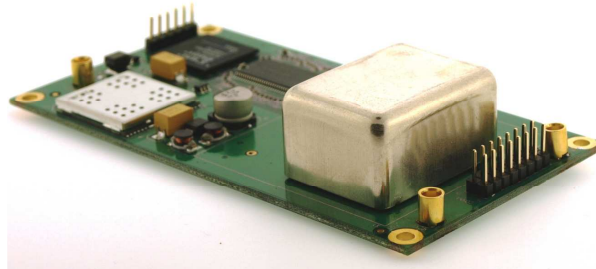


GPS Frequency And Timing Module

GMX1001

DESCRIPTION:

The Bliley GMX1001 GPS module is a flexible time and frequency reference module. This modules compact size, simple interface and outstanding holdover offers breakthrough price-performance in and adaptable high performance system.



FEATURES:

- Provides 10MHz and 1pps
- Outputs synchronized to GPS
- Excellent Phase Noise
- Excellent holdover capability
- Different oscillator choices to meet the most applications
- UART Port with NMEA protocol for monitoring
- Supply Options 5VDC and 12VDC

Electrical Performance			
<i>Parameter</i>	<i>Conditions</i>	<i>Specification</i>	<i>Unit</i>
Frequency Output ⁽¹⁾	Into 50Ω	10	MHz
Frequency Output Signal ⁽¹⁾	Into 50Ω	7±2	dBm
Frequency Accuracy Locked	24-hours average when locked to GPS	≤1E-12	
Frequency Accuracy Initial ⁽¹⁾	After power on, without GPS	≤2	Hz
Frequency Output Phase Noise ⁽¹⁾	-10Hz	-120	dBc/Hz
	-100Hz	-140	dBc/Hz
	-1KHz	-150	dBc/Hz
	-10KHz	-155	dBc/Hz
	-100KHz	-155	dBc/Hz
Frequency Output Spurious	Non-Harmonic	≤-70	dBc
Time Output	TTL Into 50Ω	1	PPS
Time Output Accuracy Locked	Over any 20-min. interval @ constant temperature	±50	nS RMS
Time Output Accuracy Holdover ⁽¹⁾	Over 4-Hours, under limited temperature variations	≤1	μS
Communications Interface ⁽²⁾	9600 bauds, 8 bits, 1 stop bit, Odd parity	UART	
Communications Protocol ⁽²⁾	Custom commands to support module control	NMEA-0183	
Status Indicators	Lock and Sync indicators (LED, LVCMOS output)	Active High	
GPS Input	L1 GPS C/A code from active antenna,	1575.42	MHz
GPS Antenna Power	100mA max, short circuit protection	+5	VDC
GPS Receiver	Independent tracking channels	12	
	TTFF Cold Start	36	s
	TTFF Hot Start:	4	s
	Sensitivity Acquisition (cold)	-141	dBm
	Sensitivity Acquisition (hot, warm)	-149	dBm
	Sensitivity Tracking	-156	dBm
Sensitivity Navigation	-155	dBm	
External Reference	LVCMOS logic	1	PPS
Supply Voltage ⁽⁴⁾		12	VDC
Power	Start-up (max)	6	W
	Steady State Power @ Room Temperature	3	W
Warm-up Time	Room Temperature	3	Min

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Environmental Specifications			
<i>Parameter</i>	<i>Conditions</i>	<i>Specification</i>	<i>Unit</i>
Operating Temperature ⁽³⁾	Ambient	-40 to +85	°C
Operating Altitude		-200 to 40,000 -60 to 12,000	ft m
Operating Humidity	non-condensing	90	%
Physical Specifications			
<i>Parameter</i>	<i>Conditions</i>	<i>Specification</i>	<i>Unit</i>
Package Size	L x W x H	4.5x2.36x1.06 114x60x27	in mm
Antenna Input		MCX	
1PPS Output		MCX	
10MHz Output		MCX	
16 Pin Header Connections ⁽⁵⁾	Pin 1: 1PPS Input Pin 2: N/C Pin 3: GND Pin 4: GND Pin 5: RX Pin 6: TX Pin 7: 10MHz Pin 8: N/C Pin 9: LOCK Pin 10: SYNC Pin 11: N/C Pin 12: RST Pin 13: GROUND Pin 14: GROUND Pin 15: VCC Pin 16: VCC		
16 Pin Header I/O Voltage Levels	V_{IH} (Min) V_{IL} (Max) V_{OH} (Min) V_{OL} (Max)	2.0 0.8 3.0 0.8	V V V V

- (1) Others available on request. Performance varies with temperature variations and selected oscillator.
- (2) Other communication protocols available on request.
- (3) Other operating temperatures available upon request
- (4) +5V or 12V versions available
- (5) All N/C (Not Connected) programmable on request

Consult factory for ordering instructions