PRODUCT BRIEF
Intel® Atom™ Processor Z2460
Smartphones

Intel® Atom™ Processor Z2460

Outstanding performance, exceptional graphics and video, advanced image processing, and optimum power efficiency for today's demanding smartphones

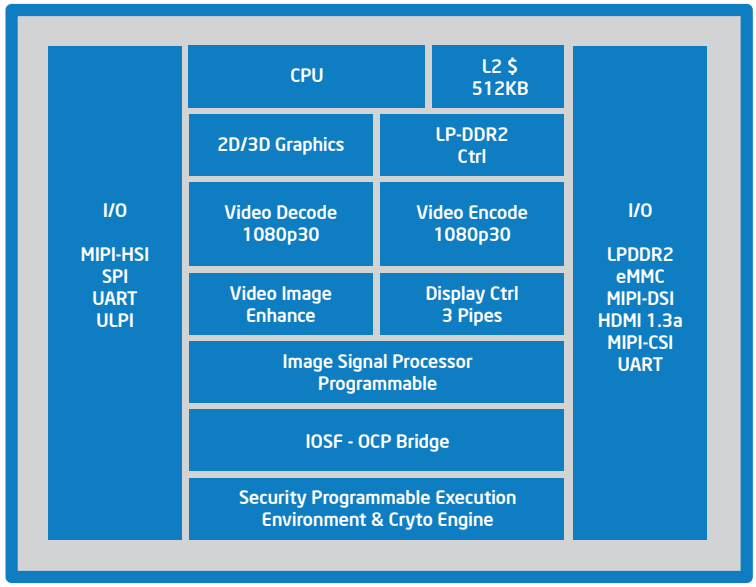
Overview

The 1.6 GHz Intel® Atom™ processor Z2460 uses Intel® Hyper-Threading Technology to provide increased performance and system responsiveness to meet the requirements for today's advanced smartphones. This processor includes the Intel® Graphics Media Accelerator for 3D graphics and immersive HD video experiences. The integrated image signal processor handles advanced imaging capabilities to support fast image capture in low light. Combined with advanced optimization focused on low power, the Intel Atom processor Z2460 enables competitive battery life for multiple days.

Product Highlights

High Performance CPU - The Intel Atom processor Z2460 at 1.6 GHz delivers high performance for smartphones. It has an integrated dual channel memory controller, which offers fast memory read/write performance through efficient pre-fetching algorithms, low latency and high memory bandwidth. The Intel Atom processor Z2460 includes support for LPDDR2 400MHz (800MT/s) memory technology up to 1GB.

- **Intel® Burst Performance Technology (Intel® BPT)** – Enables the processor to dynamically burst to higher performance, making it possible to provide on-demand, higher performance on smartphones while optimizing for power.
- **Intel® Hyper-Threading Technology (Intel® HT Technology)** – Intel Hyper-Threading Technology provides performance and support for multithreaded applications, helping to deliver increased performance and system responsiveness in today's multitasking environments by enabling the processor to execute two instruction threads in parallel. Examples include snappy UI response, fast web page download, and running multiple applications simultaneously.

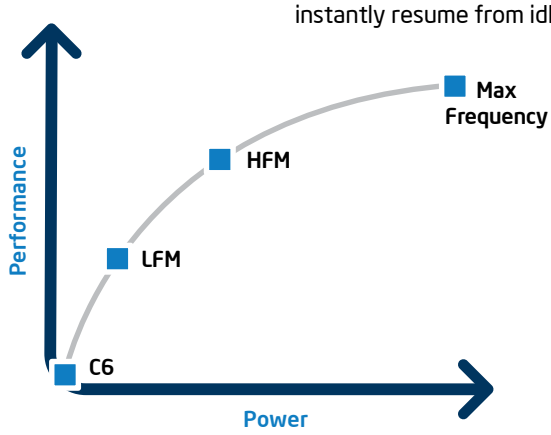


The Intel®Atom™ processor Z2460 is a highly integrated system-on-a-chip (SoC), delivering powerful graphics and video capabilities needed for smartphones.

