



TEL: (886)-2-8227-1799
FAX: (886)-2-8227-1798
E-mail: Sales@ChipSiP.com
Address: 8F, No.186, JianYi Road
ChungHo City, Taipei, TAIWAN 235

Draft Datasheet

Rev. 0.2.d000302

PRODUCT: **CGPA104**

DESCRIPTION: GPS SiP Module with Antenna & MMCX Connector

Approved Signatures	鈺景科技 股份有限公司
	Contact Person:

Index

Index	1
Document History	2
Introduction	3
Description	3
Features	3
Architecture	4
Application.....	5
Connector Description (unit: mm).....	6
Package Dimension (unit: mm)	7
Status Information	8

Document History

Revision	Date	History
0.1.d000214	2011.02.14	Initial draft datasheet
0.2.d000302	2011.03.02	Edited Features section

Introduction

ChipSiP introduces CGPA104 for GPS application. The CGPA104 is a system-in-a-package (SiP) module. The Patch Antenna, RF switch, SAW Filter, LNA, TCXO, Crystal, Level Shifter, 1.8V LDO Regulator and RLC components are embedded into a SiP module.

The chip is integrated with both hardware components and the software codes. The decode information is sent out via UART port in NMEA 0183 format. For engineers, CGPA104 simplifies circuit designs, miniaturizes circuit boards.

Description

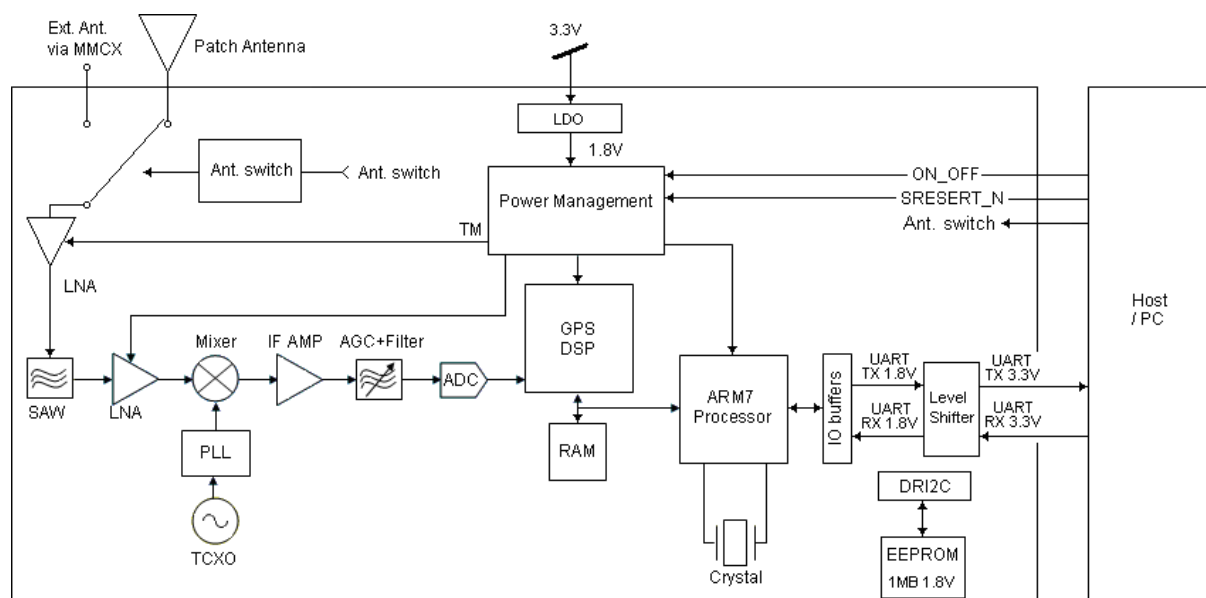
The CGPA104 is a complete navigation system built on a new SiRFstarIV and other specifications of key components for deriving highest performance in GPS application. These combinations are resulted in higher sensitivity, faster first fix, system stability in outdoor environment.

Features

- Stand alone GPS application
- SiRFstarIV GSD4e ROM GPS Engine
- Embedded Highly-Reliable Ceramic Patch Antenna
- MMCX connector for external active antenna
- Integrated SAW Filter, TCXO, RTC and RLC components
- 1.57542GHz +/- 2MHz pass-band for L1 frequency
- Out-band rejection >30dB from 0 to 4 GHz
- 48 track verification channels
- Navigation sensitivity: -160dBm

- Tracking sensitivity: -162dBm
- Cold start <35s
- Maximum acquisition power 198 mW
- Single DC 3.3V supply
- UART supported
- Active Jammer Remover: Removes in-band jammers up to 80-Hz. Tracks up to 8 CW jammers.
- SBAS (WAAS or EGNOS) support
- Smart sensor I²C interface
- Module size: 23.0 x 16.0 x 7.0 mm
- Operating temperature: 0 ~ 70 °C

