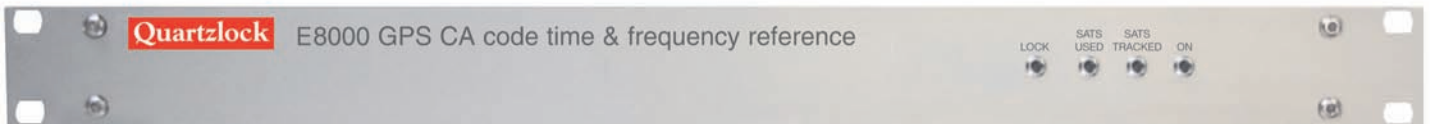


Economy GPS Timing & Frequency Standard



Description

The Quartzlock E8000 represent a breakthrough in exceptionally low cost, traceable, **calibration-free “off air” frequency & time standards**. These very low cost references maintain the high frequency & time accuracy required for demanding applications. Low distortion 10MHz Sine & 1PPS outputs.

Features

- 1×10^{-12} accuracy
- No Drift
- High Stability
- 1 Year Warranty
- Lowest Cost Available
- Very long production life & support.

Benefits

- No Calibration Required
- Traceable Reference, nationally & internationally

Applications:

- **Calibration of:** Counters, Frequency Meters, Spectrum & Network Analysers, Synthesizers, & Communication Analysers
- **Reference for:** VHF, UHF & PMR TX, CDMA, Tetra, DTV & DAB
- Production Test Frequency Standard
- Network Time Protocol use in Financial, Utilities, Security & Communications Timing
- OEM
- **Standard for:** Calibration Labs, Radio Workshops, Labs and Stations

Quality:

- Quartzlock's Hydrogen Maser based laboratory is used in production test & QA to ensure compliance with offset and stability specifications.

Economy GPS Timing & Frequency Standard

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SPECIFICATION

Outputs

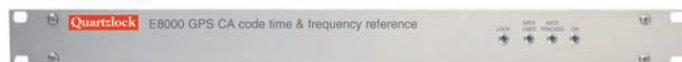
- a) Sinewave, 10MHz, 12dBm +/- 2dBm into 50 Ohms
Harmonics < -50dBc
Spurii < -75dBc
- b) TTL, 3.3VCMOS, 1pulse per second

Frequency Accuracy	1x10 ⁻¹² Long Term	
Short Term Stability	tau	Allan Variance
	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	85 ... 240V ac	
Current Consumption	250mA typical	

Size

- a) 19" x 1.75" 1U rack mount
- b) 105 x 30 x 125mm desktop module

Antenna Supplied with cable & connectors



OPTION 41

Interface	Shared between DPLL and GPS receiver
DPLL	9.6kbaud, RS232, PC compatible (8bits no parity, no handshake)
GPS	9.6kbaud, Motorola binary format (8bits no parity, no handshake)
DPLL Tracking	5mHz to 500mHz typical in 8 binary Bandwidths increments default 20mHz

OPTION 42

Outputs	See A5000 Spec 6 x10MHz low distortion, sinewave, isolated, +13dBm 1V rms 50 Ohms
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OPTION 48

		Low Noise & Ultra Low Noise (contact Quartzlock)			
Short Term Stability	Phase Noise				
		(typ -dBc/Hz)			
tau	Allan Variance	Options (contact Quartzlock)			
1s	x10 ⁻¹¹	1Hz	69	90	100
10s	x10 ⁻¹¹	10Hz	98	120	130
100s	x10 ⁻¹²	100Hz	120	130	150
1000s	x10 ⁻¹²	1kHz	130	145	155
10000s	x10 ⁻¹²	10kHz	140	145	155
		100kHz	143	145	-

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Measurement