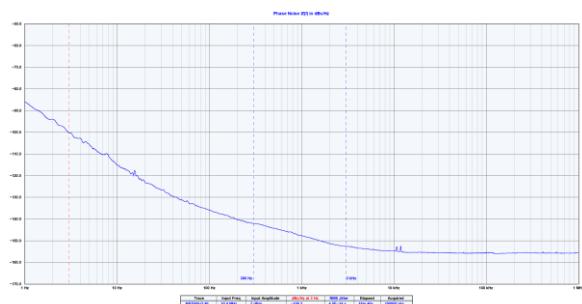
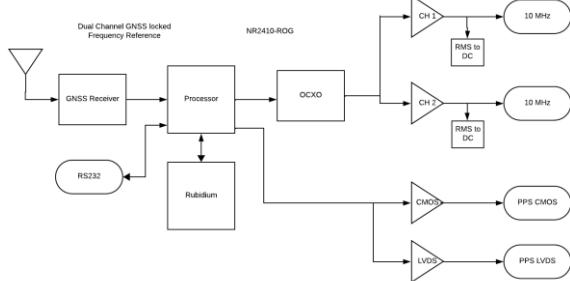


NR2410-ROG

10MHz, Low Noise, Dual Channel, GNSS Locked, Rubidium Reference



Phase Noise

| Offset Frequency (Hz) | |
|-----------------------|------|
| Typical (dBc / Hz) | |
| 10 | -115 |
| 100 | -135 |
| 1K | -145 |
| 10k | -155 |

High Performance reference featuring the low phase noise of an OCXO, holdover performance of Rubidium and long-term stability of GNSS locking. PPS output at CMOS levels can drive 50 Ohm load. PPS also present as LVDS on the rear panel. NMEA data available on serial port.

Technical Specifications

| | |
|-------------------------|--|
| Output | 10 MHz, 1.0 Vrms ± 0.2 , into 50 Ohms, two channels, Sine |
| Harmonic Distortion | < -30 dBc |
| Connectors | BNC |
| 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 | <2 ns |
| Connector | BNC |
| Load Impedance | 50 Ohm |
| LVDS | Three pin connector on rear (Phoenix 1757255, mates with 1757022) |
| Location | rear |
| 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 |

| | |
|---------------------------------------|--|
| Remote interface & control | |
| Protocol | RS232 NMEA-0183 |
| Connector | DB-9 |
| Location | Rear panel |
| Protocol | Bit plus stop |
| Standard Baud Rates | Selectable 4800, 9600, 19200, 38400, 57600 or 115200 bps |
| | |
| Rubidium Atomic | |
| Accuracy at shipment | +/-1.0E-10 |
| Warm-up time | <15 minutes |
| Time of lock | <5 min -130 dBm |
| Time to achieve accuracy | <±1E-9<20 minutes |
| Aging - monthly | <±5E-11 |
| | |
| Stability: Allan Deviation | |
| 1s | <3E-10 |
| 10s | <1E-10 |
| 100s | <3E-11 |
| SSB Phase noise for 10Mhz | Standard |
| 10Hz | <-115dBc |
| 100Hz | <135dBc |
| 1000Hz | <-145dBc |
| 10000Hz | <-155dBc |

Environmental and Mechanical

| | |
|-----------------------|--|
| Operating temperature | 0 to 50C non-condensing |
| Storage temperature | -40 to 70C |
| Height | 1.5 inches |
| Width | 7.0 inches |
| Depth | 7.5 inches |
| AC input | 90 to 250 VAC, 50/60hz, less than 10 watts power adapter |
| Weight | ≈1.5lbs |

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