APPLICATIONS ➤Portable Navigation Devices ➤Location enabled convergence devices

SiRFatlasIV Multifunction Location Platform

GPS/Galileo Location and Multimedia Processor

PRODUCT OVERVIEW

Delivering leadership navigation, 65 nm process technology, and 500 MHz ARM11-fueled multimedia experiences, the SiRFatlasIV™ targets entry to mid range location enabled convergence devices. This cost efficient single-chip solution also provides an integrated GPS baseband, integrated touch screen controller, and MLC Flash controller—a blend of affordability and advanced technology.

GENERAL SPECIFICATIONS

Supported OS

- WinCE, Linux

Supported Software

Standard

- Base software platform to support core location, graphics, and multimedia functions

Premium

- SiRFInstantFix™ extended ephemeris services

Package

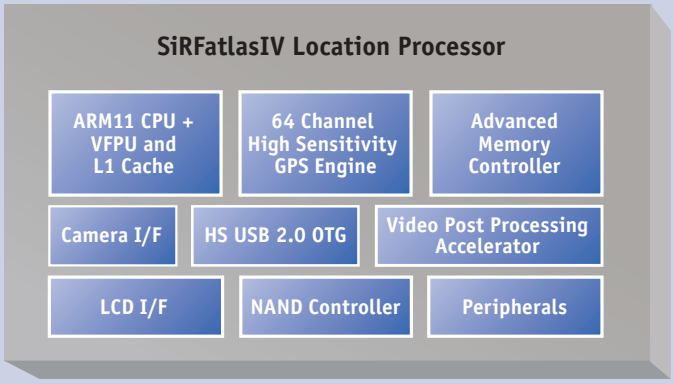
Type: 292-ball grid array (TFBGA) with a pitch of 0.65 mm
Pb free

Dimensions: 12 mm x 12 mm;
Height: 1.1 mm

KEY FEATURES

- High-performance GPS and Galileo location engine
- High-speed ARM11 CPU with floating point unit, 16 KB D/I cache, and 16 KB D/I TCM
- Supports QVGA H.264 mobile digital TV content and VGA MPEG4 video playback
- Advanced memory controller supports 166 MHz clock Mobile-DDR and 200 MHz clock DDR
- Embedded hardware for color space conversion, deinterlace, and scaler
- 8-bit NAND flash interface with 8-bit BCH HW ECC support for direct boot from SLC or MLC NAND
- Integrated four port SD/MMC/MMC+ controller and support for direct boot
- High-speed USB 2.0 port with internal PHY configurable as host or slave

SiRFatlasIV BLOCK DIAGRAM



TECHNICAL SPECIFICATIONS

Computing Core

ARM1136JF-S CPU

Vector Floating Point Unit

L1 cache 16 KB/16 KB (D/I)

TCM 16 KB/16 KB (D/I)

Memory Subsystem

System bus 64 bit

DMA 16 channels

Mobile-DDR, DDR1 support

GPS/Galileo Receiver

64 channels, high sensitivity

Seamless compatibility with SiRF GRF3i+

Storage

Direct boot from 8-bit SLC/MLC NAND Flash

SDHC/SD 2.0/MMC4.2 (x2)

Direct boot from iNAND/MoviNAND

Display, Graphics, Multimedia

Up to 800 x 480, 16 bit color

RGB565 or 16 bit CPU I/F TFT LCD panel

Hardware VPP (video post processor) for deinterlace, scaler, color space conversion

Two hardware overlay layers

8- or 10-bit video input port for camera or CCIR656 video stream with hardware downsampling and YUV/RGB conversion

Peripheral Connectivity

AC97/I2S

UART (x2), USP for PCM, DSP, I2S, SPI, UART, irDA

I^2C (x2)

10-bit ADC

High-speed USB 2.0

SD/MMC+/SDIO (x2) for WiFi, Bluetooth, mDTV, NAND storage, memory card

HIGHLIGHTED ADVANTAGES

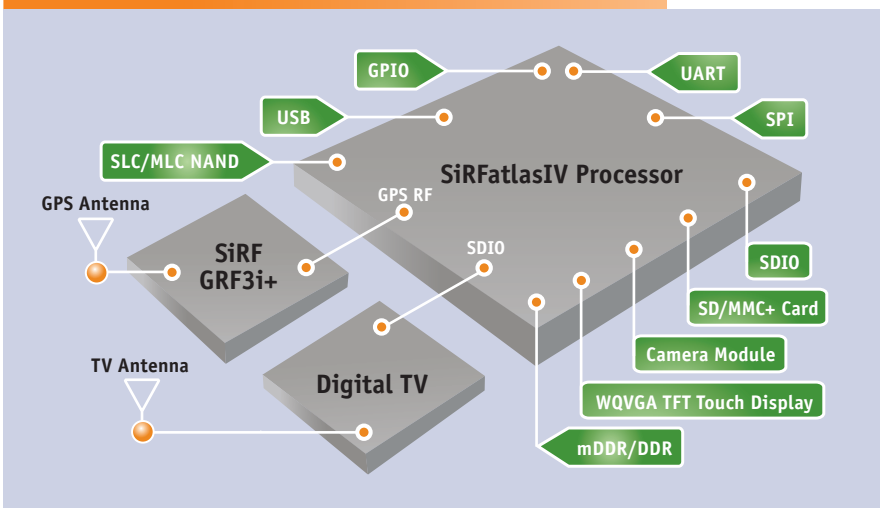
With the growing popularity of location centric devices, today's mobile user demands better and cheaper navigation with value-added functions such as multimedia entertainment, Bluetooth, and real time communication capabilities such as RDS-TMC for traffic and weather information. Its a tall order, but the SiRFatlasIV multifunction platform is designed to address all of these needs and in a cost-effective manner.

The SiRFatlasIV is powered by an ARM11 CPU with floating point unit and a location engine optimized for simultaneous tracking of GPS and Galileo satellites. Peak performance is ensured with a 64-bit system bus and a high-speed memory controller capable of supporting various DRAM modules including DDR 200/Mobile-DDR 166, providing adequate memory bandwidth for the most demanding application scenarios.

The built-in video post processing accelerator handles video rendering and display, allowing the powerful CPU to run at full horsepower for application processing. Popular mobile digital TV applications such as TDMB, DVB-H, and CMMB can run with no impact on CPU performance.

The SLC/MLC NAND and SD controller design allow the system designer the flexibility to select either a low cost or a robust NAND product. With an embedded GPS baseband, touch-screen controller, ADC, and high speed USB PHY, a lower system cost can be achieved. The SiRF GRF3i+ and digital TV chips connect seamlessly to the SiRFatlasIV processor to deliver full convergence capabilities.

SiRFatlasIV PLATFORM CONFIGURATION



ORDERING INFORMATION

For more information about this and related products, contact your SiRF representative, or call our sales force at (1) 408) 467-0410, or visit www.sirf.com.

For the location of your nearest authorized SiRF distributor, visit www.sirf.com.

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