

GPS Timing & Frequency Reference

- Accurate to 25ns RMS UTC
- No Drift
- High Stability
- Internationally Traceable Standard



Approx actual size

The Quartzlock E8-X represents a breakthrough in exceptionally low cost, traceable, calibration-free "GPS" frequency & time standards. These very low cost references maintain the high frequency & time accuracy required for demanding applications. This product is available as a PCB level component.

Features

- 1×10^{-12} accuracy
- 12 Channel GPS Receiver with TRAIM
- 10MHz Output
- 1PPS Output

Benefits

- No calibration required
- 12 Channel GPS Receiver provides high accuracy UTC Time & Frequency Reference
- Very cost effective
- 1 year warranty
- Compact form factor

Applications

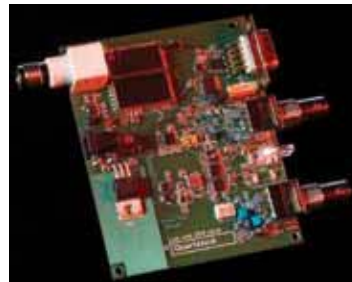
- Production Test Frequency Reference
- Time & Frequency standard for calibration & RF Laboratories
- Frequency Standard for counters, signal generators, Spectrum & Network Analysers
- Time & Frequency Reference for satellite communications ground stations CDMA, LTE, DTV & DAB

Specification

Outputs	a) Sinewave	10MHz, 12dBm +/- 2dBm into 50 Ohms
	Harmonics Spurii	<-50dBc <-75dBc
Frequency Accuracy	b) TTL	1pulse per second
	3.3VCMOS	4ns standard deviation
Frequency Accuracy	1x10 ⁻¹² Long Term	
Short Term Stability	tau	Allan Variance (typ)
	1s	<2x10 ⁻¹⁰
	10s	<4x10 ⁻¹⁰
	100s	<5x10 ⁻¹¹
	1000s	<2x10 ⁻¹¹
	10000s	<5x10 ⁻¹²
Phase Noise (typ)	1Hz	-60 dBc
	10Hz	-90 dBc
	100Hz	-115 dBc
	1kHz	-130 dBc
	10kHz	-140 dBc
	Lock Indicator	On - Not Locked
Off - Locked, Low Phase Error		
Short flash every second -		
Locked, High Phase Error		
GPS Indicator	Green - Indicates number of satellites used in time solution	
	Amber - Indicates number of satellites tracked but not used in time solution	

Warm Time	<15 minutes to specified accuracy	
Power Supply	15V dc (ac psu provided) Active GPS antenna supplied (5m lead). High gain antenna option with 20m lead.	
Current Consumption	250mA typical	
Size	E8-X	105 x 30 x 125mm desktop module
	Option 43	100 x 120mm
USB Option	Ask Quartzlock	
Option 43 (E8-X or Y)	PCB version	
Option 46	Antenna & PSU (5m antenna lead) (for the E8-X OEM)	
Option 47	High gain antenna & PSU (20m antenna lead)	

E8X-OEM (Option 43)



Survey, Satellite Azimuth & Elevation, Navigation, Timing & Signal Quality Monitoring

These software packages will find educational survey and GNSS applications. Demonstration of the location, timing and navigation functions are provided.



Quartzlock GPS instruments have been designed to work with various external software packages such as WinOncore.

These programmes enable the main parameters of the GPS signals to be easily verified, particularly input signal level and satellites in view.

WinOncore12 has been designed for use as an evaluation and testing tool in conjunction with Motorola's GT, UT and M12 Oncore GPS receivers. This utility will aid the user in initializing and operating the Oncore receiver, displaying, plotting and printing data from the receiver, and recording and replaying data files.

Other Oncore receivers such as the VP, Basic or XT Oncore may also be used with WinOncore12; however, not all of the input and output (I/O) messages are defined. If you are using a receiver which supports I/O messages not defined in WinOncore12, you may customize support for each desired message in the Command Manager.

WinOncore12 supports both NMEA and Motorola Binary protocol, and thus may be used to record live data or playback previously recorded data from a NMEA (*.GPS) file or Motorola Binary (*.bin) file.

WinOncore12 will run under Windows 95/98/2000 and NT.

Quartzlock accept no responsibility for accuracy or performance of these external programs.