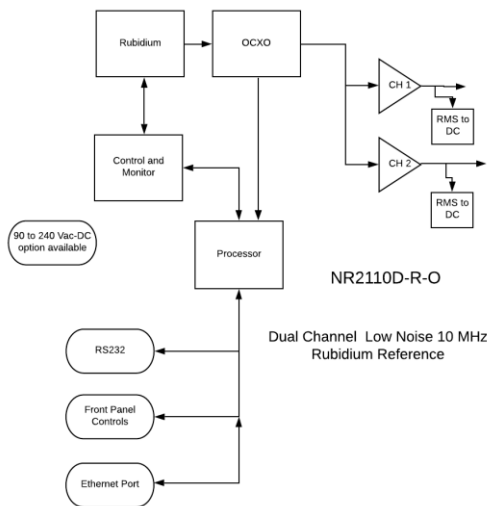


Company Datasheet #	NR2110DRO
Revision #:	A
Date:	07012020

NR2110D-R-O

10MHz, Low Noise, Dual Channel, Rubidium Reference with Networking Capability



Networking

SNMP option

Phase Noise

Offset Frequency (Hz)	Typical (dBc / Hz)
10	-130
100	-140
1K	-145
10k	-150

High Performance reference featuring the low phase noise of an OCXO, holdover performance of Rubidium and long-term stability of GNSS locking. Networking affords remote control and monitoring via SNMP.

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Technical Specifications

Output	10 MHz, 1.0 Vrms ± 0.2 , into 50 Ohms, 10 channels, Sine
Harmonic Distortion	< -30 dBc
Yearly Aging	< ± 1 ppb
Connectors	BNC
Remote interface & control	
Protocol	RS232 NMEA-0183
Connector	DB-9
Location	Rear panel
Protocol	Bit plus stop
Standard Baud Rates	Selectable 4800, 9600, 19200, 38400, 57600 or 115200 bps
SNMP (option)	
Remote monitoring & control	Internet
Parameters monitored Locally – present on remote interface for monitoring	Output amplitude, all power supplies, GNSS lock status, number of satellites, Built-In test status,
Transaction/decodable commands	English format
Single monitoring command	Updated every second
Connector	RJ-45
Rubidium Atomic	
Accuracy at shipment	$\pm 5.0 \times 10^{-11}$
Warm-up time	< 15 minutes
Time of lock	< 5 min -130 dBm
Time to achieve accuracy	< $\pm 1 \times 10^{-9}$ < 20 minutes
Aging - monthly	< $\pm 5 \times 10^{-11}$
Aging - yearly	< $\pm 1.0 \times 10^{-9}$
Stability: Allan Deviation	
1s	< 3×10^{-10}
10s	< 1×10^{-10}
100s	< 3×10^{-11}
SSB Phase noise for 10Mhz	
	Standard
10Hz	< -125dBc
100Hz	< -155dBc
1000Hz	< -160dBc
10000Hz	< -160dBc

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Environmental and Mechanical

Operating temperature	0 to 50C non-condensing	
Storage temperature	-40 to 70C	
Height	1RU (~1.73)	
Width	19 inch	
Depth	12 inch	
AC input	90 to 250 VAC, 50/60hz, less than 10 watts (DC power options available)	
Weight	≈5.5lbs	

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