



# Intel® Celeron® Processor - Low Power for Applied Computing

## Product Highlights

- 300 MHz and 400 MHz:
  - Built on the Intel 0.18 micron process
  - 128K Full speed on-die L2 cache operating at core frequency
  - Low profile, surface mount BGA package
  - BGA (31 x 27 x 2.5mm), (BGA2)
  - 495 leads in area array
  - Tcase: 0 to 100C
- 650 MHz:
  - Built on the Intel 0.13 micron process
  - 256K Full speed on-die L2 cache operating at core frequency
  - Low profile, surface mount  $\mu$ FCBGA package
    - $\mu$ FCBGA package (35 x 35 mm)
    - 479 balls in area array
    - Tcase: 0 to 100C
- Functional features
  - MMX technology
  - Floating Point Unit (FPU)
  - Dynamic Execution Micro-Architecture
  - On-Die L2 Cache with Error Checking and Correcting (ECC)

### Low Power 400 MHz

- 400 MHz processor speed
- 100 MHz processor side bus
- 10.1W TDP (max), 6.5 W TDP (typ)
- Supported with the Intel® 815, Intel® 815E, Intel® 440BX AGPset and Intel® 440MX Chipsets

### Ultra-Low Power 300 MHz

- 300 MHz processor speed
- 100 MHz processor side bus
- 5.7W TDP (max), 4.2 W TDP (typ)
- Supported with the Intel 815, Intel 815E, and the Intel 440MX Chipsets



### Ultra-Low Voltage 650 MHz

- 650 MHz processor speed
- 100 MHz processor side bus
- 8.3W TDP (max), 7.0W TDP (typ)
- Supported with Intel 440MX and Intel 815E chipsets

## Product Overview

The Intel® Celeron® processors - Low Power, Ultra Low Power and Ultra Low Voltage now provide an exceptional value for thermally sensitive and space constrained applied computing applications by combining the optimal balance of cost, performance, and low power. Available in the small form factor BGA package at 300 and 400 MHz with 128K of on-die L2 cache or the  $\mu$ FCBGA package at 650 MHz with 256K of on-die L2 cache. These features make it ideal for value-based, low-profile, low-power applied computing applications, such as data communications, telecommunications, industrial automation and transaction terminals.

The 300 MHz processor, at just 1.1V and 5.7 W TDP (max), and the 650 MHz processor, also at 1.1V and with a 8.3W TDP (max), are ideal solutions for communication appliances such as set-top boxes, network attached storage, web pads and other applications with lower power envelopes and BOM requirements.

## Product Description

The Embedded Intel® Architecture low power family features a 100 MHz processor side bus, designed for a faster transfer of data, to yield an increase in performance. The 128K/256K of on-die L2 cache combined with the efficiencies of the 0.18 and 0.13 micron manufacturing processes offers good low power processor performance for value based systems. The compact form factor results in a low profile, meeting small space requirement. This enables a variety of value-based designs for thermally sensitive and space constrained environments.

## INTEL® CELERON® PROCESSORS - LOW POWER, ULTRA LOW POWER, & ULTRA LOW VOLTAGE

PRODUCT NUMBER	CORE SPEED (MHz)	EXTERNAL BUS SPEED (MHz)	L2 CACHE	THERMAL DESIGN POWER (MAX)	VOLTAGE	T <sub>CASE</sub>	PACKAGE
RJ80530VY650256	650	100	256K	8.3 watts	1.1V	0-100C	479 µFCBGA
KC80526LY400128	400	100	128K	10.1 watts	1.35V	0-100C	495 BGA
KC80526LL300128	300	100	128K	5.7 watts	1.1V	0-100C	495 BGA

## Intel Access

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