



SP1010

Digital Broadcaster Receiver Advance Information

The SiPort® SP1010™ Terrestrial Digital Broadcast Receiver is a highly integrated single chip CMOS tuner and baseband. This multiband single-chip receiver enables Digital Radio and Digital Data Services on connected platforms such as Personal Navigation Devices (PND), MP-3 Players and automotive navigation systems.

The SiPort SP1010 offers unmatched performance per milliwatt and enables location based data services and rich digital content on a variety of platforms. The combination of RF and digital logic on a single die fabricated in standard CMOS process enables high performance, low power consumption, attractive price points, and small form factors. The SP1010 design provides superior RF performance and interference rejection in all operating modes. Digital Signal Processing (DSP) enables the baseband to provide performance previously found only in expensive, high-end receivers. The software-programmable configurability enables multi-standard reception without compromising performance/power ratios. The SP1010 handles all symbol decoding, synchronization, de-interleaving, error detection, and error-correction functions. Figure 1 shows the major functional hardware blocks of the SP1010.

In Digital Radio mode, the SP1010 receives a broadcast signal from an antenna and outputs digital audio PCM samples to an external audio DAC. In Digital Data Services modes, the SP1010 receives broadcast signals from an antenna, demodulates and decrypts the data received and sends out the decoded data stream to an external host processor for displaying the new content whether updating a Point of Interest (POI) on a PND or downloading a new song to the MP-3 Player.

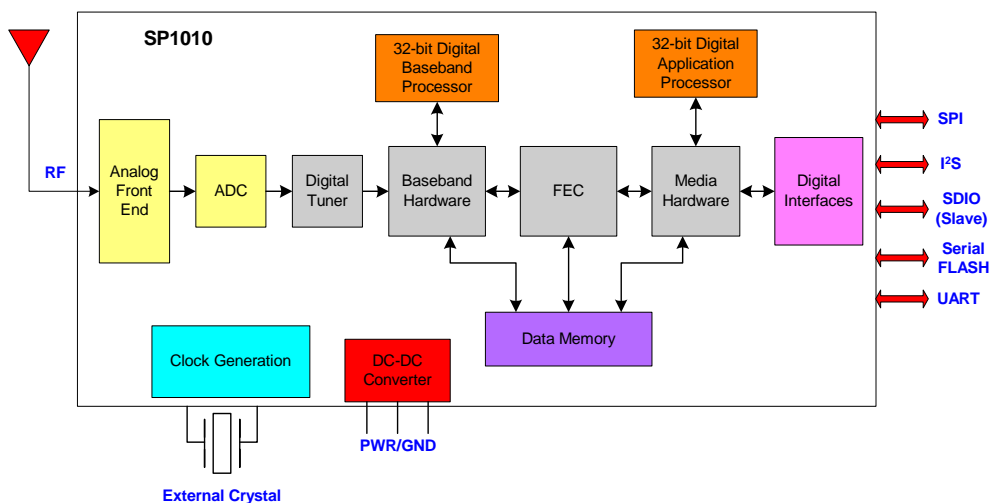


Figure 1: SP1010 Block Diagram

SP1010 Features

Multi-band, multi-standard broadcast digital audio and digital video receiver supporting:

- Microsoft MSN®Direct Data Services
- HD™ Data Services
- HD Radio™ Digital FM
- HD Radio™ (with External AM Tuner)
- Eureka 147 Digital Audio Broadcast (DAB) VHF III: 174 – 240 MHz
- Digital Multimedia Broadcast (T-DMB)VHF III: 174 – 240 MHz
- Analog FM 76 – 108 MHz
- Analog AM (with External AM Tuner) 530 – 1700 kHz
- Weather Band from 162.400 – 162.550 MHz
- Small Footprint
 - A single chip for both tuner and baseband functionality
 - 9 x 9 mm² 76-pin QFN package (1.2 mm thickness)
- Single 3.3V operation with on-chip DC-DC converters thus eliminating the need for external voltage regulators
- -25 to +85°C Operating Temperature
- Total power dissipation of 110 mW in HD Radio playback
- Minimal external components results in a low cost, small footprint solution

SP1010 Target Platforms

- Personal Navigation Devices (PND)
- MP-3 Players
- Portable and Tabletop Radios
- Automotive Navigation
- Aftermarket Automotive Audio
- HiFi Home Audio Systems
- Home Entertainment Systems