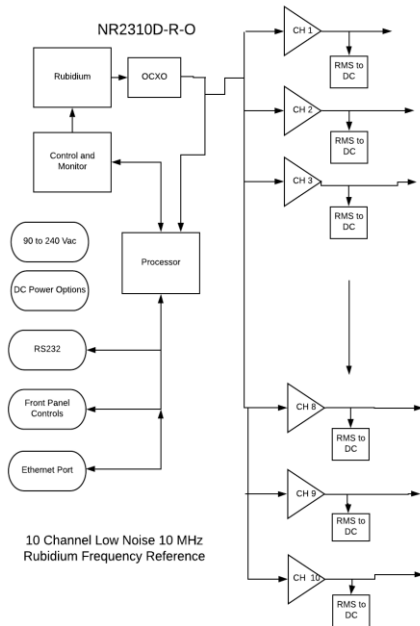


Company Datasheet #	NR2310D-R-O sma
Revision #:	E
Date:	071422

# NR2310D-RO

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



### Networking

SNMP option

### Phase Noise

Offset Frequency (Hz)	Typical (dBc / Hz)
10	-125
100	-145
1K	-155
10k	-155

All channels are monitored for a fault condition and built in test monitors critical circuits which drives panel indicators as well as alarm relay that can be wired into an alarm panel. Low noise OCXO dominates phase noise performance.

<b>Company Datasheet #</b>	NR2310D-R-O sma
<b>Revision #:</b>	E
<b>Date:</b>	071422

## Technical Specifications

<b>Output</b>	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
<b>PPS</b>	
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	500 Ohm
Location	rear
<b>Remote interface &amp; control</b>	
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
<b>SNMP (option)</b>	
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
<b>Rubidium Atomic</b>	



Company Datasheet #	NR2310D-R-O sma
Revision #:	E
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Accuracy at shipment	+/-5.0E-11	
Warm-up time	<15 minutes	
Time of lock	<5 min -130 dBm	
Time to achieve accuracy	<±1E-9<20 minutes	
Retrace	<1E-10 after 2 hours	
Aging - monthly	<±5E-11	
Stability: Allan Deviation	Standard	M-Option
1s	<3E-10	<1E-10
10s	<1E-10	< 5E-11
100s	<3E-11	< 2E-11
SSB Phase noise for 10Mhz	Standard	
10Hz	-125	
100Hz	-145	
1000Hz	-155	
10000Hz	-155	
<b>Temperature Stability</b>	Standard	M-Option
	1E-9	0.5E-9 -10 to 50C

### ***Environmental and Mechanical***

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

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