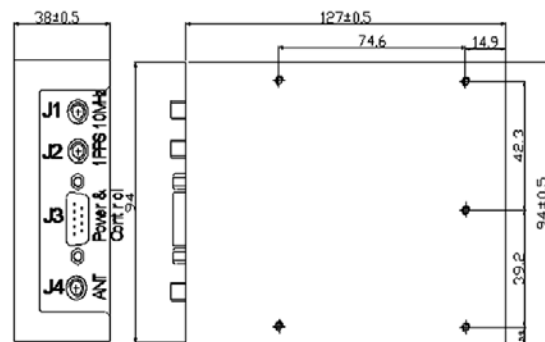


GPS Disciplined Rubidium Oscillator

- 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	$\leq 1 \times 10^{-12}$ (after disciplined for one day, 24 hours average, 25°C)
		Time	$\pm 100\text{ns}$ (relative to GPS or Ext. input, 25°C)
	Holdover (no GPS)	Frequency	$\leq 5 \times 10^{-12}/\text{day}$
		Time	$\leq 1 \mu\text{s}/24 \text{ hours}$
Short Term Stability	$\leq 3 \times 10^{-11}@1\text{s}$ $\leq 1 \times 10^{-11}@10\text{s}$ $\leq 3 \times 10^{-12}@100\text{s}$		
Phase Noise	$< -100\text{dBc}@10\text{Hz}$ $< -130\text{dBc}@100\text{Hz}$ $< -140\text{dBc}@1\text{kHz}$		
Harmonics	$< -40\text{dBc}$		
Spurious	$< -80\text{dBc}$		
Temperature Coefficient	$\pm 3 \times 10^{-10}$ over $-20^\circ\text{C} \sim +50^\circ\text{C}$		
Time to Lock (@25°C)	$< 7 \text{ min}$		
Earth Magnetic Field Sensitivity	$\leq 2 \times 10^{-11}$		
Retrace	$\leq 2 \times 10^{-11}$		
Output	$1 \times 10\text{MHz}$ Sine wave (7~13)dBm/50Ω SMA $1 \times 1\text{PPS}$ 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	12VDC		
Input Voltage	22W@ Warm-up, 9W@ Steady (25°C)		
Power Dissipation			
Dimensions	$\leq 127^{\pm 0.5} \times 94^{\pm 0.5} \times 38^{\pm 0.5}$		
Weight	$< 0.6\text{kg}$		
Operating Temperature	$-40^\circ\text{C} \sim +60^\circ\text{C}$		
Storage Temperature	$-40^\circ\text{C} \sim +70^\circ\text{C}$		
Humidity	$\leq 90\%$		
MTBF	$\geq 100000\text{h}$		

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