Intel® Graphics Media Accelerator – An integrated, power-optimized 2D/3D graphics engine with 400MHz graphics core frequency and support for OpenGL* ES2.0, OpenVG* 1.1 allows rendering of realistic 3D graphics and high frames per second (fps) gameplay. It has integrated hardware-accelerated video encode and decode engines to playback HD video (MPEG4.2, H.264, WMV & VC1) and encode (MPEG4.2, H.264) for high quality capture. The Intel GMA supports internal display up to 1280 x 1024 resolution and 1920 x 1080 up to 30fps thru HDMI output.

Intel's Image Signal Processor – An integrated programmable image signal processor supports exceptional high throughput up to 240 megapixels per second (mpps) to deliver amazing image quality. It provides DSLR-like features such as 10-picture burst shot capture at 15fps for moving scenes and low capture capabilities in challenging environments.

Intel® Smart Idle Technology (Intel SIT) – Enables the CPU core and the rest of the processor to switch off while the operating system remains in the "ON" state (S0). The technique takes full advantage of clock and distributed power gating across the power islands. With ultra low power smart L2 cache, the system can instantly resume from idle states.



The core of the Intel® Atom™ processor Z2460 is power gated at C6 standby mode to consume zero power at idle state. It scales efficiently to a wide range of dynamic clock frequencies, from active standby to low frequency mode (LFM) to high frequency mode (HFM) and max frequency processing loads.

Android* Platform Optimizations for Intel® Architecture - The platform is enhanced using Dalvik VM runtime optimization, x86 trace-based JIT, Native Code Generation, Javascript* and HTML5 code execution. Intel also developed software specifically targeted at power management and security for Android with newly developed firmware, drivers and middleware. This new Android software integration for Intel architecture provides superior balance of performance, security and power efficiency when running Android applications.

Technical Specifications	
Process technology	32nm High-k/metal gate transistor technology
Compact Co-POP Package	12mm x 12mm, 617 balls, 0.4mm pitch Support LPDDR2 PoP package
Intel® Atom™ Microarchitecture	Intel® Smart Cache, 512KB Single core with Intel® Hyper-Threading Technology Enhanced Intel® Deeper Sleep C6E state S0i1/S0i3 power reduction features
3D Graphics Engine	2000MPPS Peak Fill Rate 40MTS (real scene) – Peak Polygons OpenVG 1.1, OpenGL ES 1.1 and OpenGL ES 2.0 support
Hardware accelerated video encode and decode	1080p30 video encode 1080p30 video decode
Display Controller	Two MIPI-DSI ports HDMI 1.3a interface
System Memory Interface	Dual Channel 32bit LPDDR2 interface Support 1GB Support 800MT/s data rates
Programmable ISP	Glue less interface to CMOS sensors with MIPI CSI-2 interface High resolution still image support up to 24MP sensor Front camera with up to 2MP sensor Supports Auto-Exposure, Auto White Balance and Auto Focus
6 High Speed Master I2C controllers	Supports high-speed, full-speed and low-speed modes
SPI controller	2 master and 1 master/slave ports
USB-OTG 2.0 interface	ULPI interface to MSIC, MSIC contains USB-OTG PHY
Keypad Controller	Support up to 4 direct key inputs
Intel® Smart Sound Technology	Low power programmable codec to decode/encode popular audio formats
Flexible GPIO configuration	Configurable to mux, with functional blocks Up to 89 GPIO – always on to enable wake events Up to 69 GPIO balls – core power GPIO shuts down in sleep states
Test Interface	IEEE-1149.1 and IEEE-1149.7 (JTAG) Boundary Scan MIPI Parallel Trace Interface (PTI)
Intel® Smart and Secure Technology	Programmable security engine Low power
Modem Interface	MIPI-HSI port

Intel Smartphones:

http://www.intel.com/content/www/us/en/smartphones/smartphones.html

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Intel® Hyper-Threading Technology is available on select Intel® Atom™ processors. Requires an Intel® HT Technology-enabled system. Consult your PC manufacturer. Performance will vary depending on the specific hardware and software used. For more information including details on which processors support HT Technology, visit http://www.intel.com/info/hyperthreading

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