	DATA SHEET NUMBER	NR3606-OG
	REVISION	B
	DATE	8-16-22

NR3606-OG

Six Channel GNSS Locked Reference
3 PPS and 3 Sine Plus LVDS

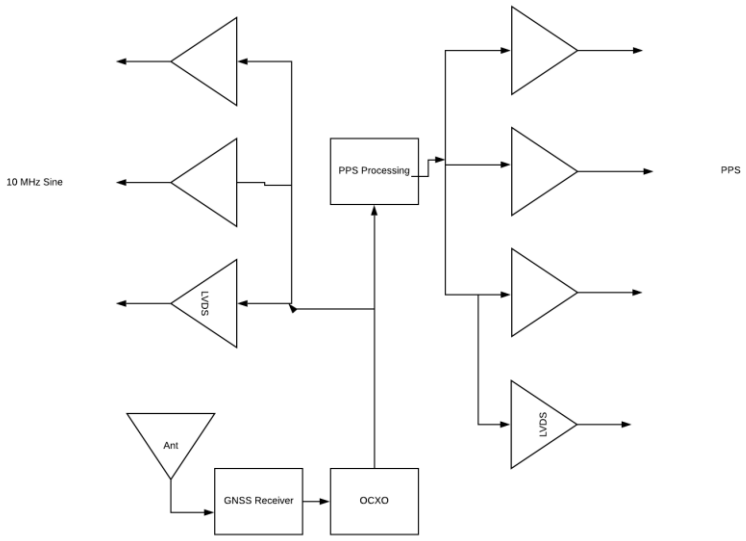
Low Noise and GNSS Lock Options

Unique in the industry, the NR3606 provides three 10 MHz sine outputs and three PPS outputs. It also provides a 10 MHz LVDS and PPS LVDS output. Ideally suited for applications requiring the stability of a locked frequency reference and the synchronization of a PPS.

The OCXO provides low phase noise and a holdover stability of 5 ppb/day.

The PPS outputs can be factory configured to either 3.3 or 4.5 Volt CMOS levels capable of driving a 50 Ohm load.

The unit is available with GNSS-locking as a PPS simulator with 10 MHz sine and LVDS.



OCXO Holdover

Aging < +-5 ppb/day

GNSS Locked

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

Low Phase Noise

Phase Noise	
Offset	dBc/Hz
10	-125
100	-140
1K	-145
10K	-150

Output	10 MHz,0.5 Vrms ±0.2, into 50 Ohms, LVDS 100 Ohm load
Accuracy at shipment	<±1E-9
Locked stability	<~E-12 @ 100s (see Allan Deviation curve) After 30 mins (post GNSS lock + crystal warmup 10 minutes)
First year frequency stability	±50 ppb (long-term unlocked)
Temperature stability	±10 ppb (long-term unlocked)
Yearly aging	±50ppb (long-term unlocked)
PPS accuracy	15ns(1σ) (@-130 dBm) 50ns(1σ) (@-150 dBm)
Receiver sensitivity	-155dBm antenna power 3.3 VDC<30 mA
PPS	15ns(1σ) (@-130 dBm) 50ns(1σ) (@-150 dBm) RMS accuracy, 3.3 volt or 5 volt CMOS . Drive capability to 100 mA
Power requirements	Standard configuration is 12VDC (9 to 15VDC) Options- ±24VDC (20 to 30VDC), ±48VDC (40 to 60VDC) AC adapter available 100 to 240VAC, 50/60Hz
Connectors	BNC 10 MHz output
	BNC PPS (3.3 VDC CMOS) (assigned when ordered)
PPS	
Amplitude for 1PPS	3.3 VDC CMOS (5 VDC option)
Pulse width for 1PPS	Programmable 1 to 500ms in 1 ms steps
Rise time for 1PPS	<20 ns (faster edge available)
Drift	Options to 1 usec/day
Connector	BNC
Load Impedance	50 Ohm
Location	rear
LVDS	100 Ohm load
Remote interface & control	
Protocol	RS232
Connector	DB-9
Location	Rear panel
Protocol	Bit plus stop
Standard Baud Rates	Selectable 4800, 9600, 19200, 38400, 57600 or 115200 bps
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 5VDC)
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
Main Power	
DC input	-60 to +60 in three ranges
Power	<15 W (steady state < 10 W)
Warranty	1 year plus 3 year optional extended warranty from date of shipment

Environmental and Mechanical

Operating temperature	0 to 50°C non-condensing
Storage temperature	-40 to 70°C
Height	1.58”
Width	6.0”
Depth	6.0” exclusive of connectors
Weight	1.5 lbs.