

A complete Digital Radio solution

Sonata is a DAB+ Digital Radio module, targeted towards Consumer Electronics manufacturers empowering them to build:

- complete DAB digital radio receivers by connecting Sonata to a minimal number of external components, as exemplified in the figure below, or
- to add digital radio capability to cellular radios, regular FM radio or to other entertainment devices

Sonata functions as a radio receiver, MP3 player and clock/alarm:

- DAB+/DMB - Digital Radio receiver
- digital FM and RDS for analogue broadcasting
- audio MP3 and WMA, AAC player
- alarm clock

To build a complete DAB+ Digital Radio receiver, EtherWaves provides a single-chip RF front-end unit and a baseband with the supporting circuitry. The baseband unit is executed on AD's BlackFin532 low-cost general purpose-DSP chip, enabling a cost-effective solution.

Conceived for fast design cycle and cost-effective complete solution

Designed to be cost-effective, Sonata provides an Eureka 147 DAB and DAB+ receiver equipped with the latest features expected from a high-end digital radio product; FM radio reception with RDS, a MP3/WMA/AAC player supported by a SD Card, crystallized sound processing and clock-radio functionality. The sound processing includes bass & treble control, equalization, and mixing, thus precluding the need for dedicated additional expensive circuitry. Furthermore, Sonata enables the recording of the original digital audio format for later playback. Sonata system management includes graphical user interface and a file system.

EtherWaves provides its customers with a hardware evaluation board, documentation and BOM for completing the design (Gerber files), software with the complete application, and integration support.

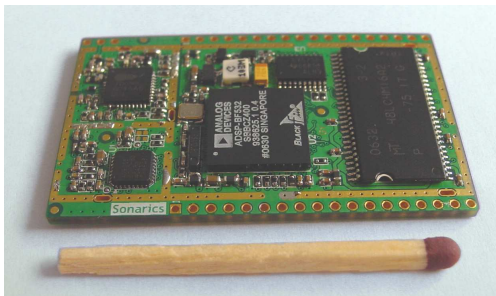


Figure 1 Sonata Module

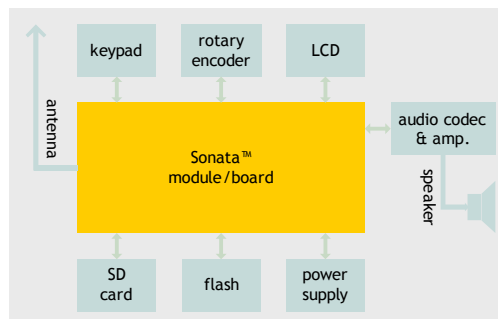


Figure 2 - Typical digital radio receiver & MP3 player block diagram

Key Features

- Supports Multi-Broadcasting standards: DAB (Europe, Australia, etc. - ETSI EN 300 401) multi-mode L-band and band III/ DAB+ (ETSI TS 102 563) including data services, EPG, T-DMB (Korea TTAS.KO-07.0026 and Europe ETSI TS 102 427 / 428) output is DMB-TS
- Stereo FM receiver with RDS support
- Playback of MP3/WMA/AAC files from SD card
- Multi-lingual
- Continuous record for on-demand last minutes replay
- Built-in sound control engine: bass, treble & loudness

- direct control of LCD, keypad, rotary encoder (optional)
- Power down for low power consumption
- Clock / alarm functionality
- Compact size

Main Benefits

- Proven reliable solution
- Cost-effective
- Fast design cycle
- Suitable for a large variety of consumer electronics products and a large range of markets
- Easy integration with existing products