Architecture



Application

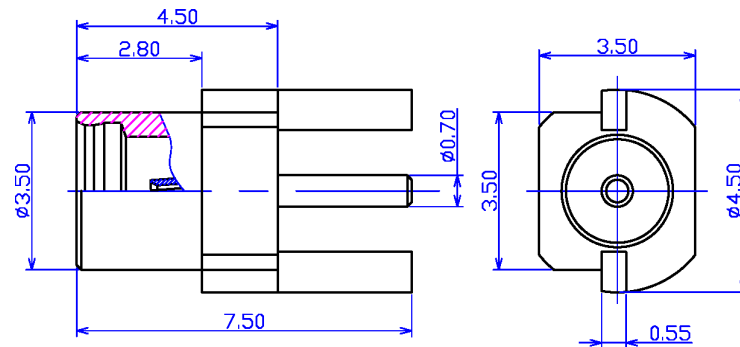
- Mobile gaming
- Cellular handsets
- Cameras
- Personal Navigation Device
- Asset tracking
- Other location-aware consumer devices

Premium on-chip software provides a new level of continuous location awareness by employing:

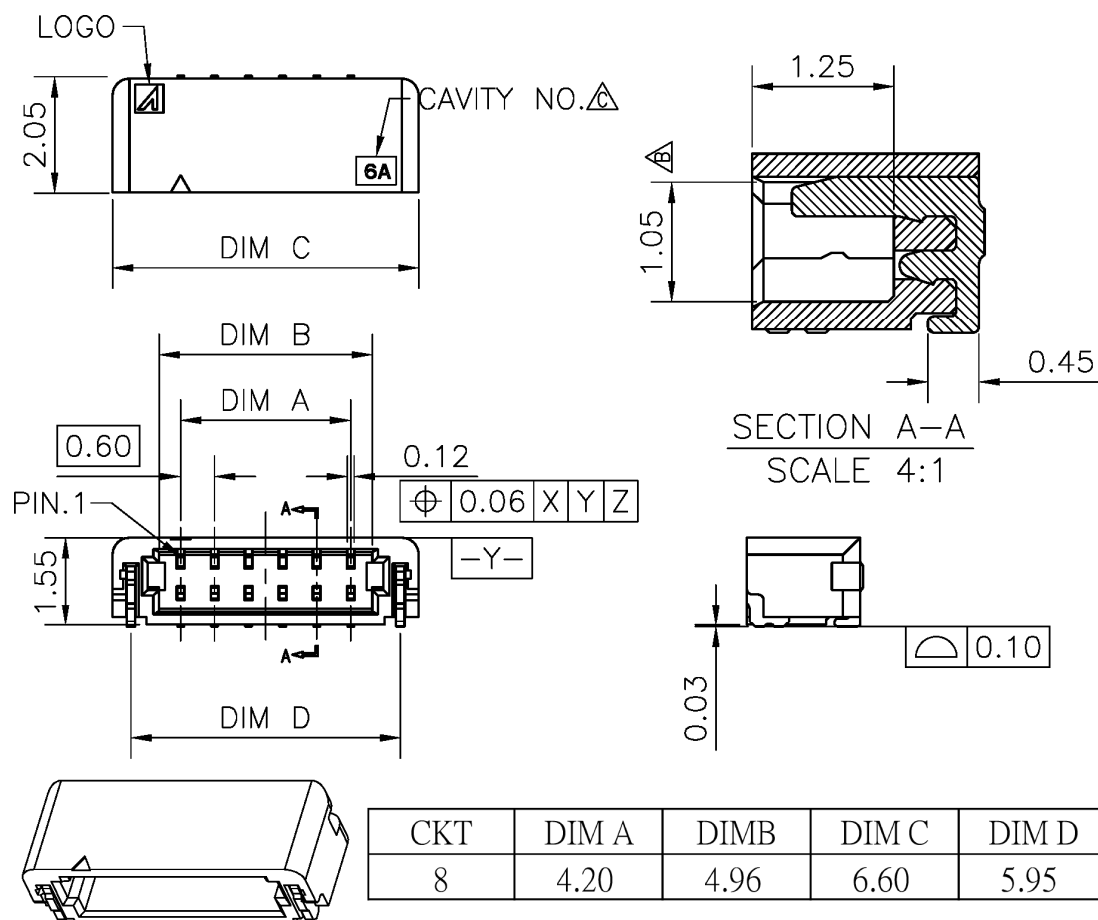
- Opportunistic ephemeris decodes and advanced power management, which enable the GPS receiver to stay in a hot-start condition nearly continuously while consuming very little power
- Full support for client-based and server-based SiRFInstantFix
- Dynamic contextual awareness, temperature monitoring, and MEMS sensors that work in concert to conserve power and boost performance

Connector Description (unit: mm)

