



# Intel® Celeron® Processor at 2.0 GHz and 2.5 GHz for Embedded Computing

## Product Overview

With an advanced microarchitecture and core frequency of 2.0 GHz and 2.5 GHz, the Intel® Celeron® processor is ideal for scalable performance embedded computing, including communications, transaction terminal and industrial automation applications. While incorporating new features and improvements, it remains software compatible with previous members of the Intel® microprocessor family.

The Intel Celeron processor is validated with the following chipsets, expanding the selection of Celeron processor-based platforms with a superb balance of price and performance for embedded computing segments.

- Intel® 875P chipset supports outstanding performance, featuring dual-channel DDR 266/333/400 with ECC, AGP 8x, 4 GB max memory, Communications Streaming Architecture (CSA), and four PCI-X\* slot devices
- Intel® 865G chipset supports dual-channel DDR 266/333/400 main memory, 4 GB max memory, integrated graphics controller with Intel® Extreme Graphics 2 Technology, and AGP 8x graphics interface
- Intel® 852GME chipset features up to 2 GB of DDR 266/333 system memory, providing an optimized integrated graphics solution, ECC, and support for Intel Extreme Graphics 2 Technology
- Intel® 852GM chipset supports 2 GB of DDR 200/266 system memory and features integrated graphics utilizing Intel Extreme Graphics 2 Technology
- Intel® 845 chipset family provides up to 2 GB of DDR 200/266/333<sup>1</sup> memory and configurable, optional ECC operation (Intel® 845 and Intel® 845E chipsets)



## Product Highlights

- Available at 2.0 GHz and 2.5 GHz with a 400 MHz front-side bus delivering 3.2 GB of data per second into and out of the processor
- Featuring Intel NetBurst® microarchitecture
  - Hyper-pipelined technology of Intel NetBurst microarchitecture doubles the pipeline depth of the P6 microarchitecture
  - Rapid execution engine, which includes two Arithmetic Logic Units (ALUs), clocked at twice the core processor frequency
  - 128 KB Level 2 Advanced Transfer Cache (ATC) delivers a high data throughput channel between the Level 2 cache and the processor core. Features of the ATC include:
    - Non-blocking, full-speed, on-die Level 2 cache
    - 8-way set associativity
    - Data clocked into and out of the cache every clock cycle
  - Deep, out-of-order speculative Advanced Dynamic Execution engine
  - Streaming SIMD Extensions 2 (SSE2) adds 144 new instructions
  - Data Prefetch Logic functionality anticipates the data needed by an application and pre-loads it into the ATC, further increasing processor and application performance

## Product Highlights (continued)

- Validated with the Intel 875P chipset, Intel 865G chipset, Intel 852GM chipset, Intel 852GME chipset, Intel 845E chipset, Intel 845GV chipset, and Intel 845 chipset
- Manufactured on 0.13µ process technology
- Support for uni-processor designs
- Fully compatible with existing Intel® architecture-based software
- FC-PGA2 478-pin package with integrated heat spreader
- Embedded lifecycle support
- Along with a strong ecosystem of hardware and software vendors, including members of the Intel® Communications Alliance ([intel.com/go/ica](http://intel.com/go/ica)), Intel helps cost-effectively meet development challenges and speed time-to-market

### Intel® Celeron® Processor at 2.0 GHz and 2.5 GHz for Embedded Computing

Product Number	Core Speed	Front-Side Bus Speed	L2 Cache	Thermal Design Power	Voltage <sup>2</sup>	Tcase (Max)	Package
RK80532RC060128	2.5 GHz	400 MHz	128 KB	61.0 W	1.525 V	72° C	FC-PGA2 478-pin
RK80532RC041128	2.0 GHz	400 MHz	128 KB	52.8 W	1.525 V	68° C	FC-PGA2 478-pin

<sup>1</sup> Only the 845GV SKU of this family supports DDR 333

<sup>2</sup> Variable VID maximum voltage. The Intel Celeron processor ships with different voltage settings. For detailed product specifications, please refer to our Web site at <http://developer.intel.com/design/celeron/datashts/251748.htm>

## Intel Access

Embedded Intel® Architecture Home Page:	<a href="http://intel.com/design/intarch">intel.com/design/intarch</a>
Developer's Site:	<a href="http://developer.intel.com">developer.intel.com</a>
Intel in Communications:	<a href="http://intel.com/communications">intel.com/communications</a>
General Information Hotline:	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST
Intel® Literature Center:	(800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada) International locations please contact your local sales office.

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