

Chips

Indoor operation for GPS



SEQUOIA'S SiRF GSC3 and GSC3f combine a complete Autonomous GPS and A-GPS (assisted GPS) digital baseband processor, an embedded CPU and an RF front end in a single package. The GSC3f includes 4 megabits of flash memory.

They are designed to make location-based functionality easier to integrate into mobile terminals, including asset and offender tracking, personal location and other hand held terminals.

End users can determine their geographical location in a wider range of environments as Sequoia claims that, with a signal sensitivity of -158dBm, the GSC3 and GSC3f can operate within buildings, in urban canyons or under dense foliage.

www.sequoia.co.uk

Single chip with multiple DSPs

CRADLE TECHNOLOGIES has announced the first products in its CT3600 product family. The family integrates up to sixteen loosely coupled SIMD 32-bit DSP engines, eight general-purpose CPUs, 144 programmable I/O pins and a three-tiered memory hierarchy system on a single chip to accelerate and integrate multimedia infrastructure processing.

The first member of the family, the CT3616, can encode 16 real-time MPEG-4 channels (480fps) at SIF resolution, sixteen G.711 voice channels, perform a complete IP packet encapsulation (RTP/UDP) with a 10/100 Ethernet MAC and provides an integrated hard disk (IDE) or compact FLASH storage interface. It is seen as providing a 16-channel "DVR (digital video recorder) on-a-chip" for the surveillance industry.

A development environment includes Version 5.0 of Cradle's Software Development Kit (SDK) and the RDS3600 Digital Media Development Platform.

www.cradle.com

"Cell" debut clocks at 4Ghz

IBM, Sony Corporation, Sony Computer Entertainment Inc. and Toshiba Corporation have begun to disclose the detail of Cell, their jointly developed microprocessor.

A multi-core architectural design with super-computer-like floating point performance, Cell is being developed at a joint design centre, in Austin, Texas. The prototype chip is 221 mm², integrates 234 million transistors, and is fabricated with 90 nanometre SOI technology. During initial hardware testing of an eight synergistic processor implementation, it was clocked at speeds greater than 4 GHz.

It is aimed at entertainment and rich media applications, and will simultaneously support multiple operating systems, including conventional operating systems (including Linux), real-time operating systems for computer entertainment and consumer electronics applications and guest operating systems for specific applications.

www.ibm.com/chips
www.sony.net
www.toshiba.co.jp/index.htm

A \$2 FPGA

The Xilinx Spartan-3E FPGA family has devices ranging from 100K to 1.6M system gates, and, the company claims, delivers the lowest cost per logic cell in the FPGA industry with a quantity price of under \$2.00 for the 100K system gate devices.

The Spartan-3E is designed for gate-centric designs in digital consumer products, such as flat panel television. To reduce the use of discrete

devices it supports 18 common I/O standards.

A Spartan-3E version of the Xilinx development environment, ISE (7.1i) was also released and a starter kit is available.

www.xilinx.com/spartan3e
www.xilinx.com/ise

10-bit 1.5Gbps ADC

Atmel has announced a new 10-bit analog-to-digital converter (ADC) with a clock frequency of 1.5Gbps and with an embedded 1:4 LVDS demultiplexer for direct interfacing with standard FPGAs. The AT84AS003TP is for upgrading existing systems or designing new digitisers for digital receivers, test instrumentation or radar equipment applications.

At 1.5Gbps, Atmel claims performance such as 8.0 ENOB, 58dB SFDR at 1.5Gbps has been demonstrated in Nyquist conditions and that the 3GHz analog input bandwidth allows operation in second Nyquist zone with performance at up to 1.5GHz input frequency.

The embedded, selectable 1:2 or 1:4 demultiplexer allows direct interfacing with standard LVDS compatible FPGAs, without external circuitry. Timing or voltage tuning is not necessary, even when sweeping the sampling frequency from 100Mbps to 1.5Gbps.

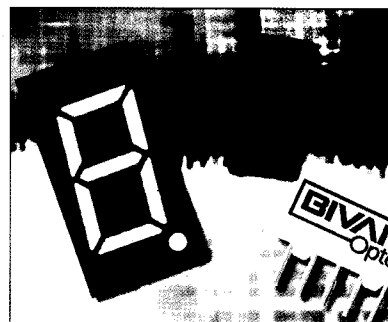
www.atmel.com

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AT84AS003VTP

Seven-segment displays

BIVAROPTO claims its new line of seven-segment displays deliver the industry's highest levels of uniformity, greatest brightness and colour consistency.

The new BD Series is available in a range of single-digit seven segment LED displays, with 6 different digit heights from 0.276" (7mm) to 1.0" (25.4mm), in 24 different styles and models. Common anode or cathode circuitry enables use in any numeric display configuration, including right and left hand decimal and 18 alpha characters. Standard wavelengths range from 465nm to 630nm, providing the full range of standard colours (blue, green, yellow and red). Standard face colour



is black with white diffused segments. Other segment or face colours are available.

www.bivar.com