

Company Datasheet #	NR-4320-O
Revision #:	B
Date:	9-15-19

NR4320-O

GPS Locked Reference Module Synthesized Secondary

KEY FEATURES



The signal source is a GPS driven, mixed-signal phase lock loop generating a 10MHz sine output from an intrinsically low jitter voltage controlled crystal oscillator. The output is a 0.5 Vrms sine. There is extensive built-in test that drives an LED and solid relay contacts for system integration. The unit also features an auto-calibration that compensates for long-term crystal drift provide years of precise performance. There is also a GPS lock status signal, optional PPS and serial port to provide access to NEMA time stamp data. Secondary channel synthesized from 10 MHz can be programmed from 14 KHz to 10 MHz.

Product Highlights

- Compact easily integrated
- Single 5 VDC supply
- Auto Calibration
- Built-in Test status signal
- GPS lock status signal
- Secondary 14KHz to 10 MHz

High Sensitivity GPS Receiver

The 26 channel he GT-87 is the high-sensitivity, high-accuracy Timing Multi-GNSS receiver. Supports TRAIM and various position modes, allowing it to output accurate and robust 1PPS synchronized to UTC time. Supports GPS, GLONASS, QZSS, SBAS, Active Anti-Jamming and Advanced Multipath Mitigation Functions.

Low Phase Noise- 10 MHz Sine

Offset Frequency (Hz)	Typical (dBc / Hz)
10	-110
100	-125
1k	-136
10k	-145

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Technical specifications

10MHz Sine	0.4 ±0.1 Vrms, 50 ohm- MCX- Option CMOS out
Harmonics	Less than -30dB
First Year Frequency Stability	± 50 ppb (long-term stability effectively cancelled by auto cal)
Temp Stability	±10 ppb
Daily Aging OCXO	±5 ppb/day
Yearly aging	±30ppb
Accuracy-Auto cal (24 hrs)	10 MHz-<10ppb (does not include crystal drift if not GPS locked)
Receiver sensitivity	-155dBm
PPS	30ns RMS accuracy, 3.3 volt logic
GPS Lock	Solid state relay contact status
Alert	Solid state relay contacts
Power Requirements	5 (±0.2)Vdc @ 1.0 amps max
Connectors	MCX 10 MHz output, sine wave
	MCX PPS CMOS
	MCX Antenna connector
	Auxiliary MCCX
Secondary Channel	14 KHz to 10 MHz—factory set in 1 ppm steps (3.3 Volt LVCMOS)
Secondary Duty Cycle	45 to 55%
Secondary Jitter	<100ps this is functional selected frequency (integer jitter<< non-integer)
Secondary Channel	Spread Spectrum clocking option (center or down spread)

Environmental and Mechanical

Operating temperature	0 to 50C non-condensing (extended temperature range available)
Storage temperature	-40 to 85C
Width	2.2 inch
Depth	4.3 inch
Height	1.5 in
Weight	~4 oz

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