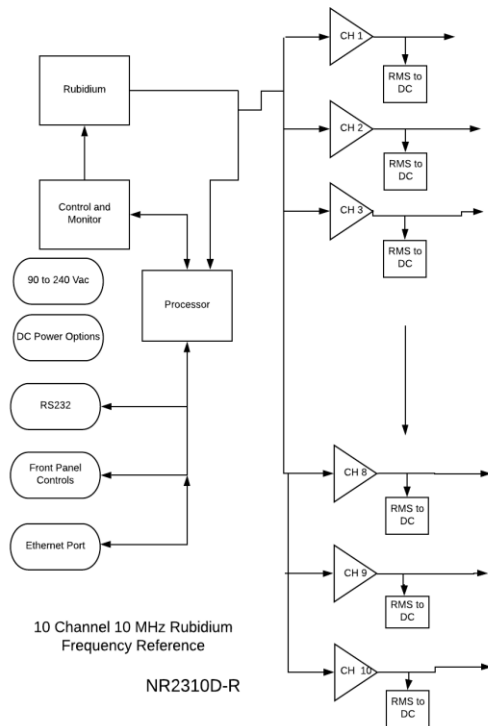


Company Datasheet #	NR2310D-R
Revision #:	C
Date:	113022

# NR2310D-R

## 10MHz 10 Channel Rubidium Reference with Networking Capability



### Networking

SNMP option

### Phase Noise

Offset Frequency (Hz)	Typical (dBc / Hz)
10	-85
100	-115
1K	-135
10k	-140

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.

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## Technical Specifications

Output	10 MHz, 1.0 Vrms $\pm$ 0.2, into 50 Ohms, 10 channels, Sine
Harmonic Distortion	< -30 dBc
Yearly Aging	$\pm$ 1 ppb
<b>Simulated 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	50 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>		
Accuracy at shipment	+/-5.0E-11	
Warm-up time	<15 minutes	
<b>Rubidium Atomic</b>		
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	
Aging - monthly	<±5E-11	
Retrace	<±1E-10 after 1 hour	
Stability: Allan Deviation	High Stability Option	
1s	<5E-10	1E-10
10s	<1E-10	3E-11
100s	<3E-11	1E-11
SSB Phase noise for 10Mhz		
	Standard	Low Noise Option
10Hz	< -85	<-125dBc
100Hz	<-115	<155dBc
1000Hz	<-135	<-160dBc
10000Hz	←140	<-160dBc

### ***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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