

Eurocan Integrated GPSDO (GPSTCXO™) Module Spec

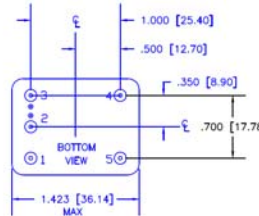
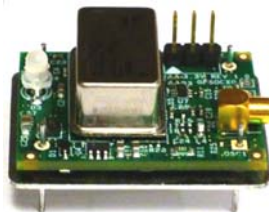


- 36 X 28 X 10mm (Eurocan) Module
- Integrated TCXO
- 50 Channel WAAS GPS Receiver
- lowest power, low cost
- PRELIMINARY SPECIFICATION

TYP. ELECTRICAL SPECIFICATIONS:

Module Specification:		
1 PPS Accuracy	±75ns to UTC RMS (1-Sigma) GPS Locked (<20ns typical)	
Oscillator Options	TCXO standard, OCXO option	
Serial Control	GPS NMEA and Status Output, SCPI-99 control optional	
GPS Frequency	L1, C/A 1574MHz	
GPS Antenna	Active or Passive	
GPS Receiver	50 Channels, Mobile, SBAS WAAS, EGNOS, MSAS capable	
Sensitivity	Acquisition -142 dBm, Tracking -158 dBm	
GPS TTFF	Cold Start - <45 sec, Warm Start - 1 sec, Hot Start - 1 sec	
ADEV	1Ks <1E-010, 10Ks <2E-011 (GPS Locked, 25°C, no motion/airflow)	
TTL Alarm Output	GPS LOCK indicator	
Stabilization Time	<5 min at +25°C to 1E-08 Accuracy	
Supply Voltage (Vdd)	3.3V, <125mA	
Power Consumption	<0.5W	
Operating Temperature	-20°C to +70°C	
Storage Temperature	-55°C to +100°C	
Additional Features	status LED, NMEA-0183 support	
Oscillator Specification (TCXO):		
Frequency Output	10MHz CMOS	
10MHz Retrace	±2E-08 After 1 Hour @ +25°C (no GPS)	
Frequency Stability over Temperature, and over 24hrs	±1.5E-07 (no GPS), <5E-012 over 24hrs (with GPS)	
Output Amplitude	CMOS 3.3Vpp (5Vpp CMOS level optional)	
TCXO aging (fully compensated by GPS)	±1ppm per year without GPS	
Phase Noise (TCXO)	1Hz	-73dBc/Hz
	10Hz	-102dBc/Hz
	100Hz	-131dBc/Hz
	1kHz	-148dBc/Hz
	10kHz	-152dBc/Hz
	100kHz	<-155dBc/Hz
Connections:		
10MHz Output (PIN-4), 3.3V power (PIN-3), TTL NMEA-0183 (PIN-1), Event (Lock) Status (PIN-2), Ground (PIN-5)	Connector Type: Standard Eurocan-size module, fits legacy Eurocan footprints, Status and NMEA output pins are driven through 2.2K resistors so footprint is 100% compatible to analog Eurocan OCXO's (using REF and EFC pins for status)	

GPSTCXO™ Module (open-frame non-enclosed version):



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