Texas Instruments (TI) delivers the first open, software-driven Eureka DAB digital radio receiver solution. This provides the most cost-effective and power-efficient product to the industry today.

The TI Eureka Digital Audio Broadcasting (DAB) solution for OEMs includes:

- TI DSP-based digital baseband and TI analog parts
- Evaluation board and reference design

**Digital baseband and receiver system**

Figure 1 shows the architecture of the re-programmable, DSP-based digital baseband TMS320DRE200™ and the total receiver solution. The ETSI 300 401-compliant DRE200 baseband performs channel and source decoding on a single chip. In addition, the digital baseband can decode all Eureka modes and perform user-interface functions. TI also builds the ADC, DAC, power amplifier, and various power-management devices for this application. TI’s evaluation board and reference design will resemble Figure 1.

**Features and specifications of the DRE200 baseband are:**

- Compatible with standard audio DAC interfaces
- Can interface to an external microcontroller, DRAM and SRAM
- Disturbance-free operation during multiplex sub-channel reconfiguration or ensemble switch
- Can feed data to external TPEG or MOT decoder and external memory
- Baseband <200 mW, standby <1 mA
- 1.6-V operation
- 144-pin TQFP or 144-pin µ*BGA™
- -40 to +85°C operation

**Key Benefits**

- Reduce system costs – up to 40% lower than competition with low-cost baseband and system bill of materials
- Easily design new products with turn key reference design and comprehensive support
- Quickly and easily update and upgrade products via software
- Reduce baseband power consumption – 27% lower than the competition

![Figure 1. Eureka DAB Digital Radio Solution](image-url)
Applications
In addition to car and home digital radios, the DRE200 enables portable devices by having the lowest power consuming baseband in the industry.

Benefits of TMS320DRE200™

- Low-cost baseband and system BOM – Up to 40% lower than competition because:
  - Integrated baseband leveraging TI’s DSP economy of scale and process technology
  - No DRAM/ SRAM, microcontroller required for audio and PAD decoding
  - Software implementation minimizes cost to add new features
- Power efficiencies resulting from:
  - 60% less baseband power consumption (< 200 mW) than competition
  - 27% less system power consumption (< 800 mW) than competition
- Software driven, open and scalable platform gives:
  - Flexibility to replace/add any feature software modules with TI’s DSP tools
  - Rapid, easy development of enhanced features and integrated devices on a single chip
- Ease of design due to:
  - Turn-key ref design easily manufactured/customized
  - TI and third-party support

Roadmap
The DRE200 baseband enables low-cost, portable, basic radios. The future baseband products from TI will redefine digital radio by enabling feature-rich and integrated end products.

Pricing and availability
An evaluation board based on the DRE200 baseband will be available to OEMs in 1Q01 for $5,000. The DRE200 samples will be ready in 1Q01 and production volumes will be available early 2Q01. The reference design is also planned for OEMs in 2Q01. For volume pricing on the DRE200, please contact your TI field sales representative.

For more information, please contact the nearest TI sales office or visit our website at:
http://www.ti.com/sc/digitalradio