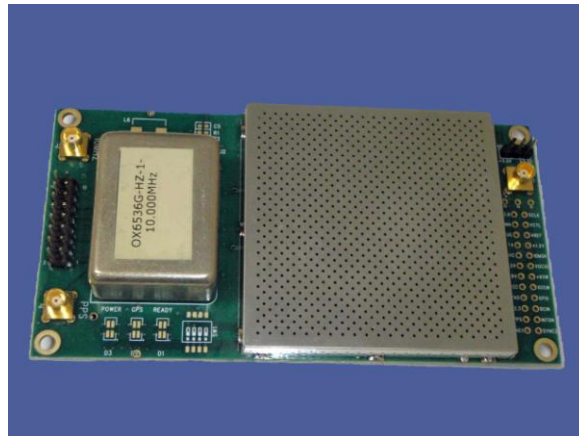
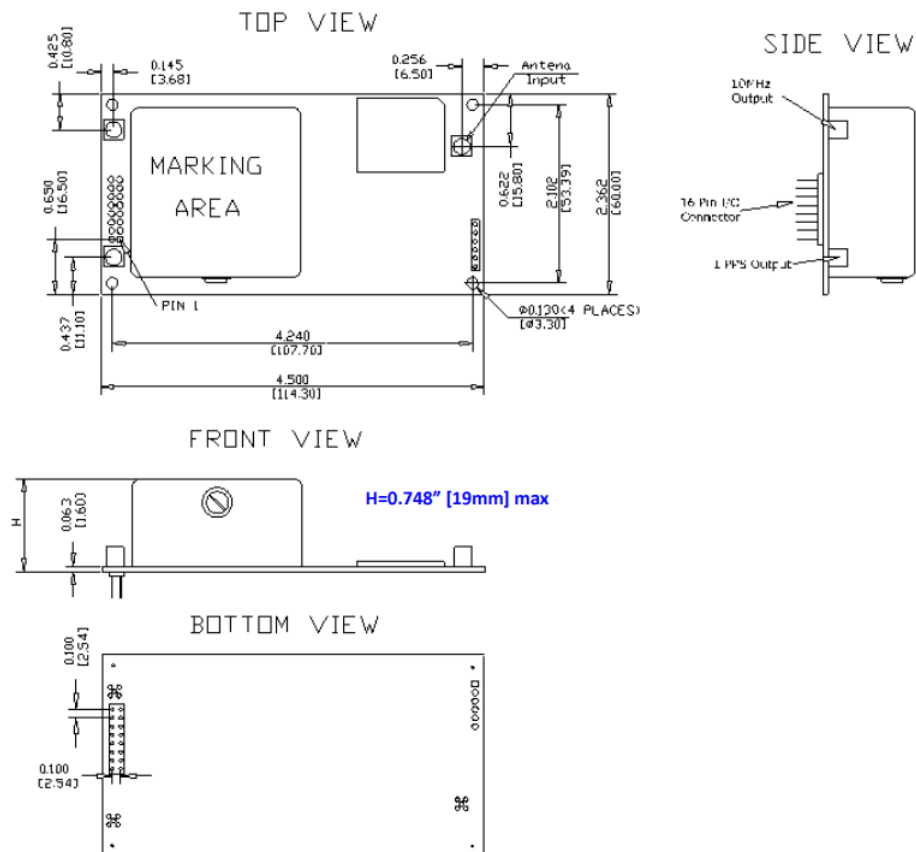


The SY-GSC10S is a flexible and accurate GPS disciplined time and frequency source that has been designed as a subsystem level module.



- MECHANICAL DIMENSIONS**



• PIN ASSIGNMENT

The SY-GSC10S has two RF connectors type MCX¹ used for 10MHz and 1PPS mounted on the top. The module uses a dual row 16 pin (2x8) 0.100" header as I/O connector² for status, control and communication interface mounted on the bottom. Reference User Manual for pin assignments.

Note 1: The suggested manufacturer is RADIALL part number R113 426 000W.

Note 2: The suggested manufacturer is AMP part number 104351-8.

• SPECIFICATIONS

General Specifications	Mechanical	4.50"x 2.36" x 1.06" (114.3 x 60 x 27 mm)	
	Time Reference	GPS (Timing optimized)	
	Frequency Reference	OCXO standard (Phase locked to GPS)	Alternate OCXO, DOCXO, or TCXO options available consult Ruby Quartz
	Operating Temperature	-20°C to +70°C	
	Storage Temperature	-40°C to +85°C	
	Humidity	Up to 95% non-condensing	
Frequency Outputs	Output Signal	10 MHz Sine Wave	
	Output Level	+10 dBm nominal into 50 ohms	
	Phase Noise	1Hz < -90 dBc/Hz	
		10Hz < -124 dBc/Hz	
		100Hz < -140 dBc/Hz	
		1KHz < -150 dBc/Hz	
		10KHz < -152 dBc/Hz	
	100KHz < -155 dBc/Hz		
Output Signal – 2	10 MHz Square Wave (TTL Level into 50 ohms)		
Long-term Stability (while tracking)	1x10 ⁻¹² after 24 hours of tracking		
Short-term Stability	1x10 ⁻¹¹ ($\Delta t = 1$ sec)		
Timing Outputs	1PPS	Level: TTL into 50 ohms	
	1PPS2S on even seconds	Level: TTL into 50 ohms	
	Accuracy	<±25 nsec to UTC while tracking	
	Jitter	<3 nsec typical	
	Holdover Stability	≤1 μs over 4 hours (Static Temperature and Position)	
Data Output	RS-232 Serial Port, selectable baud	NMEA 0183 format: \$GPGGA, \$GPGSV, \$GPRMC, \$GPZDA. Date, Time, Position, Velocity, Bearing, Status, GPS Monitoring	
	Logic transition indicators	Locked to GPS and Hardware Status	
Data Input	RS-232 Serial Ports, 9600 baud	NMEA 0183 format for input of Default overrides	
GPS Performance	Receiver Architecture	12 parallel channels, Timing Optimized GPS Receiver C/A code, L1 Carrier (1575.42 MHz), 5-Volt Active Antenna Code plus Carrier Tracking, Update rate: Once per second. Maximum Altitude: 18000m; Maximum Velocity: 515 m/sec	
	Time to First Fix	< 5 seconds typical (hot), <40 seconds typical (cold)	
Power	Input Supply Voltage	12 to 26 VDC	Special order: 5 VDC conditioned
	Warm-up Current (<3 min)	540 mA @ 12 VDC typical (6.5 Watt)	
	Steady State Operating Current	270 mA @ 12 VDC typical (3.2 Watt)	
Connectors	10 MHz	MCX	
	1 PPS	MCX	
	GPS Input	MCX	
	Power, Data, Auxiliary Outputs	16 pin Header, 0.1" pitch	