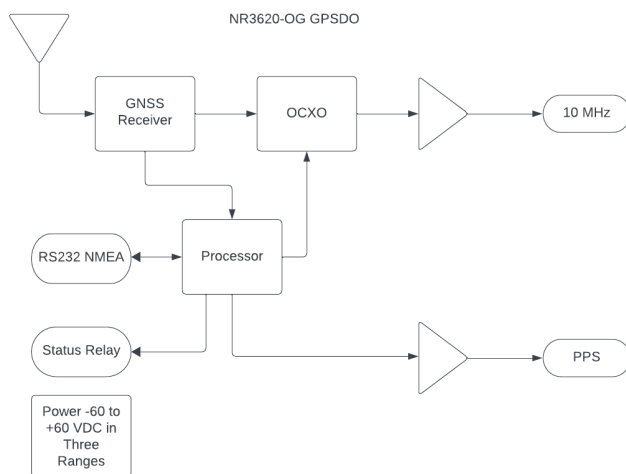


NR3620-CAL

GNSS Locked Reference Module with OCXO Holdover/AutoCal

KEY FEATURES



The signal source is a GNSS driven, mixed-signal phase lock loop generating a 10 MHz sine output from an intrinsically low jitter voltage-controlled crystal oscillator. The output is a 1 Vrms sine.. There is extensive built-in test that drives an LED and relay contacts for system integration. There is also a GPS lock status signal (and LED), PPS and a serial port to provide access to NMEA time stamp data. The unit can operate from DC power from -60 Vdc to +60 Vdc- in three ranges. Power converter provides electrical isolation from the power source to the output (configuration option). PPS is programmable in 1 ms increments and can be configured for either 3.3 or 5 Volt CMOS into 50 Ohms. Unit is available in a kit that includes the unit, antenna, power supply and cable to connect the antenna to the unit.

Product Highlights



High Sensitivity GPS Receiver

The 26 channel high-sensitivity, high-accuracy Multi-GNSS receiver. Supports TRAIM, GPS, GLONASS, QZSS, SBAS, Active Anti-Jamming and Advanced Multipath Mitigation Functions

Typical Phase Noise- 10 MHz Sine

Offset Frequency (Hz)	Typical (dBc / Hz)
10	-125
100	-140
1k	-145
10k	-150

Auto Cal

Multiple times a day, the unit stores the temperature/time performance of the holdover crystal. If GPS is lost, the unit uses the last best known compensation.

Technical specifications

10MHz Sine	13 \pm 2 dBm ,50 ohm- BNC
Harmonics	Less than -30 dBc
Locked Stability	<~E-11 after 100 seconds
First Year Frequency Stability	\pm 50 ppb (long-term unlocked)
Temp Stability	\pm 10 ppb (unlocked)
Yearly aging	\pm 50ppb (unlocked)
PPS	Programmable pulse width (1 ms increments) Nom=200ms
PPS	3.3 V or 5 V CMOS, output impedance 20 Ohms
Allan Deviation	
1s	3E-12
10s	5E-12
100s	6E-12
1000s	8E-12
10,000s	7E-12
Phase Noise	
10 Hz	-125
100 Hz	-140
1000 Hz	-145
10,000 Hz	-150
GNSS receiver	
	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
Antenna with LNA	
Antenna power	3.5 Vdc, < 35 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 \pm 50MHz=60 dBc, Fo \pm 60 MHz

DC current	<25 ma@3.5 Vdc	
Power Requirements	Three ranges \pm (9 to 18, 18 to 36, 36 to 65) Vdc (ac adapter available) Power converter can be configured to provide > 500 volts isolation) < 6 Watts	
Connectors	BNC- 10 MHz output	
	BNC- PPS 3.3 Vdc CMOS	
	Power/Alert mate TE Connectivity- 106527-4	
	Power Connector 1 PWR-, 2 PWR+, 3 Status 1, 4 Status	
	Status relay normally closed	

Environmental and Mechanical

Operating temperature	0 to 50C non-condensing (extended temperature range available)	
Storage temperature	-40 to 70C	
Width	4 inch (exclusive of connectors)	
Depth	5 inch	
Height	1.5 in	
Weight	~16 oz	

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