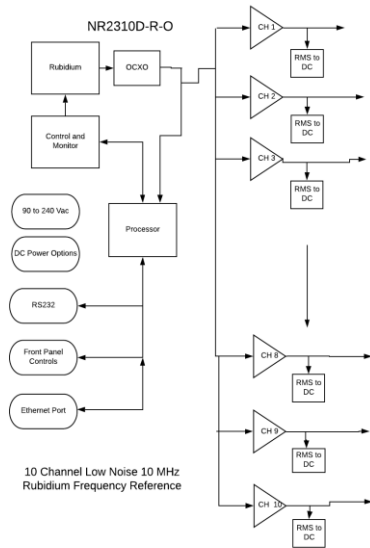


NR2310D-R-O

10MHz, Low Noise, 10 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

Stable Rubidium source provides 10 channels of 10 MHz sine or (optionally) ten MHz square. All channels are monitored for a fault or open condition. Low noise OCXO locked to the Rubidium dominates phase noise performance.



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Revision #:	B
Date:	050223

Technical Specifications

Output	10 MHz, 1.0 Vrms \pm 0.2, into 50 Ohms, 10 channels, Sine
Harmonic Distortion	< -30 dBc
Connectors	Available with either BNC or SMA connectors
PPS	
Amplitude for 1PPS	3.3 Vdc CMOS (5 Vdc option)
Pulse width for 1PPS	Programmable 1 to 500ms in 1 usec steps
Rise time for 1PPS	<10 ns
Connector	SMA
Load Impedance	50 Ohm
Location	rear
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	+/-1.0E-10



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Warm-up time	<15 minutes	
Time of lock	<5 min -130 dBm	
Time to achieve accuracy	< $\pm 1E-9$ <20 minutes	
Aging - monthly	< $\pm 5E-11$	
Stability: Allan Deviation		
1s	<3E-10	
10s	<1E-10	
100s	<3E-11	
SSB Phase noise for 10Mhz		
	Standard	
10Hz	< -130	
100Hz	<-140	
1000Hz	<-145	
10000Hz	\leftarrow 150	

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	\approx 5.5lbs	

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