Tensilica Xtensa Lx Processor Beats all other Processors and Cores On Eembc Networking 2.0 and Office Automation Benchmarks

Xtensa LX Nearly 4X Faster than Next Closest Competitor

Santa Clara, Calif. – Tensilica, Inc., the only company to automate the design of optimized application-specific configurable processors for system-on-chip (SOC) design, today announced that it has posted the highest score ever recorded for a licensable processor core, and the highest absolute score ever published for any processor, on both the Networking 2.0 and the Office Automation benchmark suites of the Embedded Microprocessor Benchmark Consortium (EEMBC). EEMBC develops and certifies real-world benchmarks and benchmark scores to help designers select the right embedded processors for their systems. With members including leading semiconductor, intellectual property, and compiler companies, EEMBC establishes benchmark standards and provides certified benchmarking results through the EEMBC Certification Labs (ECL). "While optimized versions of our Xtensa LX processor clearly topped these benchmarks, the out-of-the-box results, with no additional optimizations, were very impressive," stated Steve Roddy, Vice President of Marketing for Tensilica. "Customers looking for outstanding embedded processor power in a small form factor with low code size can quickly benefit from using the Xtensa LX processor, even without utilizing Tensilica's instruction extension automation technology for optimization." EEMBC Results – Networking 2.0 Benchmark EEMBC benchmark scores, based on simulation, show that an optimized Xtensa LX processor core is significantly faster on a per-MHz basis than the only two other processors certified to date, the 1GHz PowerPC 750GX and 1.4 GHz PowerPC MPC7447A, both of which are full-chip, standard product processors. The Xtensa LX processor delivers this outstanding performance while simultaneously delivering a 4X code density advantage and more than a 100X advantage in both die area and power dissipation. The normalized (per MHz) EEMBC TCPmark test scores are: • 1.62434 – Xtensa LX Optimized • 0.4671 – PowerPC 760GX • 0.5856 – PowerPC MCP7447A • 0.33762 – Xtensa LX Out of the Box e normalized (by MHz) EEMBC IPmark test scores are: • 0.82138 – Xtensa LX Optimized • 0.2861 – PowerPC 760GX • 0.1818 – Xtensa LX Out of the Box • 0.1751 – PowerPC MCP7447A (Because EEMBC scores for licensable synthesizable processors, such as the Xtensa LX, are expressed on a "per-MHz" basis, the PowerPC results were normalized to a "per-MHz" basis for this comparison.) With the Networking 2.0 benchmark, EEMBC simulates real-world networking performance with many different users and differing traffic types. The TCPmark represents processor performance in Internet-enabled, client-side devices. The IPmark represents processor performance in network routers, gateways and switches. The total code size (aggregate total of bytes of object code) for all twelve benchmark kernels in the Networking Version 2 suite are • 65208 bytes – Xtensa LX Optimized • 67256 bytes – Xtensa LX Out of the Box • 255,764 bytes – PowerPC 760GX • 280,984 bytes – PowerPC MCP7447A EEMBC Results – Office Automation Benchmark The EEMBC benchmark scores confirm that the Xtensa LX processor is nearly four times faster than the much larger PowerPC 440GX core, and more than 4 times as powerful as the 64-bit MIPS 20Kc processor. The certified EEMBC OAmark scores are: • 4

.19523 – Optimized Xtensa LX processor • 1.07999 – Out-of-the-box PowerPC 440GX processor • 0. 880 – Out-of-the-box Xtensa LX processor • 0.89033 – Out-of-the-box MIPS 20Kc processor • 0.75975 – O f the box ARM 1026EJ-S processor EEMBC scores for licensable synthesizable processors are expressed on a "per-MHz" basis. The optimized configuration of Xtensa LX used in this Office Au tomation benchmark certification achieved a 454 MHz operating frequency in 90 nm ASIC technology. At that expected operating frequency, the 4.19523 OAmarks /MHz would yield an at-speed score of 1904 OAmarks. The optimized version of the Xtensa LX runs nearly four times faster than the much larger, out-of-the-box Power PC 440GX core, and more than four times faster than the out-of-the-box 64-bit MIPS 20Kc processor. In addition to having a significant advantage in the OAmark scores, Tensilica's Xtensa LX processor demonstrated much lower code size, which means it r equires less memory. Code size results for the Office Automation benchmark were: • 4,912 bytes – Out-of -the-box Xtensa LX processor • 5,908 bytes – Out-of-the-box ARM 1026EJ-S processor • 11,024 bytes – O mized Xtensa LX processor • 13,780 bytes – Out-of-the-box MIPS 20Kc processor • 18,540 bytes – Out-o he-box IBM PowerPC 440 processor About EEMBC EEMBC, the Embedded Microprocessor Benchmark Consortium, develops and certifies real-world benchmarks and benchmark scores to help designers select the right embedded processors for their systems. Every processor submitted for EEMBC benchmarking is tested for parameters representing different workloads and capabilities in communications, networking, consumer, office automation, automotive/industrial, embedded Java, and microcontroller-related applications. With members including leading semiconductor, intellectual property, and compiler companies, EEMBC establishes benchmark standards and provides certified benchmarking results through the EEMBC Certification Labs (ECL). About Tensilica Tensilica was founded in July 1997 to address the growing need for optimized, application-specific microprocessor solutions in high-volume embedded applications. With a configurable and extensible microprocessor core called Xtensa, Tensilica is the only company that has automated and patented the time-consuming process of generating a customized microprocessor core along with a complete software development tool environment, producing new configurations in a matter of hours. For more information, visit www.tensilica.com. Editors' Notes: • Tensilica and Xtensa are registered trademarks be longing to Tensilica, Inc. • All other company and product names are trademarks and/or registered t rademarks of their respective owners. • Tensilica's announced licensees include Agilent, ALPS, AMCC (J NI Corporation), Astute Networks, ATI, Avision, Bay Microsystems, Berkeley Wireless Research Center, Broadcom, Cisco Systems, Conexant Systems, Cypress, Crimson Microsystems, ETRI, FUJIFILM Microdevices, Fujitsu Ltd., Hudson Soft, Hughes Network Systems, Ikanos Communications, LG Electronics, Marvell, NEC Laboratories America, NEC Corporation, NetEffect, Neterion, Nippon Telephone and Telegraph (NTT), NVIDIA, Olympus Optical Co. Ltd., sci-worx, Seiko Epson, Solid State Systems, Sony, STMicroelectronics, Stretch, TranSwitch Corporation, and Victor Company of Japan (JVC).

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