

# Firefly-1A GPSOCXO Module Spec – Extended Temperature Option

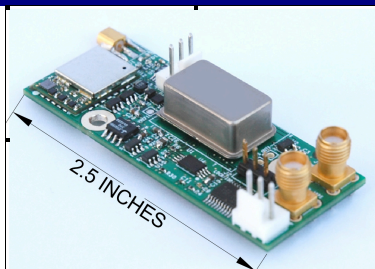


- -40°C to +75°C Temp Range
- 1.0 X 2.5 X 0.5 Inch Package
- < 1 Min. Warm Up
- 50 Channel WAAS GPS Receiver
- PRELIMINARY SPECIFICATION

## TYP. ELECTRICAL SPECIFICATIONS:

<b>Module Specification:</b>		
1 PPS Accuracy	±50ns to UTC RMS (1-Sigma) GPS Locked	
Holdover Stability	<±11us over 3 Hour Period @+25°C (No Motion)	
1 PPS Output (OCXO Flywheel Generated)	3.3VDC CMOS	
RS-232 Control	NMEA and SCPI-99 Control Commands 1PPS Level Output for Linux SNTP Server Software (with D Sub RTS pin)	
Avionics Support	3D Velocity Vector (Velocity Output for the X, Y, and Z planes)	
GPS Frequency	L1, C/A 1574MHz	
GPS Antenna	Active or Passive	
GPS Receiver	50 Channels, Mobile, WAAS, EGNOS, MSAS capable	
Sensitivity	Acquisition -144 dBm, Tracking -160 dBm	
TTFF	Cold Start - <45 sec, Warm Start - 1 sec, Hot Start - 1 sec	
ADEV	1s - 1E-11	
TTL Alarm Output	GPS Unlock and Hardware Failure, and LOCK indicators	
Warm Up Time / Stabilization Time	<5 min at +25°C to 1E-08 Accuracy	
Supply Voltage (Vdd)	8.0V to 14.0 VDC (12 VDC Nominal)	
Power Consumption	<2W Max, 1.35W Typ.	
Operating Temperature	-40°C to +75°C	
Storage Temperature	-45°C to +85°C	
<b>Oscillator Specification:</b>		
Frequency Output	10MHz Sine Wave	
10MHz Retrace	±2E-08 After 1 Hour @ +25°C	
Frequency Stability Over Temperature (Unlock Condition)	±2.5E-07	
Output Amplitude	+13dBm ± 3dBm	
Warm Up Time	< 1 min @ +25°C	
Phase Noise	1Hz	-80dBc/Hz
	10Hz	-110dBc/Hz
	100Hz	-135dBc/Hz
	1kHz	-145dBc/Hz
	10kHz	<-145dBc/Hz
<b>Connections:</b>		
1PPS Output, 10MHz Output	<b>Connector Type:</b> SMB (SMA upon special order)	
RS-232	3 Pin	

## FireFly-1A GPSDO (SMA version)



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