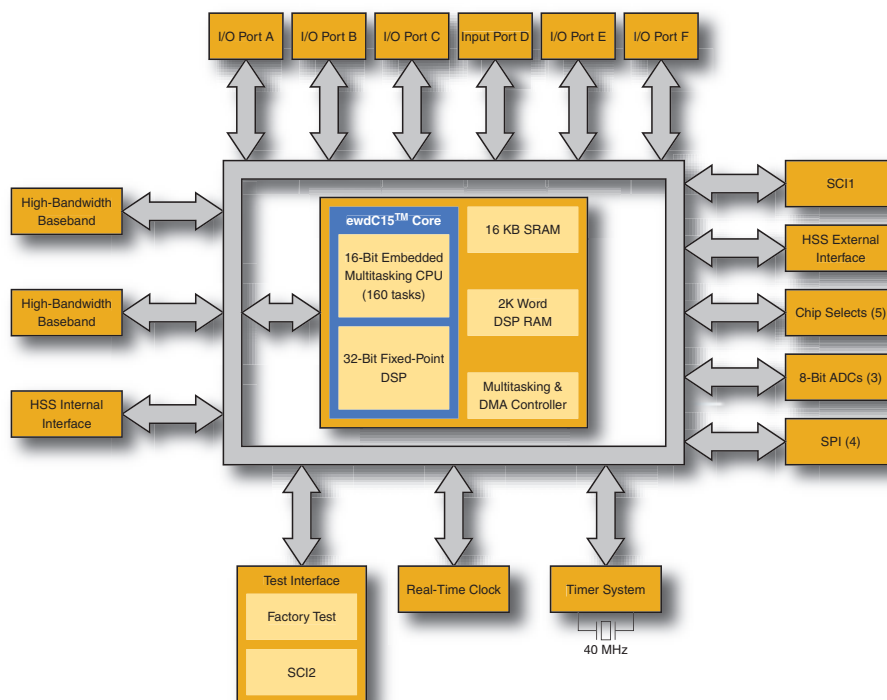


# Wireless Processor Preliminary Product Brief

The e8015™ Wireless Processor is a highly-integrated and optimized mixed-signal Product-on-Chip™ (PoC™) solution. The e8015 processor incorporates the ewdC15™ core, DMA controller, embedded SRAM, and two high-bandwidth baseband controllers in a single package solution. The ewdC15 core contains a powerful 32-bit DSP and a robust 16-bit multitasking microprocessor. The configurable RF interface enables the e8015 processor to work with any RF solution. The e8015 processor is targeted at wireless implementations of networking and information appliances. Wireless applications include wireless networking adapters, wireless web cameras, information appliances, and computer peripherals.



**e8015 Wireless Processor Block Diagram**

## Digital Features

- 2.7V to 3.3V operation
- ewdC15™ core
  - 40 MHz 16-bit microprocessor
  - 32-bit fixed-point DSP
  - eMOS™ Embedded Multitasking Operating System providing 160 simultaneous tasks
- Two GFSK high-bandwidth baseband controllers
  - DECT compatible
  - WDCT compatible
  - HomeRF compatible
- Configurable RF interface
- True Response™
  - Simultaneous Flash memory read & write
- Removable media interface
- 16 MB programming space/addressing range
- 2K word DSP RAM
- 16 KB generic data/program SRAM
- NAND Flash interface
- ISA bus compatible
- Two fixed chip selects
- Three programmable chip selects
- 39 programmable I/Os
- 8/16-bit selectable external data bus
- 16/24-bit timer/counter with output compare and input capture
- DMA control for SPI, baseband & CODEC bus

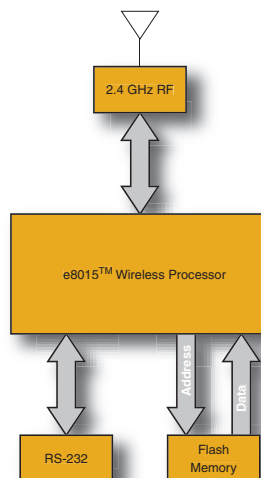
## Digital Features (continued)

- Four serial peripheral interfaces (SPI)
- Two SCI (UART) interfaces
- IrDA infrared controller (IrLAN 1.0)
- High-speedserial (HSS) interface for analog peripherals
- Three 8-bit ADCs
- 37 vectored interrupts
- Real-time clock (RTC)
- In-circuit debug and programming (ICDP)

## Applications

- Wireless networking adapters
- Wireless web cameras
- Information appliances
- Computer peripherals

## Application Example



**Wireless Networking Adapter**

## Package Availability

- 128-lead TQFP (20 mm x 14 mm)
- 144-ball BGA (12 mm x 12 mm)

## embedded wireless devices inc

Founded in 1995, with headquarters in Pleasanton, California and a design facility in Horsens, Denmark, embedded wireless devices inc develops and markets solutions for multi-point broadband wireless networking. By combining a highly-optimized MPU/DSP host processor and eMOS™ operating system with multiple programmable basebands, analog front end, and system memory, ewd solves the dilemma of simultaneous voice and data communications in enterprise and residential broadband wireless networking environments.

For wireless applications such as home networking, telephony, PDAs, VoIP devices, MP3 players/recorders and information appliances, ewd's total product solutions shorten product development cycles and significantly reduce the product's complexity and overall cost. Core competencies include wireless applications and protocols, multiple programmable basebands, multitasking architectures, digital signal processing, and analog and RF design.

5200 Franklin Drive  
Pleasanton, CA 94588  
Phone: 925.251.6200  
Fax: 925.251.6201

Holmboes Allé 1  
3rd Floor  
8700 Horsens  
Denmark  
Phone: +45.7628.6250  
Fax: +45.7628.6251

Website:  
<http://www.ewdi.com>

E-mail:  
[information@ewdi.com](mailto:information@ewdi.com)

© 2001 embedded wireless devices inc. All rights reserved.

ewd, the ewd logo, ewdC15, e8015, eMOS, PoC, Product-on-Chip, and True Response are trademarks of embedded wireless devices inc.

**WARRANTIES AND DISCLAIMERS:**  
THIS DOCUMENT IS PUBLISHED FOR INFORMATIONAL PURPOSES ONLY AND IS PROVIDED "AS IS" AND WITHOUT WARRANTY OF ANY KIND. ewd™ DISCLAIMS ANY AND ALL WARRANTIES WITH RESPECT TO THIS INFORMATION, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT PERMITTED BY LAW, IN NO EVENT SHALL ewd BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF, OR RELIANCE UPON, ANY INFORMATION IN THIS DOCUMENT OR ANY ERROR OR OMISSION IN SUCH INFORMATION. ewd RESERVES THE RIGHT TO UPDATE, CHANGE OR REMOVE PORTIONS OF THE INFORMATION PROVIDED HEREIN WITHOUT NOTICE.

0019-v1-08/09/01-xM