

# GPS Timing & Frequency Reference

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- Accurate to 25ns RMS UTC
  - No Drift
  - Internationally Traceable Standard
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The E8-X represents a breakthrough in low cost, traceable, calibration-free “GPS” frequency & time standards. These low cost references maintain the high frequency & time accuracy required for demanding applications. This product is available as a PCB level component.

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## Features

- $1 \times 10^{-12}$  accuracy
- 10MHz output
- 1PPS output
- NMEA output

## Benefits

- No calibration required
  - GPS receiver provides high accuracy UTC time & frequency reference
  - Compact form factor
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## Applications

- Production test frequency reference
- Time and 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	E8-X
<b>Type</b>	<b>VTCXO Desktop</b>
<b>Output</b>	
Frequency	10MHz
Level	12dBm ±2dBm 50ohms
Number	1
Connector	BNC
<b>Frequency Accuracy</b>	1.00E-12
<b>Frequency Stability</b>	
1s	2.00E-10
10s	4.00E-10
100s	5.00E-11
1000s	2.00E-11
<b>Phase Noise</b> dBc/Hz in 1Hz BW	
1Hz	-60dBc/Hz
10Hz	-90dBc/Hz
100Hz	-115dBc/Hz
1kHz	-130dBc/Hz
10KHz	-140dBc/Hz
<b>Harmonics</b>	<-50dBc
<b>Spurious</b>	<-75dBc
<b>Start Up (Warm) Time</b>	<15 Minutes
<b>1PPS</b>	
Accuracy	<±75ns
Level	3.3VCMOS
Number	1.00E+00
Connector	BNC
<b>Power Supply</b>	
AC	90 - 240Vac
DC	12 - 18Vdc
<b>Power Consumption @ 25°C</b>	
Warm Up	6W
Stabilized	3.75W
<b>Temperature</b>	
Operating	-20°C to +50°C
Storage	-40°C to +70°C
Humidity	90% (Non Condensing)
<b>GPS Antenna</b>	
Gain	28dB @ 3.3V
Noise Figure	0.8dB
Voltage	2.7-5 Vdc
Connector	BNC
Mounting	Magnetic
Cable	5m
<b>Mechanical</b>	
Colour	Black
Dimension	165 x 105 x 35mm
Dimension Packed	270 x 160 x 85mm
Weight	1kg