

# Intel Outlines Plans for New Category of Smarter, Purpose-Built 'System on Chip' Designs

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As Internet access continues to be added to all kinds of computers and devices, Intel executives outlined a plan to use its chip design expertise, factory capacity, advanced manufacturing techniques and the economics of Moore's Law to usher in a new category of highly integrated, purpose-built and Web-savvy System on Chip (SoC) designs and products. The company also unveiled its first eight such products under its Intel EP80579 Integrated Processor family for security, storage, communications, and industrial robotics.

For the first time, Intel is architecting several of these smarter SoC chip designs based on the same blueprint as the company's existing processors that run the bulk of the Internet, called Intel architecture (IA). The products will offer new levels of performance and energy efficiency versus traditional SoCs, combine multiple functions and will be customized to target the company's traditional computing businesses and several growth areas across Consumer Electronics (CE), Mobile Internet Devices (MIDs) and embedded markets.

Intel has more than 15 SoC projects planned internally, including the company's first Consumer Electronics (CE) chip codenamed "Canmore" scheduled for introduction later this year and the second-generation "Sodaville" next year. In addition, Intel's second-generation embedded product line is scheduled to arrive in 2009, with Intel's next-generation platform for Mobile Internet Devices code-named "Moorestown" and

featuring "Lincroft," scheduled for release in 2009/2010. Many of these new products will be based on the Intel Atom processor core. All of these chips will provide increased performance and energy efficiency, along with the ability for customization, leading to faster development schedules and time-to-market delivery for customers while bringing more innovation, choice and lower costs to consumers.

"We're now able to deliver more highly integrated products ranging from industrial robotics and in-car infotainment systems to set-top boxes, MIDs and other devices. By designing more complex systems onto smaller chips, Intel will scale the performance, functionality and software compatibility of IA while controlling the overall power, cost and size requirements to better meet respective market needs," said Gadi Singer, vice president of Intel's Mobility Group and general manager, SoC Enabling Group. "Best of all, customers and consumers will equally benefit."

## **New Smart Chips for Embedded Computing**

Four of the eight new smart SoC Intel EP80579 Integrated Processor products include Intel QuickAssist Technology that simplifies the use and deployment of security and packet accelerators in Intel-based computers. Each SoC is based on the Intel Pentium M processor, integrated memory controller hub, and a variety of integrated communications and embedded I/O controllers.

These products come in a range of speeds, power dissipation and commercial/industrial temperature options. In some cases, they will lead to platforms that have a 45 percent smaller board footprint and 34 percent lower power dissipation.

Each product also comes with Intel's extended 7-year-long life-cycle manufacturing support, which makes them ideal for applications such as

traditional embedded and industrial computer systems, small- to medium-sized business (SMB) and home network-attached storage, enterprise security applications, IP telephony, and wireless and WiMAX infrastructure. More information, including pricing and performance projection detail can be found at [www.intel.com/pressroom/kits/soc](http://www.intel.com/pressroom/kits/soc).

"There is a tremendous opportunity for these smart SoC solutions in the market today as the number of Internet-connected devices reaches into the billions, performance expectations rise and device sizes shrink," said Doug Davis, vice president of Intel's Digital Enterprise Group and general manager, Embedded and Communications Group. "These products enable our customers to rethink their own innovation and system design around the many benefits of Intel architecture."

The smart SoC versions with Intel QuickAssist Technology accelerate cryptographic and packet processing for security appliances such as virtual private network (VPN) gateways, firewalls, Unified Threat Management (UTM) and enterprise voice applications such as Voice-over-Internet Protocol (VoIP) and converged access platforms.

Intel also provides standard software drivers and software services modules for download. The Intel EP80579 Software for Security Applications on Intel QuickAssist Technology provides the tools necessary to develop robust security appliances, while the Intel EP80579 Software for IP Telephony Applications on Intel QuickAssist Technology provides libraries for secure enterprise voice applications.

Intel already has 50 customers for these products, many of which have had access to them for nearly a year. A variety of initial systems will arrive this quarter, with more expected later this year and next, as embedded system design cycles can take 12 to 18 months to get into the marketplace.

Provided by Intel

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