



## Multicore audio DSP supports high definition audio standards

4 April 2007

Responding to the demand for increased memory and performance in advanced audio applications, *Freescale Semiconductor* unveiled at the *2007 International Consumer Electronics Show*, two digital signal processing (DSP) chips that are designed to support multiple high definition (HD) audio standards.

The Symphony DSP56720 and DSP56721 dual-core DSPs represent the first offerings in the company's family of multicore 24-bit audio processors.



"With the introduction of our first multicore audio DSPs, Freescale is expanding our award-winning Symphony DSP portfolio for home entertainment, automotive and professional audio applications," said Bernardino Baratta, general manager, Multimedia Applications Division at Freescale. "The performance demands of audio have increased exponentially over the past five years, and we believe this new line of multicore DSPs will drive next generation products that provide unprecedented user experiences, such as Blu-Ray and HD-DVD players, A/V receivers, guitar amplifiers and more."

"New, high-definition audio standards, which will be incorporated into consumer products in the near future, will require more processing power than a single DSP can reasonably provide," notes Morry Marshall, vice president of strategic technologies, *Semico*. "Freescale's multicore DSP family provides the performance needed while simplifying design, lowering time-to-market and reducing costs for many systems that would otherwise require multiple DSPs."

## Multicores meet higher data performance requirements

The Symphony single-chip audio IC solutions include two DSP cores, on-chip memory and a rich set of peripherals. They were designed using dual DSP56300 24-bit cores, which handle both the latest decoding standards and advanced post-processing on the same chip. Each core operates at 200 MIPs with a 200 MHz clock. This allows the chip to meet the high performance requirements of many audio applications including HD audio standards such as DTS-HD, Dolby Digital+ and Dolby TrueHD.

Many of today's high performance audio products use multichip DSP implementations. With these multicore audio DSPs, the need for a multichip solution is eliminated, significantly reducing board space and the cost of the design.

Code compatible with Freescale's existing 24-bit DSP solutions, the Symphony DSP56720 and DSP56721 enable customers to migrate quickly and easily to a higher performance solution. Both multicore DSPs incorporate the same plug-and-play software architecture that exists in the Freescale DSP563xx family and support not just the standard audio decoders but also enable flexibility and customisation of post processing algorithms.

The Symphony audio DSP56720 and DSP56721 multicore audio DSPs are targeted at consumer, professional audio and automotive applications that require high performance for audio processing.

### Credit(s)

Supplied By [Avnet Kopp](#)

Tel +27 (0)11 809 6100

## Related News

- **Security MCUs target M2M comms**  
[ [2 April 2008](#), [Infineon Technologies](#) ]
- **Ultra-low voltage MCUs**  
[ [2 April 2008](#), [NuVision Electronics](#) ]
- **Enhanced 32-bit CISC microcontroller line-up**  
[ [19 March 2008](#), [Hi-Q Electronics](#) ]
- **PIC32s with USB OTG functionality**  
[ [19 March 2008](#), [Avnet Kopp](#), [Future Electronics](#) ]
- **Rugged and sealed USB memory stick**  
[ [19 March 2008](#), [Arrow Altech Distribution \(AAD\)](#) ]

## Similar Articles

- **Stiffy disk replacement device simply plugs into USB**  
Cruzer Mini is one of the world's smallest (66 x 20 x 12 mm) flash memory drives and uses USB interface to achieve fast data transfer rates  
[ [13 August 2003](#) ]
- **MultiMediaCards**  
Infineon's MultiMediaCards (MMC) are said to be the world's smallest removable solid-state recording media  
[ [26 March 2003](#), [Electrocomp](#) ]
- **Lenslet Labs announces new optics-based DSP technology**  
"Lenslet has been successful in leveraging optical technologies originally developed for optical transmission and switching, and applying them to optical computing using a unique algorithmic approach."  
[ [27 February 2002](#) ]
- **Creating a serial peripheral interface for communications between microprocessors and peripherals**  
CoolRunner CPLDs operate at the lowest standby power (<100  $\mu$ A) of any CPLD available today, and they are an ideal programmable logic solution for providing interface controllers in portable or power sensitive applications  
[ [7 November 2001](#), [Avnet Kopp](#) ]
- **Flash memories - an exceptional evolution**  
ST has developed innovative products such as ultra-fast (25 ns) access time flash memories for hard disk drives and the world's first 32 Mb flash memory to combine a dual bank architecture and fast page mode access with full

functionality with a 1,8 V power supply

[ [24 January 2001](#), [AGAtronics Components \(see The Components Group\)](#), [Arrow Altech Distribution \(AAD\)](#), [Avnet Kopp](#), [Communica](#) ]

Where top candidates showcase.



Microsoft  
**Windows Server**

Copyright ©1995-2008 [Technews Publishing \(Pty\)](#)

[Ltd.](#). All rights reserved.

[Terms and conditions of use, including privacy policy.](#)

i n v e n t