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## Board Mounted GPSDO (TCXO) Recommended for USRP B200/B210



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## BOARD MOUNTED GPSDO KIT (PCB-MOUNTED GPS-DISCIPLINED TCXO)

This is a GPS-disciplined, temperature-controlled crystal oscillator (GPSDO), which is recommended for use with a USRP [B200/B210](#). The GPSDO provides a high-accuracy 10 MHz reference and 1 PPS signal, which allows developers to build systems that serve applications with improved frequency accuracy (75 ppb in unlocked condition) or global timing alignment (50 ns in locked condition).

Overview



Additional Resources



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which allows developers to build systems that serve applications with improved frequency accuracy (75 ppb in unlocked condition) or global timing alignment (50 ns in locked condition).

Unlike the [OCXO](#)-based version, which is recommended for use with the USRP [X300/X310](#), this lower power module can be used with the USRP [B200/B210](#) in a USB bus-powered configuration.

We recommend reading the [GPSDO Selection Guide](#) to ensure this is the right device for your application.

<b>Module Specifications</b>	
1 PPS Accuracy	±50ns to UTC RMS (1-Sigma) GPS Locked
1 PPS Output	3.3VDC CMOS
RS-232 Control	NMEA & SCPI-99 Control Commands, Integrated into UHD
GPS Frequency	L1, C/A 1574MHz
GPS Antenna	Active (5V compatible) or Passive
GPS Receiver	50 Channels, Mobile, WAAS, EGNOS, MSAS capable
Sensitivity	Acquisition -142dBm, Tracking -168dBm

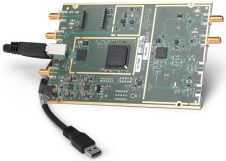
TTFF	Cold Start: <45 sec, Warm Start: 1 sec, Hot Start: 1 sec
ADEV	1E-11 at 1s
Warm Up Time / Stabilization Time	<5 min at +25C to 1E-08 Accuracy
Supply Voltage (Vdd)	3.3V
Power Consumption	0.5W Max
Operating Temperature	0C to +60C
Storage Temperature	-45C to 85C
<b>Oscillator Specifications</b>	
Frequency Output	10MHz
10MHz Retrace	$\pm 2E-08$ after 1 hour at 25C
Frequency Stability Over Temperature (Unlock Condition)	$\pm 7.5E-08$
Warm Up Time	< 1 min at +25C

Phase Noise at 10MHz	1Hz	-65dBc/Hz
	10Hz	-102dBc/Hz
	100Hz	-132dBc/Hz
	10kHz	<-152dBc/Hz

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## Compatible Products

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USRP B200 (Board Only)

The USRP B200 provides a...

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USRP B210 (Board Only)

The USRP B210 provides a...

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Compatible Products



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