





Intel® Celeron® Processor G1820TE (2M Cache, 2.20 GHz)

Specifications	
- Essentials	
Status	Launched
Launch Date	Q1'14
Processor Number	G1820TE
Intel® Smart Cache	2 MB
DMI2	5 GT/s
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1/4.2
Embedded Options Available	 Yes
Lithography	22 nm
Scalability	1S Only
Thermal Solution Specification	PCG 2013A
Recommended Customer Price	
Conflict Free	Yes
Datasheet	Link
Additional Information URL	Link
- Performance	
# of Cores	2
# of Threads	2
Processor Base Frequency	2.2 GHz
TDP	35 W
- Memory Specifications	
Max Memory Size (dependent on memory type)	32 GB
Memory Types	DDR3 1333
Max # of Memory Channels	2
Max Memory Bandwidth	21.3 GB/s
ECC Memory Supported †	 Yes
- Graphics Specifications	
Processor Graphics ‡	Intel® HD Graphics
Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1 GHz
Graphics Video Max Memory	1.7 GB
Graphics Output	eDP/DP/HDMI/DVI/VGA

Intel® Quick Sync Video	 Yes
Intel® Flexible Display Interface (Intel® FDI)	Yes
# of Displays Supported †	3







- Expansion Options

PCI Express Revision	Up to 3.0
PCI Express Configurations †	Up to 1x16, 2x8, 1x8/2x4
Max # of PCI Express Lanes	16

- Package Specifications

Max CPU Configuration	1
Package Size	37.5mm x 37.5mm
Graphics and IMC Lithography	22 nm
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® VT-x with Extended Page Tables (EPT) †	 Yes
Intel® TSX-NI	No
Intel® 64 †	 Yes
Idle States	Yes
Enhanced Intel SpeedStep® Technology	 Yes
Thermal Monitoring Technologies	Yes
Intel® Identity Protection Technology †	No
Intel® Stable Image Platform Program (SIPP)	No

- Intel® Data Protection Technology

Intel® AES New Instructions	 No
Secure Key	Yes

- Intel® Platform Protection Technology

Trusted Execution Technology †	 No
Execute Disable Bit †	Yes

Compatible Products

- Chipsets

Compare	Product Name	Status	Embedded Options Available	TDP	Recommended Customer Price
Compare All +					
	Intel® C226 Chipset (Intel® DH82C226 PCH)	Launched	Yes	4.1 W	T&R: \$49.00
	Intel® Z87 Chipset (Intel® DH82Z87 PCH)	Launched	No	4.1 W	N/A
	Intel® Q87 Chipset (Intel® DH82Q87 PCH)	Launched	Yes	4.1 W	T&R: \$47.00
	Intel® H87 Chipset (Intel® DH82H87 PCH)	Launched	No	4.1 W	T&R: \$32.00
	Intel® B85 Chipset (Intel® DH82B85 PCH)	Launched	No	4.1 W	T&R: \$28.00
	Intel® Q85 Chipset (Intel® DH82Q85 PCH)	Launched	No	4.1 W	N/A
	Intel® H81 Chipset (Intel® DH82H81 PCH)	Launched	Yes	4.1 W	T&R: \$26.00

Ordering and Spec Information

Trade Compliance Information

ECCN	CCATS	US HTS
5A992A	NA	8542310000-HYBRD

Ordering and Spec Information

Spec Code	Ordering Code	Step	RCP	VT-x
Intel® Celeron® Processor G1820TE (2M Cache, 2.20 GHz) FC-LGA12C, Tray				
SR1T6	CM8064601618705	CO	\$42.00	Yes

Retired and Discontinued

Spec Code	Ordering Code	Step	RCP	VT-x
Intel® Celeron® Processor G1820TE (3M Cache, 2.20 GHz) FC-LGA12C, Tray				
SR182	CM8064601484601	CO	N/A	

Download Drivers



BIOS Implementation Test Suite (BITS)

BITS provides a bootable pre-OS environment for testing BIOSes and in particular their initialization of Intel® Processors, hardware, and technologies

Version: Build 2073 (Latest)

Date: 2/10/2016

Operating Systems: OS Independent



Intel® Processor Diagnostic Tool

The Intel® Processor Diagnostic Tool release 3.0.0.25 is compatible with multiprocessor systems.

Version: 3.0.0.25 (Latest)

Date: 1/25/2016

Operating Systems: Linux*, Windows 7*, Windows 8*, 5 more

**Intel® Processor Identification Utility - Windows* Version**

Version 5.40 of the Intel® Processor Identification Utility is provided by Intel to identify characteristics of a processor inside a system.

Version: 5.40 (Latest)

Date: 12/23/2015

Operating Systems: Windows 2000*, Windows 7*, Windows 8*, 8 more

**Intel® Processor Identification Utility - Bootable Version**

The Intel® Processor Identification Utility is provided by Intel to identify characteristics of a processor inside a system.

Version: 5.30 (Latest)

Date: 9/11/2015

Operating Systems: OS Independent

**Linux* Processor Microcode Data File**

The microcode data file contains the latest microcode definitions for all Intel processors. Intel periodically releases these microcode updates.

Version: 20150121 (Latest)

Date: 1/27/2015

Operating Systems: Caldera Linux*, Chromium OS*, Debian 3.1 Linux*, 91 more

**Linux* Processor Microcode Data File**

The microcode data file contains the latest microcode definitions for all Intel processors. Intel periodically releases these microcode updates.