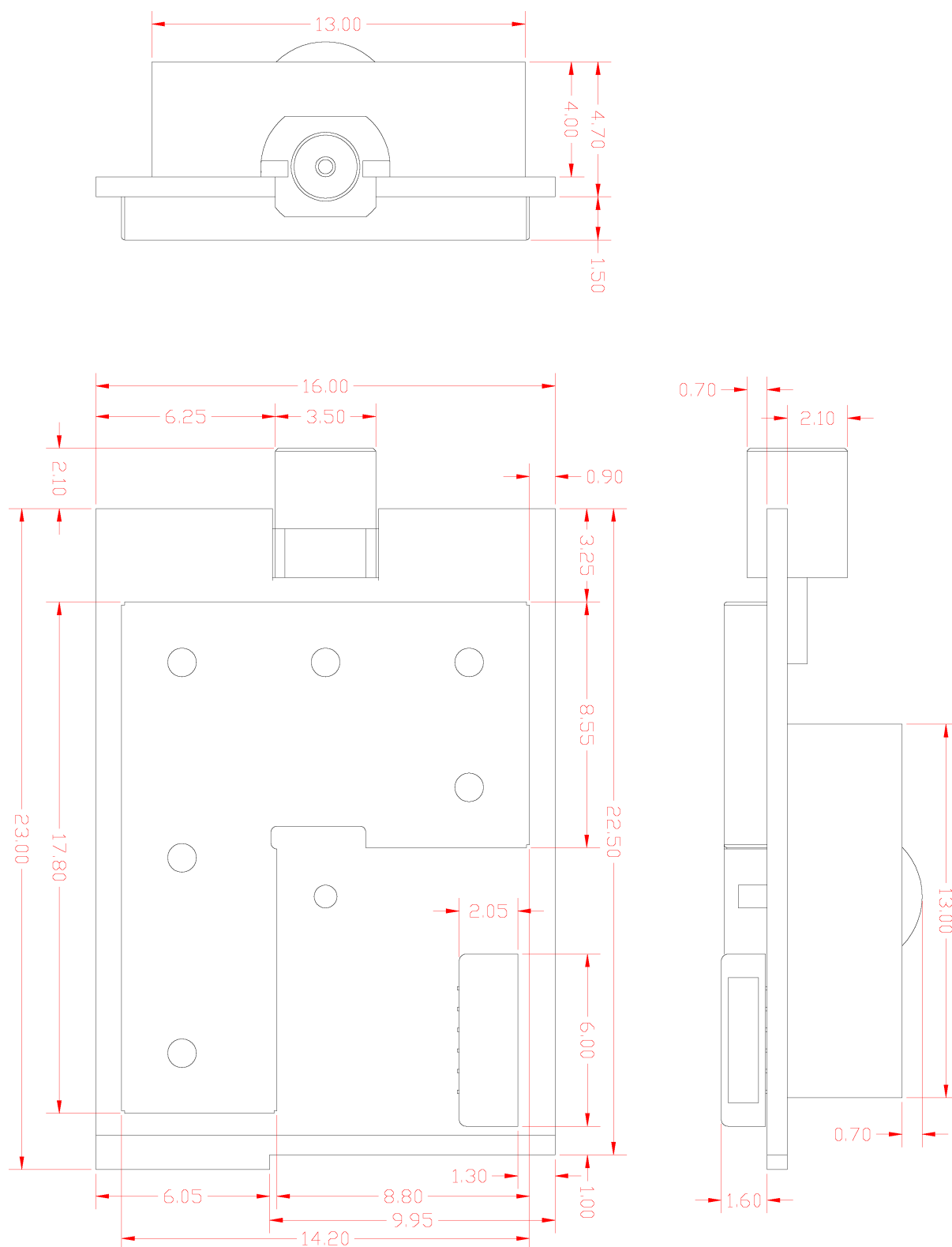
MMCX External Antenna Connector



Wire-to-Board Connector



Package Dimension (unit: mm)



Status Information

The status of this data brochure is draft Information.

Information for designers concerning ChipSiP products in development.

All specified values are the target values of the design. Minimum and maximum values specified are only given as guidance to the final specification limits and must not be considered as the final values.

All detailed specifications including pin outs and electrical specifications may be changed by ChipSiP without notice.

Pre-production Information

Pin outs and mechanical dimension specifications may not be finalized. All Specified values are the target values of the design. Minimum and maximum values are only given as guidance to the final specification limits and must not be considered as the final values.

All electrical specifications may be changed by ChipSiP without notice.

Life Support Policy and Use in Safety-critical Applications

ChipSiP products are not authorized for use in life-support or safety-critical applications. Use in such applications is done at the sole discretion of the customer. ChipSiP will not warrant the use of its devices in such applications.

Trademarks, Patents and Licenses

Unless otherwise stated, words and logos marked with [™] or [®] are trademarks registered or owned by ChipSiP or its affiliates.

ARM[®] and ARM7[®] are trademarks of ARM Holdings plc.

Other products, services and names used in this document may have been trademarked by their respective owners.

The publication of this information does not imply that any license is granted under any patent or other rights owned by ChipSiP. ChipSiP reserves the right to make technical changes to products as part of development programs. While every care has been taken to ensure the accuracy of the contents of this document, ChipSiP cannot accept responsibility for any errors.

Please refer to www.chipsip.com for compliance and conformance to standards information.