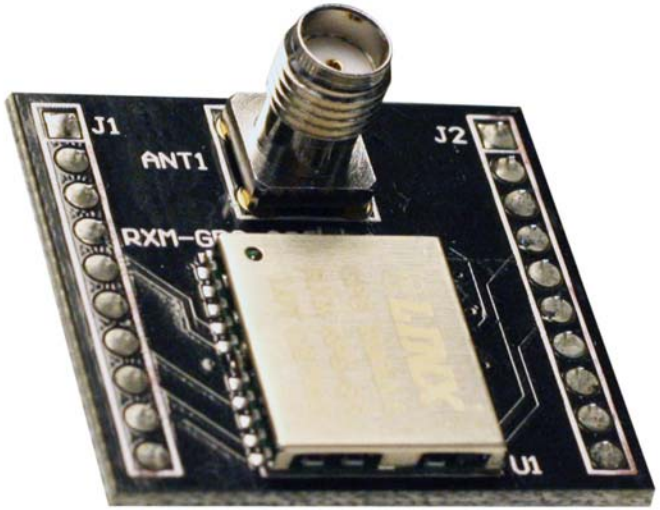
SG SERIES MASTER DEVELOPMENT SYSTEM DAUGHTER BOARD USER'S GUIDE



DESCRIPTION

The SG Series GPS receiver module is a self-contained high-performance GPS receiver with an on-board LNA and SAW filter. Based on the SiRFstar III chipset, it provides exceptional sensitivity, even in dense foliage and urban canyons. The module's very low power consumption helps maximize runtimes in battery powered applications. With over 200,000 effective correlators, the SG Series receiver can acquire and track up to 20 satellites simultaneously in just seconds, even at the lowest signal levels. These features, along with the module's standard NMEA data output, make it easy to integrate, even by engineers without previous RF or GPS experience. The Linx SG Series GPS modules offer a simple, efficient and cost-effective method of adding GPS capabilities to any product.

The Master Development System daughter board contains the surface mount SG Series GPS module, SMA connector and a ferrite bead (used to supply power to an external active antenna, such as the Linx UC or SH Series active GPS antennas) on a single board with through-hole headers. This small board makes prototyping with the SG Series module very easy.

ORDERING INFORMATION	
PART #	DESCRIPTION
ASY-MDEV-GPS-SG-DB	SG Series Master Development System Daughter Board

Revised 2/14/12

ELECTRICAL SPECIFICATIONS

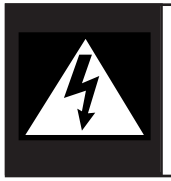
Parameter	Designation	Min.	Typical	Max.	Units	Notes
POWER SUPPLY						
Supply Voltage	V_{CC}	3.0	–	4.2	VDC	1
Supply Current:	I_{CC}					2
Peak		–	–	46.0	mA	6
Acquisition		–	32	–	mA	6
Tracking		–	28	–	mA	6
Standby		–	1.5	–	mA	6
Backup Battery Voltage	V_{BAT}	1.3	–	6.0	VDC	–
Backup Battery Current	I_{BAT}	–	10	–	µA	–
2.85V Output Voltage	V_{OUT}	2.79	2.85	2.91	VDC	–
2.85V Output Current	I_{OUT}	–	–	30	mA	3
ANTENNA PORT						
RF Input Impedance	R_{IN}	–	50	–	Ω	–
ENVIRONMENTAL						
Operating Temperature Range	–	-30	–	+85	°C	–
Storage Temperature Range	–	-40	25	+85	°C	–

Table 1: SG Series Receiver Specifications

Notes:

1. I_{OUT} = 0
2. V_{CC} = 3.3V, I_{OUT} = 0
3. V_{CC} = 3.3V
6. With passive antenna. Active antennas will increase current consumption.

Please see the SG Series GPS Module Data Guide for full specifications, features and operation instructions.



CAUTION

This product incorporates numerous static-sensitive components. Always wear an ESD wrist strap and observe proper ESD handling procedures when working with this device. Failure to observe this precaution may result in module damage or failure.

