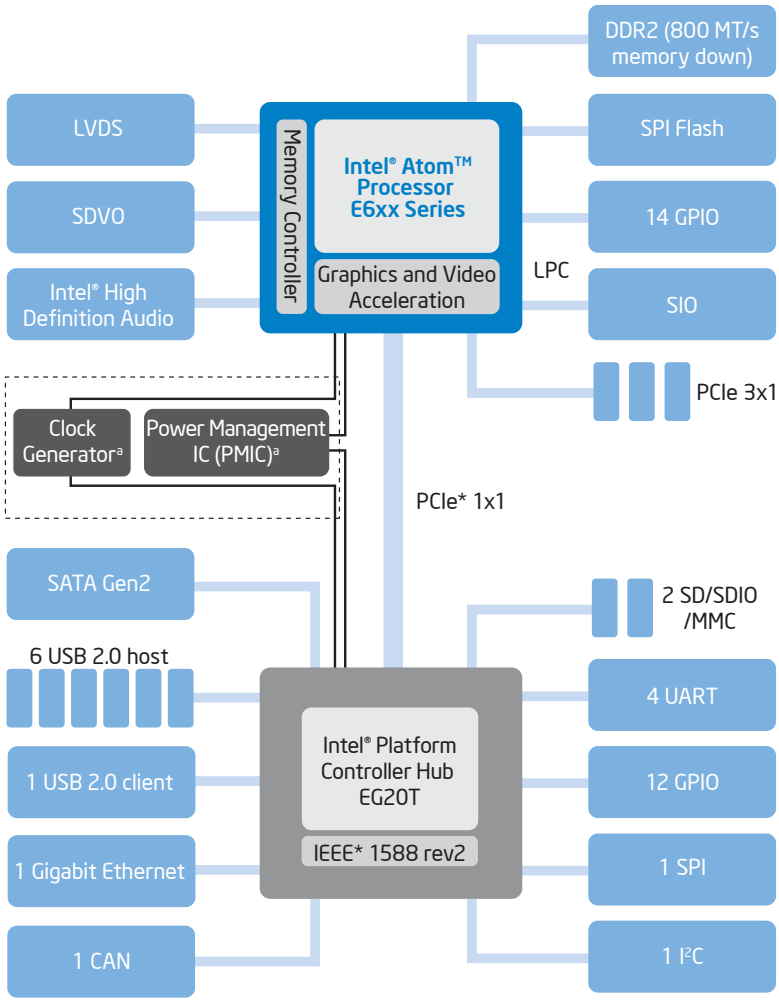
- **Intel® Hyper-Threading Technology[1]:** Provides performance and support for multi-threaded applications, to deliver increased performance and system responsiveness in today's multi-tasking environments by enabling the processor to execute two instruction threads in parallel. Examples include fast Web page downloads, multi-tasking and multi-windowing capabilities.
- **Integrated, hardware-assisted Intel® Virtualization Technology[2] for IA-32 Intel® architecture (Intel® VT-x):** Provides greater flexibility and maximum system utilization by consolidating multiple environments into a hardware platform. With support from the processor, BIOS and enabling software, Intel VT improves traditional software-only-based virtualization. By offloading workloads to system hardware, virtualization software can provide more streamlined software stacks and "near native" performance characteristics. The required virtualization software (virtual memory manager or VMM) is available from third parties such as TenAsys Corporation.
- **Industrial temperature range option:** -40˚ to +85˚C temperature range meets requirements for many embedded in-vehicle infotainment system designs in both consumer and commercial vehicles. This option is also important for industrial control and automation applications often found in factories with unconstrained thermal environments.
- **Green technology:** Both the Intel Atom processor E6xx series and Intel Platform Controller Hub EG20T are manufactured and available only in lead-free[3] and halogen-free[4] component packages.
- **Reliable technology ecosystem:** Along with a strong ecosystem of hardware and software vendors, including members of the Intel® Embedded Alliance (intel.com/go/eca), Intel helps cost effectively meet developer challenges and speed time-to-market.
- **Embedded lifecycle support:** Protects system investment by enabling extended product availability for embedded customers.



[a]PMIC and Clock Generator products are available from third parties.
An integrated PMIC and Clock Generator on a single chip is also available from a third party.

