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# Fact Sheet

## **Next-Generation Intel® Atom™ Processor Platform for Tablets Now Available**

Intel announced the next-generation Intel® Atom™ processor platform for tablets, formerly codenamed “Oak Trail.” This platform features integrated graphics and memory controller built directly into the processor die, lower TDP for fanless and thin devices, lower average power for longer battery life, and a significantly smaller footprint for smaller, more compact system designs.

The Intel Atom processor Z670 is based on Intel’s groundbreaking low-power Intel Atom microarchitecture and manufactured on Intel’s 45nm High-k Metal Gate technology. Intel’s architecture will enable a choice of operating systems including Windows\*, Android\*, and MeeGo\*.

### **What the new platform consists of:**

- **Intel® Atom™ processor Z670 for tablets:** New low-power Intel Atom processors with integrated graphics built into the CPU.
- **Intel® SM35 Express Chipset:** Low power chipset
- Integration and 45nm manufacturing enables significantly smaller overall package size, improved performance, and lower power.

### **Key features in the Intel Atom processor Z670 for tablets:**

- **Small Form Factor Processor Package Size:** the lead-free<sup>1</sup>, halogen-free<sup>2</sup> Micro-Flip chip package is 60% smaller (13.8mm x 13.8mm) than the previous-generation netbook processors (22mm x 22 mm). This saves system board space for a much thinner and smaller industrial design, enabling smaller form factors.
- **Low Thermal Design Power (TDP):** Low TDP of 3 watts enables thinner, fanless, more compact and portable tablets by reducing the cooling requirements.
- **Enhanced Intel® Deeper Sleep (C4/C4E/C6):** Saves power by converting cache data to system memory during periods of inactivity to reduce power consumption and enable longer battery life.

- **Enhanced Intel SpeedStep® Technology:** Multiple voltage and frequency operating points provide optimal performance at the lowest power, allowing for better matching of performance to application demand.
- **Integrated Graphics and Memory Controller:** Integrated Intel® Graphics Media Accelerator 600 combined with the integrated memory controller provides enhanced performance and system responsiveness.
- **HD Playback:** Integrated hardware accelerated decoder enables smooth HD (up to 1080p) video playback up and streaming at a fraction of the power consumption
- **Enhanced Data Prefetcher and Enhanced Register Access Manager:** Anticipates data the processor is likely to need and stores the information within the processor's L2 cache, resulting in improved performance since the processor doesn't have to wait as long for data.

**Key features in the Intel® SM35 Express Chipset for netbooks and entry-level desktops:**

- **Small Form Factor Chipset Package:** The lead-free<sup>1</sup>, halogen-free<sup>2</sup> 14x14mm single package is 30% smaller than the previous generation netbook chipset package (17x17mm).
- **Serial ATA (SATA):** High-speed storage interface supports faster transfer rate for improved data access.
- **Universal Serial Bus (USB):** Hi-Speed USB 2.0 provides greater enhancement in performance with a design data rate of up to 480 megabits per second (Mbps) with up to 4 USB 2.0 Ports.
- **Intel® High Definition Audio:** Integrated audio support enables premium home theater sound and delivers advanced features such as multiple audio streams and jack re-tasking
- **High Definition Media Interface (HDMI):** Support for HDMI 1.3a up to 1080p and high definition content protection (HDCP 1.3).
- **Secured Digital Input/Output:** SDIO 2.0 and eMMC 4.3 support for low power, mobile-optimized components.

<sup>1</sup> Intel 45nm product is manufactured on a lead-free process. Lead-free per EU RoHS Directive (2002/95/EC, Annex A). Some RoHS exemptions may apply to other components used in the product package.

<sup>2</sup> Applies to components containing flame retardants and PVC only. Halogens are below 900 PPM bromine, 900 PPM chlorine, and 1500 PPM combined bromine and chlorine.

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