Intel® Pentium® Processor G3320TE (3M Cache, 2.30 GHz)

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SPECIFICATIONS

Essentials

Status	Launched
Launch Date	Q3'13
Processor Number	G3320TE
# of Cores	2
# of Threads	2
Clock Speed	2.3 GHz
Intel® Smart Cache	3 MB
DMI2	5 GT/s
# of QPI Links	1
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1/4.2
Embedded Options Available	Yes
Lithography	22 nm
Max TDP	35 W
Thermal Solution Specification	PCG 2013A
Recommended Customer Price	

Memory Specifications

Max Memory Size (dependent on memory type)	32 GB
Memory Types	DDR3-1333/1600
# of Memory Channels	2
Max Memory Bandwidth	25.6 GB/s
ECC Memory Supported ‡	Yes

Graphics Specifications

Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1 GHz
Intel® Quick Sync Video	No
Intel® Clear Video HD Technology	No
# of Displays Supported ‡	3

Expansion Options

PCI Express Revision	3.0
PCI Express Configurations ‡	Up to 1x16, 2x8, 1x8/2x4

RELATED PRODUCTS

Intel® Pentium® Processor
Intel® Pentium® Processor G3000 Series for Desktop
Products formerly Haswell

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PCN/MDDS INFORMATION

SR181
929229: MDDS

Max # of PCI Express Lanes	16

Package Specifications

Max CPU Configuration	1
T_{CASE}	72°C
Package Size	37.5mm x 37.5mm
Graphics and IMC Lithography	22nm
Sockets Supported	FCLGA1150
Low Halogen Options Available	See MDDS

Advanced Technologies

Intel® Turbo Boost Technology ‡	No
Intel® vPro Technology ‡	No
Intel® Hyper-Threading Technology ‡	No
Intel® Virtualization Technology (VT-x) ‡	Yes
Intel® Virtualization Technology for Directed I/O (VT-d) ‡	No
Intel® TSX-NI	No
Intel® 64 ‡	Yes
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes
Thermal Monitoring Technologies	Yes
Intel® Stable Image Platform Program (SIPP)	No

Intel® Data Protection Technology

AES New Instructions	No

Intel® Platform Protection Technology

Trusted Execution Technology ‡	No
Execute Disable Bit ‡	Yes

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

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QM/i7-2635QM, i7-2670QM/i7-2675QM, i5-2430M/i5-2435M, i5-2410M/i5-2415M. Please contact OEM for the BIOS that includes the latest Processor configuration update.

‡ 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.

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.

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.

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

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.

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

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.

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

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