PIN ASSIGNMENTS

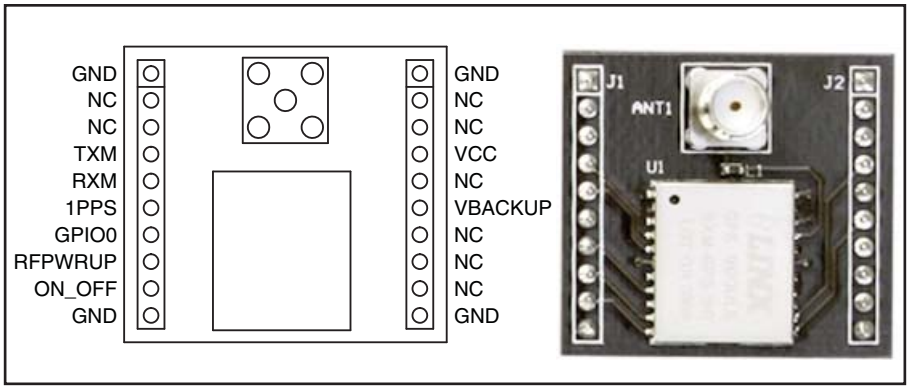


Figure 1: MDEV-GPS-SG-DB Pin Assignments

PCB LAYOUT

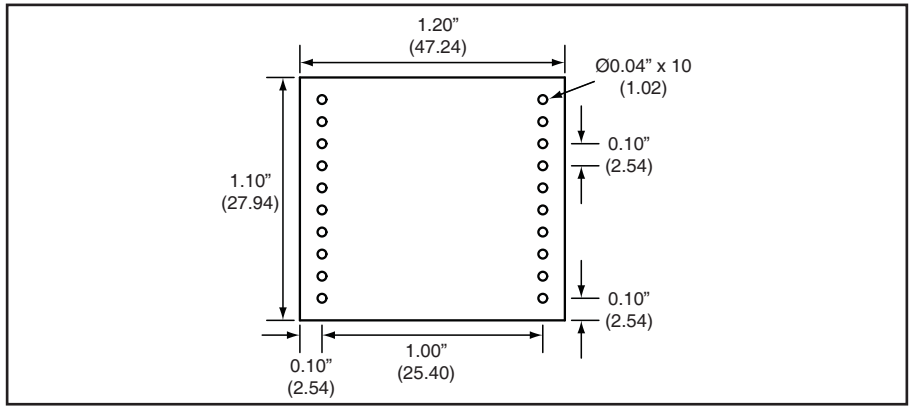


Figure 2: MDEV-GPS-SG-DB PCB Layout Dimensions

The daughter board uses 0.02" diameter round header pins on 0.1" centers. These headers can be soldered directly to the PCB or plugged into a matching socket to enable easy removal.

SCHEMATIC

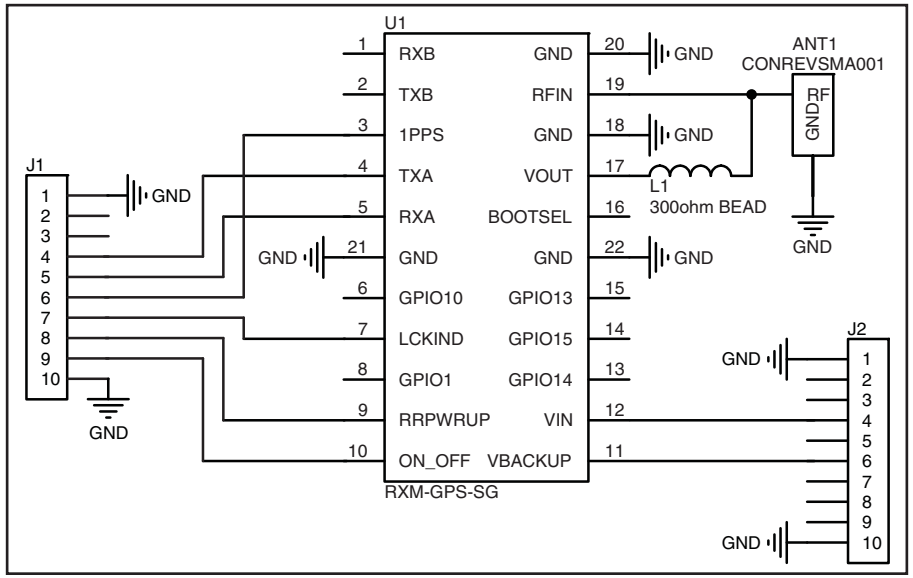


Figure 3: MDEV-GPS-SG-DB Schematic

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