

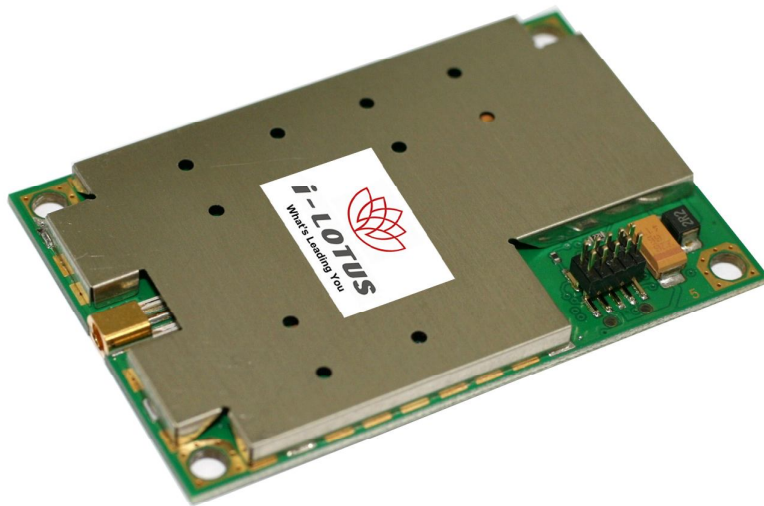


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# GPS - M48M Oncore

IL-GPS-0050-B

Advanced Precision GPS Timing Module



## Abstract

This document serves to describe the M48M Timing Oncore (Motorola Binary) hardware features and specification of the cost effective & high performance i-Lotus M48M Timing Oncore GPS Receiver.

What's Leading You

M48M Motorola Binary Command  
Technical Data Sheet



## TECHNICAL SPECIFICATIONS

General Characteristics Receiver Type	GPS L1 C/A SBAS L1 C/A QZSS L1 C/A	32 Tracking Channels + 2 Fast Acquisition Channels 60.0 x 40.0 x 11.4 mm* UART 256 KB + 16 Mbits Flash Memory Max Fix Rate 10 Hz
Performance Characteristics	Sensitivity	Tracking - 163 dBm Navigation - 158 dBm Reacquisition - 156 dBm
	TTF(Time To First Fix)	Cold Start < 36 sec Warm Start < 29 sec Hot Start < 2.5 sec
	Accuracy	Horizontal position < 1.5 m (CEP50) Velocity 515 m/s (Max) Altitude 18,000 m (Max)
	1PPS Timing Accuracy	<10 ns (1-Sigma) <30 ns (6-Sigma)
Environmental Characteristics	Operating Temperature Storage Temperature Humidity	-40°C to +85°C -55°C to +150°C RH 1'25g/m3
Electrical Characteristics	Power Supply Voltage Power Consumption	3.0 - 3.6 VDC mA (Full Power Mode) uA (Standby Mode)
Module Specifications	Output Messages	Latitude, Longitude, Height, Velocity, Heading, Time Motorola Binary Command Set NMEA 0183 (GGA, GLL, GSA, GSV, RMC, VTG, ZDA)
Standard Features	Antenna Support Antenna Sense Circuit RoHS Compliant Setup Configuration Position Hold Automatic Site Survey T-RAIM	Active / Passive / GNSS Yes Yes Saved to flash (Non-Volatile Memory) Yes Yes Yes

\* With header pins \*\* Optional

All preliminary values are subject to change.

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