



Intel® Celeron® Processor N2830 (1M Cache, up to 2.41 GHz)

Specifications

- Essentials

Processor Number	N2830
Status	Launched
Launch Date	Q1'14
Lithography	22 nm
Recommended Customer Price	\$107.00

- Performance

# of Cores	2
# of Threads	2
Processor Base Frequency	2.16 GHz
Burst Frequency	2.41 GHz
Cache	1 MB
TDP	7.5 W
Scenario Design Power (SDP)	4.5 W
VID Voltage Range	0.40V – 1.14V

- Supplemental Information








Embedded Options Available	 No
Datasheet	Link
Conflict Free	Yes

- Memory Specifications

Max Memory Size (dependent on memory type)	8 GB
Memory Types	DDR3L 1333
Max # of Memory Channels	2

- Graphics Specifications

Processor Graphics †	Intel® HD Graphics
Graphics Base Frequency	313.00 MHz
Graphics Burst Frequency	750.00 MHz
Graphics Max Dynamic Frequency	750.00 MHz
Intel® Quick Sync Video	 Yes
Intel® InTru™ 3D Technology	No
Intel® Clear Video HD Technology	No

Intel® Wireless Display		Yes
# of Displays Supported †		2
- Expansion Options		
PCI Express Revision		2.0
PCI Express Configurations †		1x4
Max # of PCI Express Lanes		4
- I/O Specifications		
USB Revision		3.0 and 2.0
# of USB Ports		5
Total # of SATA Ports		2
- Package Specifications		
Sockets Supported		FCBGA1170
Max CPU Configuration		1
T _{JUNCTION}		100°C
Package Size		25mm x 27mm
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® 64 †		Yes
Instruction Set		64-bit
Idle States		Yes
Enhanced Intel SpeedStep® Technology		Yes
Intel® Identity Protection Technology †		No
Intel® Rapid Storage Technology		No
Intel® Smart Connect Technology		Yes
Intel® Stable Image Platform Program (SIPP)		No
- Intel® Data Protection Technology		
Intel® AES New Instructions		No
Secure Key		Yes
- Intel® Platform Protection Technology		
Execute Disable Bit †		Yes

Anti-Theft Technology	No
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Ordering and Spec Information

Trade Compliance Information

ECCN	CCATS	US HTS
3A991	NA	8542310000-HYBRD

Ordering and Spec Information

Spec Code	Ordering Code	Step	RCP
Intel® Celeron® Processor N2830 (1M Cache, up to 2.41 GHz) FC-BGA13F, Tray			
SR1W4	FH8065301729602	CO	\$107.00

Download Drivers



Linux* Processor Microcode Data File

The microcode data file contains the latest Linux* microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20161104 (Latest)

Date: 11/4/2016

Operating Systems: Red Hat Linux*, Debian Linux*, Linux*, 19 more



BIOS Implementation Test Suite (BITS)

This download installs version build 2073 of the BIOS Implementation Test Suite (BITS).

Version: Build 2073 (Latest)

Date: 2/2/2016

Operating Systems: OS Independent



Intel® Processor Diagnostic Tool

This download installs the Intel® Processor Diagnostic Tool release 3.0.0.25, which is compatible with multiprocessor systems.

Version: 3.0.0.25 (Latest)

Date: 1/25/2016

Operating Systems: Linux*, Windows 7*, Windows Server 2008 R2*, 5 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: 8/13/2015

Operating Systems: OS Independent



Intel® HD Graphics driver for Windows* 8/8.1 (32-bit)

Installs version 1 of the Intel® HD Graphics driver for Windows* 8/8.1.

Version: 1 (Latest)

Date: 4/4/2014

Operating Systems: Windows 8, 32-bit*, Windows 8.1, 32-bit*



Intel® HD Graphics driver for Windows* 8/8.1 (64-bit)

Installs the Intel® HD Graphics driver for Windows* 8 and 8.1.

Version: 1 (Latest)

Date: 4/4/2014

Operating Systems: Windows 8, 64-bit*, Windows 8.1, 64-bit*



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: 11/16/2004

Operating Systems: Windows XP Home Edition*, Windows XP Professional*, Windows 98 SE*, 2 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: 11/15/2004

Operating Systems: OS Independent

**Linux* Processor Microcode Data File**

The microcode data file contains the latest Linux* microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20160714 (Previously Released)

Date: 7/14/2016

Operating Systems: Red Hat Linux*, SUSE Linux 9.x*, Debian Linux*, 28 more

**Linux* Processor Microcode Data File**

The microcode data file contains the latest Linux* microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20160607 (Previously Released)

Date: 6/6/2016

Operating Systems: Red Hat Linux*, Red Hat Enterprise Linux 4.0*, Caldera Linux*, 31 more

**Linux* Processor Microcode Data File**

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

Version: 20151106 (Previously Released)

Date: 11/9/2015

Operating Systems: Red Hat Desktop 3 Update 4*, Red Hat Desktop Linux 3*, Red Hat Enterprise Linux 2.1*, 86 more

**Intel® Graphics Driver for Windows® 10 and Windows 7*/8.1* [15.33]**

This download installs version 15.33.39.4276 of the Intel® HD Graphics Driver for Windows* 7/8.1/10.

Version: 15.33.39.4276 (Previously Released)

Date: 9/21/2015

Operating Systems: Windows 7, 32-bit*, Windows 7, 64-bit*, Windows 8.1, 32-bit*, 3 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: 20150121 (Previously Released)

Date: 1/21/2015

Operating Systems: Turbolinux*, Red Hat Desktop 3 Update 4*, Red Hat Desktop Linux 3*, 90 more

**Linux* Processor Microcode Data File**

The microcode data file 20150107 for Linux* contains the latest microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20150107 (Previously Released)

Date: 1/7/2015

Operating Systems: Turbolinux*, Red Hat Desktop 3 Update 4*, Red Hat Desktop Linux 3*, 88 more

**Linux* Processor Microcode Data File**

The microcode data file 20140913 for Linux* contains the latest microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20140913 (Previously Released)

Date: 9/15/2014

Operating Systems: Red Hat Desktop 3 Update 4*, Red Hat Desktop Linux 3*, Red Hat Enterprise Linux 2.1*, 81 more

**Linux* Processor Microcode Data File**

The microcode data file 20140624 for Linux* contains the latest microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20140624 (Previously Released)

Date: 6/24/2014

Operating Systems: Linux*

**Linux* Processor Microcode Data File**

The microcode data file 20140430 for Linux* contains the latest microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20140430 (Previously Released)

Date: 4/30/2014

Operating Systems: Linux*



Linux* Processor Microcode Data File

The microcode data file 20140122 for Linux* contains the latest microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20140122 (Previously Released)

Date: 1/22/2014

Operating Systems: Turbolinux*, Red Hat Desktop 3 Update 4*, Red Hat Desktop Linux 3*, 79 more



Linux* Processor Microcode Data File

The microcode data file 20130906 for Linux* contains the latest microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20130906 (Previously Released)

Date: 9/6/2013

Operating Systems: Turbolinux*, Red Hat Desktop 3 Update 4*, Red Hat Desktop Linux 3*, 79 more



Linux* Processor Microcode Data File

The microcode data file 20130808 for Linux* contains the latest microcode definitions for all Intel® Processors. Intel periodically releases these microcode updates.

Version: 20130808 (Previously Released)

Date: 8/14/2013

Operating Systems: Turbolinux*, Red Hat Desktop 3 Update 4*, Red Hat Desktop Linux 3*, 79 more

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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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