

DATA SHEET	NR6720-HS
REVISION	D
DATE	12-9-18

NR6720-HS

10 MHz GNSS-Locked Reference, OCXO Based, Secondary Synthesized Channel, Time Stamp and Stabilized PPS



The NR6720-HS features extremely low frequency jitter despite being GNSS-locked. GNSS-locking brings a long-term stability to an OCXO that is difficult to match. Locking an OCXO to the GNSS presents its own set of problems. The timing information from the GNSS is burdened with all the noise one would expect from a RF link - multi-path, reflections etc. Long-term stability is enhanced frequently at the expense of “close-in” stability. Low frequency components from the RF link are introduced to the OCXO - often degrading the Allan Deviation of the OCXO. The NR6720-HS uses a unique crystal and proprietary control loop to minimize “close-in” degradation while securing long-term stability.

Synthesized Secondary Channel

Provides a secondary frequency locked to GNSS.

High Sensitivity GNSS 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.

Ultra -Low P-P Frequency Jitter

Jitter < 1 ns locked

Auto Cal

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

Time Stamp

1 usec accuracy @ 10 kHz rate

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Technical Specifications

10 MHz sine	13 ±2 dBm ,50 Ohm - BNC
Harmonics	Less than -30 dBc
Locked stability (AD)	<~E-12 after 1000 seconds
First year frequency stability	±50 ppb (long-term unlocked)
Temperature stability	±10 ppb
Yearly aging	±30ppb
Secondary channel	1 Hz to 1 MHz GNSS-locked
Secondary duty cycle	45 to 55%
Peak-to-Peak frequency jitter	<5E-11
Time Stamp	1 us accuracy with time stamp rate > 10 kHz
Receiver sensitivity	-155dBm (antenna power 3.5 Vdc less than 30 ma)
PPS	30ns RMS accuracy, 3.3 volt logic, output impedance CMOS (±20mA)
PPS processor	Pulse-to-pulse jitter <700 ps
Connectors	SMA 10 MHz output
	SMA secondary output
	SMA PPS 3.3 Vdc CMOS
NEMA Data	RS232 port- 38.4 kbaud (baud rate selectable)
Power Connector	2-pin power connector - power in. Mates with On Shore Tech OSTTJ0411530
Power	Available -60 to +60 Vdc in three ranges

Environmental and Mechanical

Operating temperature	0 to 50°C non-condensing (extended temperature range available)
Storage temperature	-40 to 70°C
Width	3.5"
Depth	5.0" (exclusive of connectors)
Height	1.13"
Weight	~16 oz

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