



Toshiba provides ASIC technology, design platform and local support for development of iDTV tailored ARM®-based MPEG-4 processor

Neotion NP4+ decoder SoC delivered with minimum turn-around-time

Toshiba Electronics Europe (TEE) has successfully completed a complex ASIC development for Neotion, the French fabless semiconductor manufacturer specialising in MPEG-4 solutions for integrated digital TV (iDTV). By using Toshiba's proven process technology and advanced development platform - and working in close cooperation with local Toshiba engineering teams - Neotion was able to bring its new NP4+ MPEG-4 disruptive decoder SoC to market with minimum turn-around-time (TAT) from design to production.

Based on an ARM® 926 processor core running at 180MHz, Neotion's NP4+ is a single-chip solution that enables plug-and-play modules that bring MPEG-4 capabilities, as well as secured silicon based new generation conditional access, to legacy MPEG-2 iDTV technologies in line with the constraints of the mandatory DVB-CI (Digital Video

Broadcasting – Common Interface). By using Toshiba's established 130nm process technology and engineering support, Neotion has been able to create a 289-pin 15mm x 15mm PFBGA device that meets the power consumption, heat dissipation and size requirements of CI and CableCard® type modules while integrating very high levels of advanced functionality, including home networking and digital video recording.

The new IC was developed in conjunction with Toshiba's European LSI Design and Engineering Centre (ELDEC) in Düsseldorf. While implementing the ARM core and using advanced techniques such as pure CMOS one-time programmable memory (PCOP) for integration of security features developed by Neotion, ELDEC engineers managed to implement a number of key on-board features including design-for-test and ARM system integration. To keep TAT to a minimum, the engineering team used Toshiba's Universal Array™ (UA) SoC development platform and a special prototype production service. Universal Array is a flexible platform that speeds development time and can accommodate design changes at much later stages in the process than conventional methodologies.

Laurent Jabiol, the CEO of Neotion, comments: "Common Interface is gaining tremendous momentum because of the millions of legacy iDTVs that are now widespread in the market. The industry, operators and consumers, are all looking for seamless MPEG-4, security and a home network path towards the digital age, which our CI advanced patented modules perfectly fulfil. When developing the complex NP4+ processor, Toshiba's efficient process and professionalism allowed us to match performance and functionalities with tight power and heat dissipation module constraints. In addition the UA development platform, Toshiba's special prototype service, and the availability of local engineering teams were essential to achieve our design objectives in the shortest possible timeframe."

Armin Derpmanns, general manager of the SoC Business Unit at TEE adds: "Development of this latest Neotion MPEG-4 breakthrough processor shows how a combination of technology, process, development platform and local support can deliver real value to European fabless chip makers."

Mr Tsutsui, director of Toshiba Semiconductor Company, Custom SoC Group in Japan states: "Our work with Neotion is another successful example of our strategy to address the needs of fabless manufacturers

through an IDM model that includes a strong local engineering support infrastructure.”

For more information visit Toshiba's web site at <http://www.toshiba-components.com/ASIC/index.html>

About Toshiba

Toshiba Corporation is a leader in information and communications systems, electronic components, consumer products and power systems. The company's integration of these wide-ranging capabilities assures its position as an innovator in advanced components, products and systems. Toshiba operates a global network of more than 740 companies, with 198,000 employees worldwide and annual sales surpassing US\$76 billion.

Toshiba Electronics Europe (TEE) is the European Headquarters for the electronic components business of Toshiba Corporation, which is the world's fourth largest semiconductor vendor according to estimates by Dataquest.

Providing design, manufacturing, marketing and sales, TEE was formed in 1973 in Neuss, Germany. The company now has headquarters in Düsseldorf, Germany and subsidiaries in France, Italy, Spain, Sweden and the United Kingdom. Company president is Mr Hitoshi Otsuka and the total number of personnel in Europe is around 400.

Toshiba Electronics Europe offers one of the industry's broadest IC and discrete product lines including high-end memory, microcontrollers, ASICs, ASSPs and display products for automotive, multimedia, consumer, telecoms and networking applications. The company also has a wide range of power semiconductor solutions.

For more company information visit Toshiba's web site at www.toshiba-components.com

About Neotion

NEOTION is a public company created in January 2000, and listed since June 2006 on Alternext Euronext Paris. NEOTION is a leading provider of highly-sophisticated System-on-a-Chip (SoC) MPEG-4 processors, as well as turnkey sub-systems and reference designs enabling seamless integration and unrivalled time to market for the Consumer Electronics Industry and the TV Operators.

NEOTION's secured silicons uniquely combine: MPEG-4, advanced security modes, and hybrid IP connectivity opening sidewise also towards digital home convergence, IPTV and TV 2.0.

NEOTION is the inventor of the original MPEG-4 decoder in a card designed for Common Interface receivers (iDTV and STB). NEOTION offers a compelling range of disruptive MPEG-4 Modules enabling, beyond MPEG-4 upgrade, secured silicon based Security, DVR functions in a SD-Card, and Hybrid IP home network capabilities for genuine legacy TV sets.

Side to breakthrough Modules, NEOTION has designed the NP5 series processors that are able to power ultimate low cost / ultra low power boxes tailored for green field broadcast TV Markets (DTT and DTH), as well as for Telecom Operators looking for simple IP box solutions in a multi room and home network context.

NEOTION also offers reference designs, API, SDK, and development boards enabling various levels of implementation and customization (from application specific, to dedicated chipset ROM code).

Neotion is an active stakeholder of the CI+ Forum, as well as a member of DVB, DigiTAG, the Digital TV Group and UPnP Forum. www.neotion.com

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