Software Overview

The following independent operating system and BIOS vendors provide support for this platform:

OPERATING SYSTEM	CONTACT	BIOS
Microsoft Windows* XP SP3	Intel provides drivers[5]	American Megatrends
Microsoft Windows Embedded Standard 2009	Intel provides drivers[5]	Insyde Software
Microsoft Windows Embedded Standard 7	Intel provides drivers[5]	Phoenix Technologies
Microsoft Windows Embedded POS Ready 2009	Intel provides drivers[5]	Byosoft
Microsoft Windows 7	Intel provides drivers[5]	
Microsoft Windows Embedded CE 6.0 R3	Adeneo, BSQUARE, Wipro	
Timesys Fedora Remix*	Fedora community, Timesys	
MeeGo 1.0*	MeeGo community, Wind River	
QNX Neutrino*	QNX Software Systems	
Wind River VxWorks*	Wind River	

Intel® Atom™ Processor E6xx Series for Embedded Computing

Product Name[Δ]	Product Number	Clock Speed (GHz)	Graphics Speed (MHz)	Thermal Design Power	TjunctionMax	Temperature Range	Package
Intel® Atom™ processor E620	CT80618005844AA	0.6	320	3.3 W	90°C	Commercial 0 to 70°C	676-ball FCBGA 22x22mm
Intel® Atom™ processor E620T	CT80618005844AB	0.6	320	3.3 W	110°C	Industrial -40 to 85°C	676-ball FCBGA 22x22mm
Intel® Atom™ processor E640	CT80618005841AA	1.0	320	3.6 W	90°C	Commercial 0 to 70°C	676-ball FCBGA 22x22mm
Intel® Atom™ processor E640T	CT80618005841AB	1.0	320	3.6 W	110°C	Industrial -40 to 85°C	676-ball FCBGA 22x22mm
Intel® Atom™ processor E660	CT80618003201AA	1.3	400	3.6 W	90°C	Commercial 0 to 70°C	676-ball FCBGA 22x22mm
Intel® Atom™ processor E660T	CT80618003201AB	1.3	400	3.6 W	110°C	Industrial -40 to 85°C	676-ball FCBGA 22x22mm
Intel® Atom™ processor E680	CT80618007035AA	1.6	400	4.5 W	90°C	Commercial 0 to 70°C	676-ball FCBGA 22x22mm
Intel® Atom™ processor E680T	CT80618007035AB	1.6	400	4.5 W	110°C	Industrial -40 to 85° C	676-ball FCBGA 22x22mm

Intel® Platform Controller Hub EG20T for Embedded Computing

Product Name	Product Number	Thermal Design Power	Tjunction	Temperature Range	Package
Intel® Platform Controller Hub EG20T	CS82TPCF	1.55 W	125° C	Industrial -40 to 85° C	376-ball PBGA 23x23mm

Third-Party Vendors

I/O HUBS

Lapis Semiconductor Co., Ltd. — www.lapis-semi.com/en/

STMicroelectronics — www.st.com

Realtek Semiconductor Corp. — www.realtek.com

POWER MANAGEMENT INTEGRATED CIRCUIT (PMIC)

Dialog Semiconductor — www.dialog-semiconductor.com

ROHM Co., Ltd. — www.rohm.com

VIRTUALIZATION SOFTWARE

TenAsys Corporation — www.TenAsys.com/company

Intel in Embedded and Communications: intel.com/embedded

[Δ] Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. Go to: http://www.intel.com/products/processor_number for details.

[1] Requires an Intel® HT Technology enabled system, check with your PC manufacturer. Performance will vary depending on the specific hardware and software used. Not available on Intel® Core™ i5-750 processor. For more information including details on which processors support HT Technology, visit http://www.intel.com/info/hyperthreading.

[2] Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM). Functionality, performance or other benefits will vary depending on hardware and software configurations. Software applications may not be compatible with all operating systems. Consult your PC manufacturer. For more information, visit http://www.intel.com/go/virtualization.

[3] Intel 45nm product is manufactured on a lead-free process. Lead is below 1000 PPM per EU RoHS directive (2002/95/EC, Annex A). Some EU RoHS exemptions for lead may apply to other components used in the product package.

[4] Applies only to halogenated flame retardants and PVC in components. Halogens are below 900ppm bromine and 900ppm chlorine.

[5] Drivers available at: downloadcenter.intel.com (enter chipset name).

Performance results are based on certain tests measured on specific computer systems. Any difference in system hardware, software or configuration will affect actual performance. Configurations: [describe config + what test used + who did testing]. For more information go to http://www.intel.com/performance.

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