

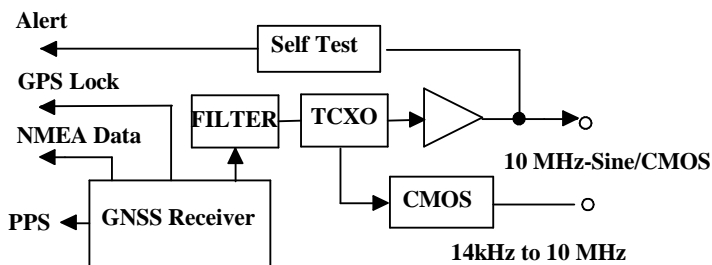
Company Datasheet #	NR6720-T/G
Revision #:	B
Date:	05132020

NR6720-T/G GPSDO



10 MHz GPS Locked 10 MHz Reference, TCXO based, Optional Secondary Synthesized Channel

KEY FEATURES



Synthesizer

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. The unit also features Auto Cal. The unit continually monitors temperature and aging so that when the unit goes into holdover, the output frequency is at the best known compensation. An optional secondary channel is available that synthesizes an output that can be anywhere from 14 KHz to 10 MHz This output is slaved to the primary 10 MHz channel. There is extensive built-in test that drives an LED and relay contacts for system integration. GPS lock status signal (and LED) a serial port to provide access to NMEA time stamp data.

Optional Synthesized Secondary Channel

Secondary channel programmable from 14 KHz to 10 MHz-3.3 VDC CMOS

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

Phase Noise -NR4400-T	
Offset	dBc/Hz
1 Hz	-50
10 Hz	-100
100 Hz	-120
1 kHz	-130
10 KHz	-140

Auto Cal

The unit stores the temperature/time performance of the holdover crystal multiple times per day. If GNSS is lost, the unit uses the last best known compensation.

Company Datasheet #	NR6720-T/G
Revision #:	B
Date:	05132020

Technical Specifications

10 MHz Sine	13 ±2 dBm ,50 Ohm - SMA
Harmonics	Less than -30 dBc
Locked Stability	<~E-11 after 100 seconds
First Year Frequency Stability	±1 ppm (long-term unlocked)
Temp Stability	±10 ppm (long-term unlocked)
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	<10 ns (faster edge available)
Connector	SMA
Load Impedance	50 Ohms
Remote interface & control	
Protocol	RS232 NMEA-0183 (available option 3.3 Vdc CMOS)
Connector	10 Pin header
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 5 Vdc)
Frequency	1574-1607 MHz
Nominal Gain	2 dBic

Company Datasheet #	NR6720-T/G
Revision #:	B
Date:	05132020

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
Connectors	SMA 10 MHz output
	SMA secondary output
	SMA PPS 3.3 Vdc CMOS
Power Connector	2-pin Power Con- power in, Digikey 277-2416-ND mates with 277-2417-ND
Power	Available -60 to +60 Vdc in three ranges

Environmental and Mechanical

Operating Temperature	0 to 50C non-condensing (extended temperature range available)
Storage Temperature	-40 to 70C
Width	3.5 inches
Depth	5 inches (exclusive of Connectors)
Height	1.13 inches
Weight	~16 oz

This document is copyright © May 13, 2020 Novus Power Products LLC. All rights reserved. This document is provided for information purposes only; contents are subject to change without notice. It is not warranted to be error-free, nor subject to any other warranties or conditions including implied warranties and conditions of merchantability or fitness for a particular purpose.