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Atom

Intel® Atom™ Processor E640T

(512K Cache, 1.00 GHz)

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SPECIFICATIONS

Essentials

Status	Launched
Launch Date	Q3'10
Processor Number	E640T
# of Cores	1
# of Threads	2
Clock Speed	1 GHz
L2 Cache	512 KB
PCI Express*	2500 MHz
FSB Parity	No
Instruction Set	32-bit
Embedded Options Available	 Yes
Lithography	45 nm
Max TDP	3.6 W
VID Voltage Range	VCC (0.75 - 0.9V), VNN (0.75 - 1.1V)
Recommended Customer Price	TRAY: \$37.00

Memory Specifications

Max Memory Size (dependent on memory type)	2 GB
Memory Types	DDR2-800
# of Memory Channels	1
ECC Memory Supported ‡	 No

Graphics Specifications

Processor Graphics ‡	Integrated
Graphics Base Frequency	320 MHz







Expansion Options

PCI Express Revision	1.0a
PCI Express Configurations ‡	x1, root complex only
Max# of PCI Express Lanes	4


Package Specifications

T _{JUNCTION}	110°C
Package Size	22mmx22mm
Sockets Supported	FCBGA676
Low Halogen Options Available	See MDDS

Advanced Technologies

Intel® Turbo Boost Technology ‡	No
Intel® Hyper-Threading Technology ‡	 Yes
Intel® Virtualization Technology (VT-x) ‡	 Yes
Intel® Virtualization Technology for Directed I/O (VT-d) ‡	 No
Intel® 64 ‡	 No
Idle States	Yes
Enhanced Intel SpeedStep® Technology	 Yes
Intel® Demand Based Switching	 No
Thermal Monitoring Technologies	Yes

Intel® Platform Protection Technology

Trusted Execution Technology ‡	 No
Execute Disable Bit ‡	Yes

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SLJ37

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"Announced" SKUs are not yet available. Please refer to the Launch Date for market availability.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See <http://www.intel.com/content/www/us/en/processors/processor-numbers.html> for details.

For benchmarking data see <http://www.intel.com/performance>.

System and Maximum TDP is based on worst case scenarios. Actual TDP may be lower if not all I/Os for chipsets are used.

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‡ This feature may not be available on all computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

Low Halogen: Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709 requirements, and the PCB / substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

Max Turbo Frequency refers to the maximum single-core processor frequency that can be achieved with Intel® Turbo Boost Technology. See www.intel.com/technology/turboboost/ for more information.

See <http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?wapkw=hyper+threading> for more information including details on which processors support Intel® HT Technology.

Processors that support 64-bit computing on Intel® architecture require an Intel 64 architecture-enabled BIOS.

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