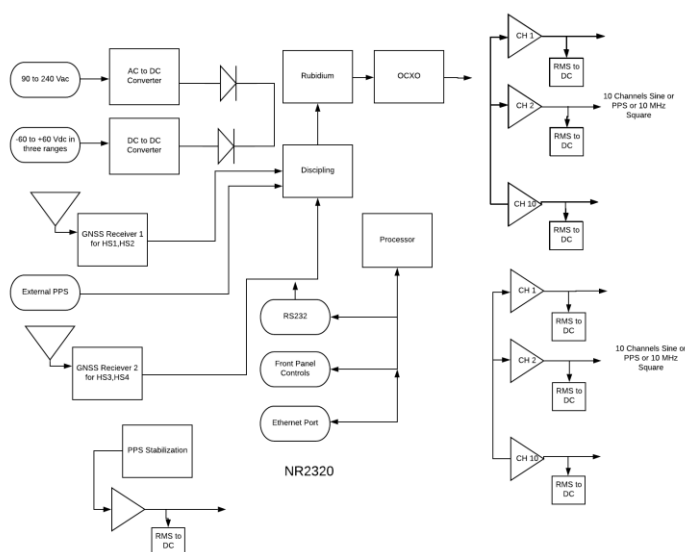


NR2320D

20 Channel Platform provides system Flexibility



Networking

SNMP option

Standard Phase Noise

Offset Frequency (Hz)	Typical (dBc / Hz)
10	-120
100	-145
1K	-150
10k	-155

High Stability

Allan deviation E-13
PPS Jitter < 5ns @ 1 sigma

20 Channel platform provides complete flexibility for the system designer. Two ten channel amplifiers can be 10 MHz Sine, 10 MHz square or PPS. Mix and match to have 10 channels of sine and 10 channels of PPS. Create a 20 channel PPS source. Add a high stability option with GNSS receiver and create the reference you need. Rubidium options provide outstanding holdover stability.

Technical Specifications

Output	10 MHz 1 Vrms ± 0.2 , into 50 Ohms, 10 channels, Sine
Harmonic Distortion	< -30 dBc
Yearly Aging	± 50 ppb (unlocked)
Connectors	SMA connectors
Accuracy (Allan Deviation)	Analog, HS1,HS2
1 second	0.9E-10
10 second	0.9E-10
100 second	2.0E-11
1000 second	0.8E-12
Accuracy (Allan Deviation)	HS3,HS4
1 second	4E-12
10 second	6E-12
100 second	3E-12
1000 second	2E-12
10000 second	3E-13
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	<5 ns
Accuracy @1 σ	
analog	15ns
HS1	15ns
HS2	15ns
HS3	5ns
HS4	5ns
Pulse to Pulse Jitter @ 1σ	
analog	10ns
HS1	10ns
HS2	GNSS-PPS <5ns SYTH-PPS< 200psec
HS3	GNSS-PPS <5ns SYTH-PPS< 200psec
HS4	GNSS-PPS <5ns SYTH-PPS< 200psec
PPS Holdover	
OCXO	< 1 ms/day
Rubidium	< 20 usec/day

Connector	SMA
Load Impedance	50 Ohm
Location	rear
Typical Phase Noise	
Offset	
1 Hz	-90 dBc/Hz
10 Hz	-120 dBc/Hz
100 Hz	-145 dBc/Hz
1kHz	-150dBc/Hz
10 kHz	-155 dBc/Hz
GNSS receiver -Analog, HS1,HS2	GPS L1 C/A, GLONASS L1OF, QZSS L1 C/A, SBAS L1 C/A (Ready): Galileo E1B/E1C, QZSS L1S
Channels	26 channels (GPS, GLONASS, QZSS, SBAS)
Sensitivity	
GPS	Tracking: -161 dBm
	Hot Start: -161 dBm
	Warm Start: -147 dBm
	Cold Start: -147 dBm
	Reacquisition: -161 dBm
GLONASS	
	Tracking: -157 dBm
	Hot Start: -157 dBm
	Warm Start: -143 dBm
	Cold Start: -143 dBm
	Reacquisition: -157 dBm
	With Novus recommended antenna
GNSS Receiver HS3,HS4	184 Channels
Systems supported	GPS, BeiDou, Galileo, and GLONASS reception
Cold Start Acquisition	< 30 seconds
Sensitivity	
Tracking	-167 dBm
Reacquisition	-160 dBm
Cold Start	-148 dBm
Hot Start	-157 dBm
Signals Supported	
GPS	L1C/A (1575.42 MHz), L2C (1227.60 MHz)
GLONASS	L1OF (1602 MHz + k*562.5 kHz, k = -7,..., 5, 6), L2OF (1246 MHz + k*437.5 kHz, k = -7,..., 5, 6)
Galileo	E1-B/C (1575.42 MHz), E5b (1207.140 MHz)
BeiDou	B1I (1561.098 MHz), B2I (1207.140 MHz)

Antenna with LNA 26 channel Analog, HS1,HS2	(Recommended)	
Antenna power	3.5 Vdc, < 20 ma (on center conductor) (factory configurable to 5 Vdc)	
Frequency	1574-1607 MHz	
Nominal Gain	2 dBic	
Amplifier gain	26 dB	
Noise Figure	< 2.0 dB	
Out of Band rejection	Fo±50MHz=60 dBc, Fo±60 MHz	
DC current	<25 ma@3.5 Vdc	
Antenna with LNA	184 channel receiver	
	L-1 Band	L2/ESb/B2i Band
Frequency	1559-1606	1197-1249 MHz
Impedance	50 Ohm	50 Ohm
Gain	Typ 3.5 dBic (Zenith)	Typ 0 to 2 dBic (Zenith)
Axial Rotation	Max 2 dB (Zenith)	Max 2 dB (Zenith)
Polarization	RHCP	RHCP
LNA Gain	Typ 28 +-3 dB	28 +- 3 dB
LNA Noise Figure	Max 2.8 dB	Max 3.2 dB
Output VSWR	Max 2.0	Max 2.0 dB
Cable Insertion Loss	Typ 6.6 dB	Typ 6.6 dB
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	



Company Datasheet #	NR2320D
Revision #:	C
Date:	10-14-25

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	
Weight	≈5.5lbs	

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