Version: 20150107 (Latest)

Date: 1/13/2015

Operating Systems: Caldera Linux*, Chromium OS*, Debian 3.1 Linux*, 89 more

**Linux* Processor Microcode Data File**

The microcode data file contains the latest microcode definitions for all Intel processors. Intel periodically releases these microcode updates.

Version: 20140913 (Latest)

Date: 9/15/2014

Operating Systems: Caldera Linux*, Chromium OS*, Debian 3.1 Linux*, 82 more

**Linux* Processor Microcode Data File**

The microcode data file contains the latest microcode definitions for all Intel processors. Intel periodically releases these microcode updates.

Version: 20140122 (Latest)

Date: 2/24/2014

Operating Systems: Caldera Linux*, Chromium OS*, Debian 3.1 Linux*, 80 more

**Intel® Processor Frequency ID Utility Bootable version [BFID_X25.EXE]**

The bootable version of Intel® Processor Frequency ID Utility can be used to identify Intel® processors for non-OS dependant systems.

Version: 7.2 (Latest)

Date: 11/14/2011

Operating Systems: OS Independent

**Intel® Processor Frequency ID Utility Windows* version [FIDXX32.MSI]**

The Intel® Processor Frequency ID Utility can be used to identify Intel® processors.

Version: 7.2 (Latest)

Date: 11/14/2011

Operating Systems: Windows 2000*, Windows 98 SE*, Windows Me*, 2 more

**Signal Processing Library for Windows* CE 2.12 [SPLCE212.EXE]**

Intel® Signal Processing Library for Windows* CE 2.12 Operating System

Version: 0.0 (Current)

Date: 8/9/2004

Operating Systems: Windows CE 2.x*, Windows CE 3.x (Pocket PC)*, Windows CE*

**Signal Processing Library for QNX* Neutrino* 2.0 Operating System [SPLQNX20.EXE]**

Intel® Signal Processing Library for QNX* Neutrino* 2.0 Operating System

Version: 0.0 (Current)

Date: 8/9/2004

Operating Systems: QNX*

**JPEG Library for Windows* CE 2.12 [IJLCE212.EXE]**

Intel® JPEG Library for Windows* CE 2.12 Operating System

Version: 0.0 (Current)

Date: 8/9/2004

Operating Systems: Windows CE 2.x*, Windows CE 3.x (Pocket PC)*, Windows CE*

**JPEG Library for VxWorks* 5.3.1 [JLVX531.EXE]**

Intel® JPEG Library for VxWorks* 5.3.1

Version: 0.0 (Current) **Date:** 8/9/2004**Operating Systems:** VxWorks***JPEG Library for QNX* Neutrino* 2.0 [JLQNX20.EXE]**

This is the Intel® JPEG Library for QNX* Neutrino* 2.0 operating system.

Version: 0.0 (Current) **Date:** 8/9/2004**Operating Systems:** QNX***Image Processing Library for Windows* CE 2.12 [IPLCE212.EXE]**

Intel® Image Processing Library for Windows* CE 2.12 Operating System

Version: 0.0 (Current) **Date:** 8/9/2004**Operating Systems:** Windows CE 2.x*, Windows CE 3.x (Pocket PC)*, Windows CE***Image Processing Library for QNX* Neutrino* 2.0 [IPLQNX20.EXE]**

Intel® Image Processing Library for QNX* Neutrino* 2.0 Operating System

Version: 0.0 (Current) **Date:** 8/9/2004**Operating Systems:** QNX***Intel® Iris™, Iris™ Pro, and HD Graphics Production Driver for Windows® 10 64-bit**

This driver includes support for the new Microsoft Windows® 10 operating system and adds new Windows 10 features.

Version: 15.40.4.64.4256 (Previously Released) **Date:** 1/30/2016**Operating Systems:** Windows® 10, 64-bit**Linux* Processor Microcode Data File**

The microcode data file contains the latest microcode definitions for all Intel processors. Intel periodically releases these microcode updates.

Version: 20140624 (Previously Released) **Date:** 9/17/2014**Operating Systems:** Linux***Linux* Processor Microcode Data File**

The microcode data file contains the latest microcode definitions for all Intel processors. Intel periodically releases these microcode updates.

Version: 20140430 (Previously Released) **Date:** 9/15/2014**Operating Systems:** Linux*

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Refer to Datasheet for formal definitions of product properties and features.

"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.

"Conflict free" and "conflict-free" means "DRC conflict free", which is defined by the U.S. Securities and Exchange Commission rules to mean products that do not contain conflict minerals (tin, tantalum, tungsten and/or gold) that directly or indirectly finance or benefit armed groups in the Democratic Republic of the Congo (DRC) or adjoining countries. Intel also uses the term "conflict-free" in a broader sense to refer to suppliers, supply chains, smelters and refiners whose sources of conflict minerals do not finance conflict in the DRC or adjoining countries. Intel processors manufactured before January 1, 2013 are not confirmed conflict free. The conflict free designation refers only to product manufactured after that date. For Intel Boxed Processors, the conflict free designation refers to the processor only, not to any additional included accessories, such as heatsinks/coolers.

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.

The Recommended Customer Price ("RCP") is pricing guidance for Intel products. Prices are for direct Intel customers, typically represent 1,000-unit purchase quantities, and are subject to change without notice. Taxes and shipping, etc. not included. Prices may vary for other package types and shipment quantities, and special promotional arrangements may apply. If sold in bulk, price represents individual unit. Listing of these RCP does not constitute a formal pricing offer from Intel. Please work with your appropriate Intel representative to obtain a formal price quotation.

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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