Intel® Celeron® Processor B810 (2M Cache, 1.60 GHz)

Additional Information

Quick Links
Embedded
PCN/MDDS Information

Products formerly Sandy Bridge
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Specifications

Essentials	
Status	Launched
Launch Date	Q1'11
Processor Number	B810
# of Cores	2
# of Threads	2
Clock Speed	1.6 GHz
Intel® Smart Cache	2 MB
Bus/Core Ratio	16
Instruction Set	64-bit
Instruction Set Extensions	SSE4.x
Embedded Options Available	Yes
Lithography	32 nm
Max TDP	35 W
Recommended Channel Price	

Memory Specifications	
Max Memory Size (dependent on memory type)	16 GB
Memory Types	DDR3-1066/1333
# of Memory Channels	2
Max Memory Bandwidth	21.3 GB/s
ECC Memory Supported	No

Graphics Specifications	
Integrated Graphics	Yes
Graphics Base Frequency	650 MHz
Graphics Max Dynamic Frequency	950 MHz
Graphics Output	eDP/DP/HDMI/SDVO/CRT
Intel® Quick Sync Video	No
Intel® InTru™ 3D Technology,	No

Intel® Wireless Display	No
Intel® Flexible Display Interface (Intel® FDI)	Yes
Intel® Clear Video HD Technology	No
Dual Display Capable	Yes
Macrovision* License Required	No

Expansion Options	
PCI Express Revision	2.0
PCI Express Configurations	1x16, 2x8, 1x8 2x4
# of PCI Express Ports	1

Package Specifications	
Max CPU Configuration	1
TJUNCTION	100C
Package Size	37.5mmx37.5mm (rPGA988B)
Graphics and IMC Lithography	32 nm
Sockets Supported	PGA988
Halogen Free Options Available	Yes

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® Trusted Execution Technology	No
AES New Instructions	No
Intel® 64	Yes
Intel® Anti-Theft Technology	No
Intel® My WiFi Technology	No
4G WiMAX Wireless Technology	No
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes
Intel® Demand Based Switching	No
Thermal Monitoring Technologies	Yes
Intel® Fast Memory Access	Yes
Intel® Flex Memory Access	Yes
Execute Disable Bit	Yes

Ordering and Spec Information

Ordering and Spec Information
Intel® Celeron® Processor B810 (2M Cache, 1.60 GHz) FC-PGA10, Tray

Socket	Step	Step TDP	Ordering Code	Spec Code	Halogen Free	VT-x
PGA988		35 W	FF8062700848800	SR088	Yes	Yes

Compatible Products

Chipsets

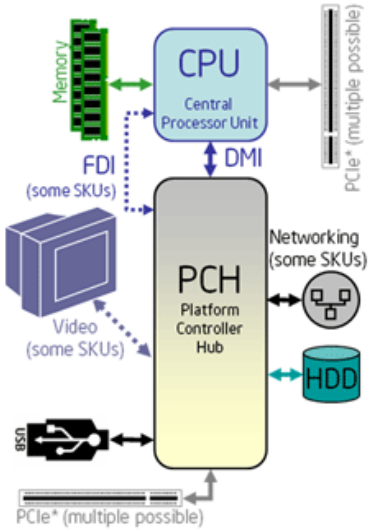
Mobile Intel® HM65 Express Chipset
Intel® HM65 Platform Controller Hub
# of CPUs: 1

Embedded: Yes
System Price: $126
System TDP: 38.9W

Mobile Intel® QM67 Express Chipset

Intel® QM67 Platform Controller Hub
# of CPUs: 1
Embedded: Yes
System Price: $134
System TDP: 38.9W

Block Diagrams



Disclaimers

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

Enabling Execute Disable Bit functionality requires a PC with a processor with Execute Disable Bit capability and a supporting operating system. Check with your PC manufacturer on whether your system delivers Execute Disable Bit functionality.

64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Consult with your system vendor for more information.

Hyper-Threading Technology (HT Technology) requires a computer system with an Intel® processor supporting HT Technology and an HT Technology enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. See www.intel.com/products/ht/hyperthreading_more.htm for more information including details on which processors support HT Technology.

Intel® Virtualization Technology requires a computer system with a processor, chipset, BIOS, virtual machine monitor (VMM) and for some uses, certain platform software, enabled for it. Functionality, performance or other benefit will vary depending on hardware and software configurations. Intel Virtualization Technology-enabled VMM applications are currently in development.

Note: Prices subject to change without notice. Prices are for direct Intel customers in 1000-unit bulk quantities and, unless specified, represent the latest technology versions of the products. Taxes and shipping, etc. not included. Prices may vary for other package types and shipment quantities, and special promotional arrangements may apply.

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/products/processor_number for details.

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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product descriptions at any time, without notice. The information herein is provided "as-is" and Intel does not make any representations or warranties whatsoever regarding accuracy of the information, nor on the product features, availability, functionality, or compatibility of the products listed. Please contact system vendor for more information on specific products or systems.

Halogen Free implies the following:

Bromine and/or chlorine in materials that may be used during processing, but do not remain within the final product are not included in this definition. The halogens fluorine (F), iodine (I), and astatine (At) are not restricted by this standard.

"BFR/CFR and PVC-Free" Definition: :

All PCB laminates must meet Br and Cl requirements for low halogen as defined in IPC-4101B
For components other than PCB laminates, all homogeneous materials must contain < 900 ppm (0.09%) of Bromine [if the Bromine (Br) source is from BFRs] and < 900 ppm (0.09%) of Chlorine [if the Chlorine (Cl) source is from CFRs or PVC. Higher concentrations of Br and Cl are allowed in homogenous materials of components other than PCB laminates as long as their sources are not BFRs, CFRs, PVC.
Although the elemental analysis for Br and Cl in homogeneous materials can be performed by any analytical method with sufficient sensitivity and selectivity, the presence or absence of BFRs, CFRs or PVC must be verified by any acceptable analytical techniques that allow for the unequivocal identification of the specific Br or Cl compounds, or by appropriate material declarations agreed to between customer and supplier.

Max Turbo Frequency refers to the maximum single-core frequency that can be achieved with Intel® Turbo Boost Technology, which requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See www.intel.com/technology/turboboost/ for more information.