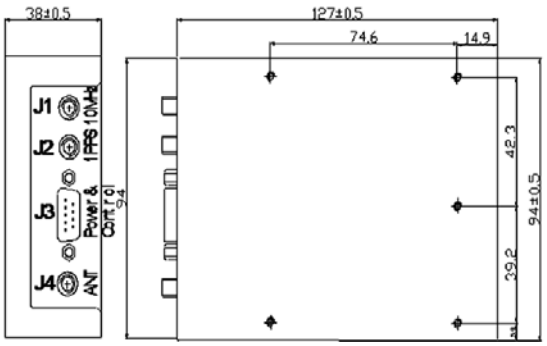
Quartzlock E10-GPS

GPS Disciplined Rubidium Oscillator

- Low Phase Noise
- High Short Term Stability
- RS232C Digital Monitor & Control



The E10-GPS Disciplined Rubidium Oscillator is the most cost effective way to maintain the high time & frequency accuracy required for demanding applications for the OEM manufacturer. This Rubidium Oscillator provides the precision synchronization required by base stations, optical network nodes, and high-speed digital networks.

Features

- 12V dc operation
- Low Distortion
- 7 minutes to lock
- 10MHz Output
- 1PPS Output

Benefits

- Cost effective GPS Disciplined Rubidium
- 2 year warranty
- GPS Traceable Standard
- Calibration free
- Quick & simple to install

Applications

- Internal Frequency Reference
- Telecom Network Synchronisation
- Cellular Wireless Base Stations

Specification

Accuracy	Disciplined to GPS or to EXT. 1PPS	Frequency	≤$1x10^{-12}$ (after disciplined for one day, 24 hours average, 25°C)
		Time	±100ns (relative to GPS or Ext. input, 25°C)
	Holdover (no GPS)	Frequency	≤$5x10^{-12}$/day
		Time	≤1μs/24 hours
Short Term Stability	≤$3x10^{-11}$@1s ≤$1x10^{-11}$@10s ≤$3x10^{-12}$@100s		
Phase Noise	< -100dBc@10Hz < -130dBc@100Hz < -140dBc@1kHz		
Harmonics	<-40dBc		
Spurious	<-80dBc		
Temperature Coefficient	±$3x10^{-10}$ over -20°C ~+50C		
Time to Lock (@25°C)	<7 min		
Earth Magnetic Field Sensitivity	≤$2x10^{-11}$		
Retrace	≤$2x10^{-11}$		
Output	1×10MHz Sine wave (7~13)dBm/50Ω SMA 1×1PPS TTL/50Ω SMA PC channel (RS232) for Time & Locality & Other Data and Frequency Control		
Input	GPS Antenna/50Ω SMA Ext. 1PPS/50Ω BNC		
Mode of Operations	A. Disciplined to GPS B. Disciplined to external 1PPS C. Auto Select: first priority to external 1PPS and second to internal GPS receiver.		
Remote Setting Via Serial Port Software for PC	Export UTC time. Export the location of the local place, including longitude, latitude and length. Export the model of the Atomic Oscillator. Export the version number of the software. Adjust the accuracy of 10MHz.		
Power Supply Input Voltage Power Dissipation	 12VDC 22W@ Warm-up, 9W@ Steady (25°C)		
Dimensions	≤$127^{\pm0.5}$×$94^{\pm0.5}$×$38^{\pm0.5}$		
Weight	<0.6kg		
Operating Temperature	-40°C ~ +60°C		
Storage Temperature	-40°C ~ +70°C		
Humidity	≤90%		
MTBF	≥100000h		

Mechanical & Electrical

J1 (SMA):10MHz output
J2 (SMA): 1PPS output
J3 (9 PIN D-SUB):
- Pin1 +12V
- Pin2 GND
- Pin3 Lock Signal
- Pin4 1PPS_Ext
- Pin5 GND
- Pin6 TxD
- Pin7 Lock TAG
- Pin8 1PPS OUT_GPS
- Pin9 RxD

J4 (SMA): GPS Antenna