

Product Brief

Intel® Celeron® M Processors on 90nm

Embedded Computing



Intel® Celeron® M Processors on 90nm for Embedded Computing

Product Overview

Intel® Celeron® M processors on 90nm process technology are available in both standard and ultra-low-voltage versions, providing a range of performance, value and power options for a variety of thermally sensitive embedded and communications applications.

These processors offer ideal solutions for small-to-medium business and enterprise communications applications, storage appliances, and embedded devices like point-of-sale kiosks and ATMs. In addition, they are software-compatible with previous members of the Intel® microprocessor family.

Intel Celeron M processors on 90nm are validated with the Intel® 3100, Mobile Intel® 915GME Express, Mobile Intel® 910GME Express, Intel® E7520, Intel® E7320, and Intel® 855GME chipsets. Each chipset, when paired with the Intel Celeron M processor, helps create a unique platform to address a variety of customer requirements.

Product Highlights

- Performance and power options:
 - Intel® Celeron® M processor 370^A at 1.5 GHz core speed with 400 MHz front-side bus (FSB) speed
 - Intel® Celeron® M processor Ultra Low Voltage 373^A at 1.0 GHz core speed with 400 MHz FSB speed
- Supported by the Intel 3100, Mobile Intel 915GME Express, Mobile Intel 910GME Express, Intel E7520, Intel E7320, and Intel 855GME chipsets
- Features a new microarchitecture designed from the ground up:
 - Dedicated hardware stack manager employs sophisticated hardware control for improved stack management
 - Micro-ops fusion for improved instruction execution
- Advanced branch prediction capability
- Level 2 Advanced Transfer Cache (ATC) delivers a high data throughput channel between the Level 2 cache and processor core (1 MB for Intel Celeron M processor 370; 512 KB for Intel Celeron M processor Ultra Low Voltage 373)
- Second-generation Streaming SIMD Extensions (Streaming SIMD Extensions 2) capability adds 144 new instructions, including 128-bit SIMD integer arithmetic and 128-bit SIMD double-precision floating-point operation
- Support for uni-processor designs
- Fully compatible with existing Intel® architecture-based software
- 478 μ FC-PGA and 479 μ FC-BGA packages
- Embedded life cycle support
- Along with a strong ecosystem of hardware and software vendors, including members of the Intel® Communications Alliance (intel.com/go/ica), Intel helps cost-effectively meet development challenges and speed time-to-market



Features

Efficient execution

- Advanced branch prediction
- Power optimized processor system bus
- Micro-ops fusion
- Hardware stack manager

Benefits

- Fast program execution
- Low exception handling overhead
- Excellent packet manipulation: load, store
- Low context switching latency

Power-optimized circuitry

- Cache and processor bus power management

- Low average power consumption

Data supply

- Large L1/L2 caches

- Fast large-table look-ups: routing tables

High I/O bandwidth

- Intel® 3100, Mobile Intel® 915GME Express, Mobile Intel 910GML Express, Intel® E7520, and Intel® E7320 chipsets support PCI Express* technology

- High packet throughput and processing

Graphics support

- Mobile Intel 915GME Express, Mobile Intel® 910GML Express, and Intel® 855GME chipsets provide support via Intel® Extreme Graphics 2 Technology

- Cutting-edge graphics performance while reducing system cost

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Product Number	Core Speed	Front-Side Bus Speed	L2 Cache	Thermal Design Power	VID	Tjunction	Package
Intel® Celeron® M processor 370^A							
RH80536NC0211M	1.5 GHz	400 MHz	1 MB	21 watts	1.260V	0-100° C	478 µFC-PGA
RJ80536NC0211M	1.5 GHz	400 MHz	1 MB	21 watts	1.260V	0-100° C	479 µFC-BGA
Intel® Celeron® M processor Ultra Low Voltage 373^A							
RJ80536VC001512M	1.0 GHz	400 MHz	512 KB	5.5 watts	0.940V	0-100° C	479 µFC-BGA

^AIntel 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.

Intel Access

Embedded Intel® Architecture Home Page: intel.com/design/intarch

Developer's Site: intel.com/design

Intel in Embedded and Communications: intel.com/go/embedded

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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