GPS2020

SyChip GPS2020 Product Brief

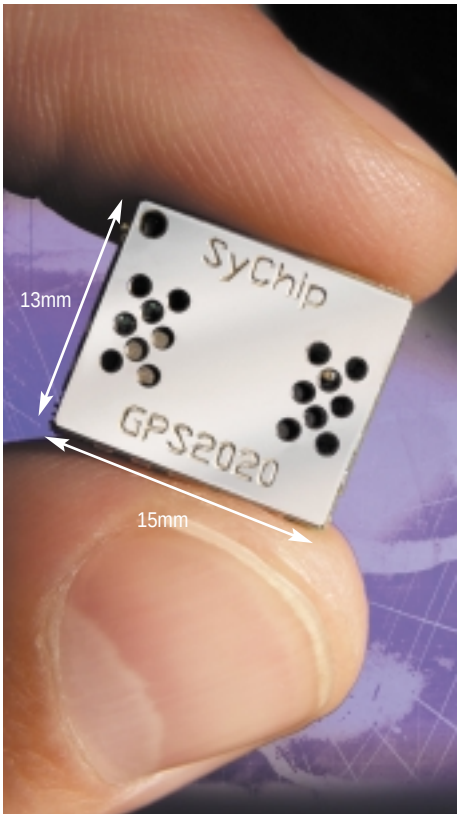
Global positioning system receiver for wireless internet appliances

SyChip, A Lucent Technologies new venture, introduces the GPS2020, one of the smallest Global Positioning System (GPS) receivers ever built: 13mm x 15mm area. Designed for wireless communication applications, the GPS2020 is aimed at enabling wireless location based services in cellular phones, palm-top computers and notebook computers. This module also represents a full fledged geolocation solution that enables US cellular phones to comply with the FCC E-911 Phase 2 mandate within the given timeframe.

Based on the Micro System Integration Technologies from Bell Laboratories, this GPS chip scale module is smaller and consumes less power than traditional PCB solutions. The small form factor allows the designers of Wireless Internet Appliances, (i.e. cellular phones, palmtop computers, etc., as well as other vertical applications), the ability to access GPS data with minimal impact on existing system designs. The module has low power consumption, high signal sensitivity, and all the attributes of a larger sized system.

The GPS2020 module contains two integrated circuits: an RF receiver and a Baseband processor. The latter includes an ARM processor core and a DSP engine. It is capable of retrieving all the necessary GPS data and provides a complete navigation solution (NMEA or SiRF binary) through the serial port. Customers will have plenty of space for their firmware since the system contains 8 Mbit of Flash memory. SyChip's highly integrated sub-system module resolves the key difficulties faced by designers in implementing GPS using a discrete chip set solution. By providing a fully tested module, SyChip also eliminates cost and schedule challenges faced by Wireless Internet Appliance manufacturers.

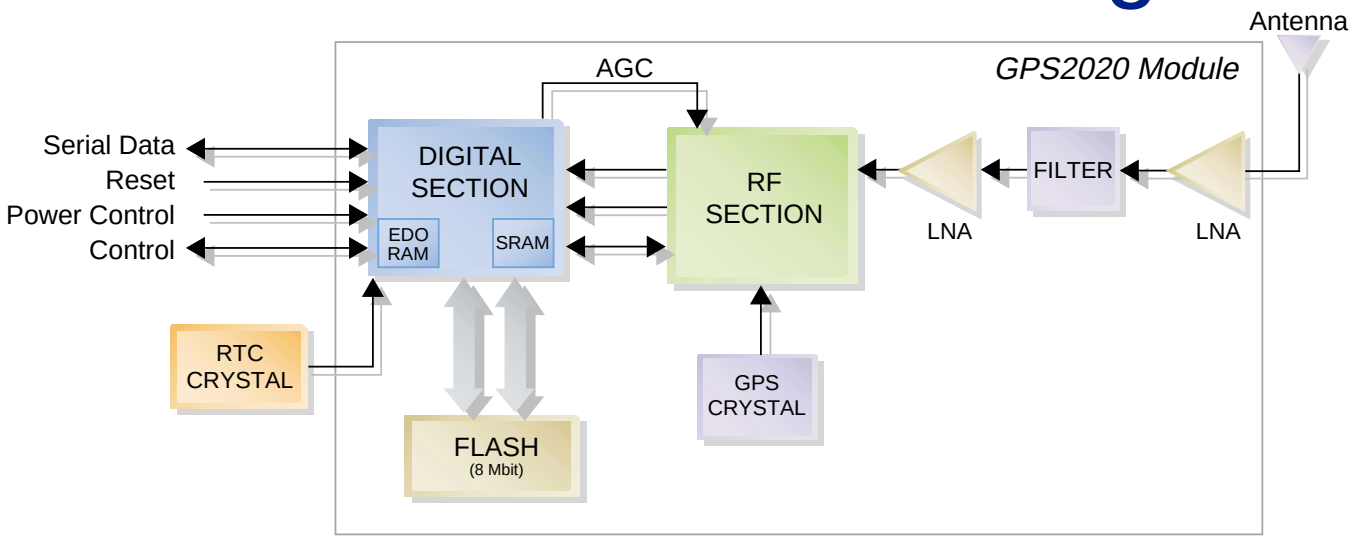
GPS Receiver Module



Features and Benefits

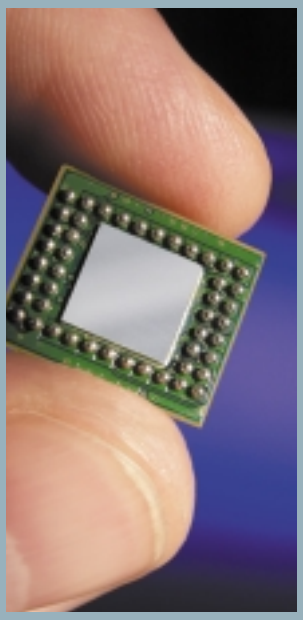
- Very small size:
  13mm x 15mm x 3.75mm
- Complete GPS functionality
- 12 Channel Receiver
- Baseband RF
  integrated module
- 8 Mbit Flash Memory and ARM Processor are available for customer application

GPS Module Block Diagram



Specifications* (SiRFStarII powered)

• Power Supply Voltage	3.3V
• Temperature Range	-40˚C to +85˚C
• Antenna Input	50 Ohms
• GPS Channels	12
• Update Rate	1Hz
• Cold Start	45 sec
• Warm Start	38 sec
• Hot Start	8 sec
• Reacquisition Time	100 millisec
• Minimum Signal	-140 dBm
• Maximum Speed	1852 km/h
• Maximum Altitude	18300 m
• Trickle State Current	1 mA
• CPU state Current	30 mA
• Tracking State Current	145 mA
• Position Accuracy	15 m (2d RMS, SA off)
• Dimensions	13mm x 15mm x 3.75mm**



* Specifications are subject to change without notice.
** Height as measured after mounting.

Visit our website: **www.sychip.com**
For sales inquiry, please send email to: sales@sychip.com

Corporate Headquarters

30 Technology Drive
Warren, NJ 07059
U. S. A.

Tel: (1) 908-941-1111
Fax: (1) 908-941-1174

California Sales Office

3180 Porter Drive
Palo Alto, CA 94304
U. S. A.

Tel: (1) 650-565-7602
Fax: (1) 650-565-7690

Asian Sales Office

New Shanghai Int'l Tower
20/F, E Suite
No. 360 Pu Dong Nan Road
Shanghai, 200120, PRC

Tel: (86) 21-6886-3554
Fax: (86) 21-5887-8039