

# FireFly-IIA GPSDO SOCXO with Distribution Amplifier Module Spec



- 1.5 X 3 X 0.65 Inch Package
- Built-In 10MHz Distribution Amp with 3 isolated outputs (>80dB)
- Excellent Phase Noise
- Single Oven SC-Cut Crystal
- PRELIMINARY SPECIFICATION

## ELECTRICAL SPECIFICATIONS:

<b>Module Specification:</b>		
1 PPS Accuracy	±50ns to UTC RMS (1-Sigma) GPS Locked	
Frequency Accuracy	Better than ±3E-010 after 3 hours operation with GPS locked at 25°C	
Holdover Stability	<±60us over 24 Hour Period @25°C (No Motion, after 5 days with GPS)	
ADEV	0.1s to 1000s: <6E-11 with GPS lock	
1 PPS Output (OCXO Flywheel Generated)	LVDS output, RS-232 level output	
10MHz Output	Two LVDS and three Isolated Sine Wave at +13dBm ±3dBm	
Distribution Amplifier Port Isolation	2MHz: > 98dB, 10MHz: > 92dB, 1GHz: > 92dB	
RS-232 Control	Full control via SCPI-99 Control Commands	
GPS Frequency	L1, C/A 1574MHz	
GPS Antenna	Passive or Active, 5V	
GPS Receiver	50 Channels, Mobile, GPS, WAAS, EGNOS, MSAS supported, Galileo ready	
Sensitivity	Acquisition -144 dBm Tracking -160 dBm	
TTF	Cold Start - <45 sec, Warm Start - 1 sec, Hot Start - 1 sec	
TTL Alarm Output	GPS Unlock and Hardware Failure indicator	
Warm Up Time / Stabilization Time	<45 min at +25°C to 1E-09 Accuracy Typ.	
Supply Voltage (Vdd)	12 VDC Nominal ±5%	
Power Consumption	<3.2W at +25°C	
Operating Temperature	-25°C to +75°C	
Storage Temperature	-45°C to +85°C	
<b>Oscillator Specification:</b>		
Frequency Output	10MHz	
10MHz Retrace	±2E-08 After 1 Hour	
Frequency Stability Over Temperature	±1.5E-08	
Output Amplitude	Output Isolation: >80dB, +13dBm ±3dBm, LVDS +/-300mV	
Warm Up Time	< 15 min	
Phase Noise	1Hz	-92dBc/Hz
	10Hz	-120dBc/Hz
	100Hz	-140dBc/Hz
	1kHz	-145dBc/Hz
	10kHz	-150dBc/Hz
Designed Lifetime	> 10 years	

## FireFly-IIA GPSDO:



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