SmartBeat wireless audio solution

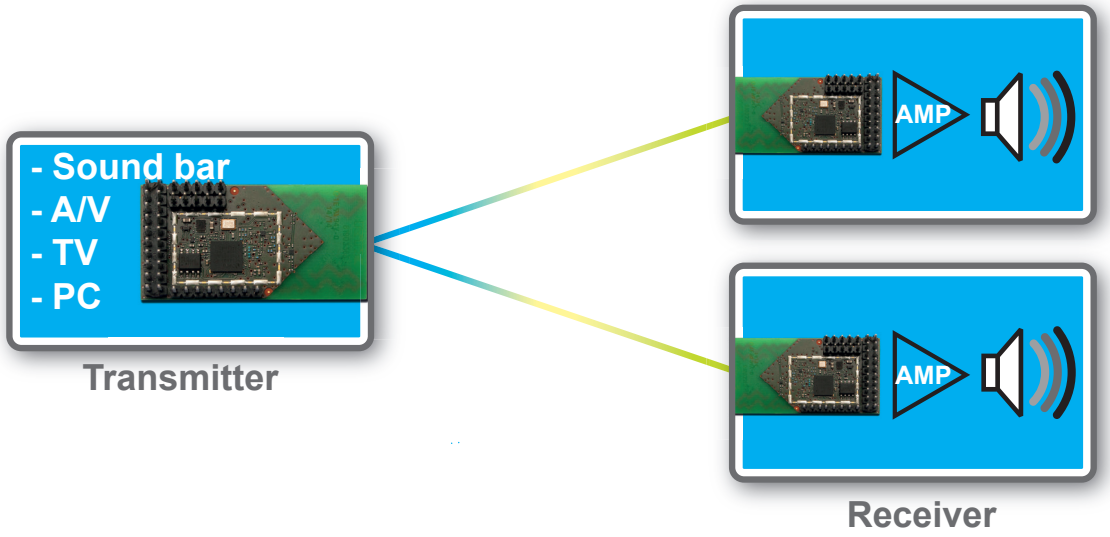
Dialog Semiconductor's SmartBeat™ wireless audio solution offers a robust RF link for wireless subwoofers, stereo speakers and multi room audio. By utilizing the 1.9 GHz frequency band SmartBeat does not suffer from interference, nor does it interfere with, other wireless technologies like WiFi, Bluetooth, ZigBee, working in the 2.4 or 5.8 GHz ISM frequency bands. The 120dB+ link budget provides whole home coverage and blind spots are minimized using Fast-Antenna-Diversity.

The TDMA/TDD RF protocol assures fixed, low latency audio connections to up to 16 receivers. Synchronicity among the receivers is within 1 µs, making it the perfect technology for multi room audio, synchronous left/right/subwoofer speakers or lip-sync A/V applications.

SmartBeat™ is a trademark of Dialog Semiconductor

SmartBeat wireless audio solution

The modularity of the SmartBeat hardware and firmware makes this a perfect solution for system integrators. The transmitter supports USB, I2S or Analog as input at 48 kHz sample frequency and broadcasts a single stereo audio stream to up to 16 receivers all around the house. Receivers support PCM (over I2S) or Analog as output and can be configured as left/right/subwoofer/stereo/mono. A bi-directional control interface is available for communication between both sides of the RF link.



Supported SmartBeat™ applications:

True system integrator solution

- Wireless Subwoofers for sound bars
- Wireless Stereo 2.0/2.1 speakers for Audio/Video and TV
- Wireless Multi room audio

Custom applications are supported through are support through Independent Design House partners. Examples of these are wireless headsets for Unified Communication for office and call centers, microphones for consumer-, commercial- and professional use, tour guide and Public Address systems.

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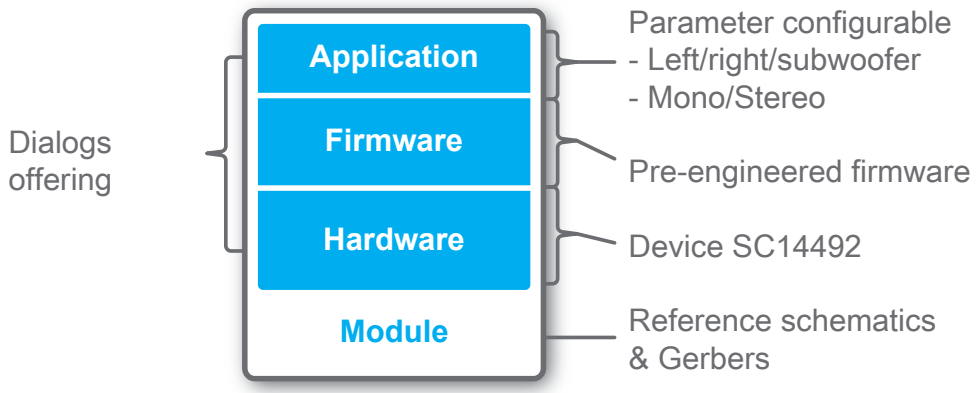
SmartBeat wireless audio solution

SmartBeat offering:

SmartBeat offers a system integrators solution for wireless audio and includes device, firmware and applications. Reference design schematics and Gerbers for an I2S module and USB dongle are available.



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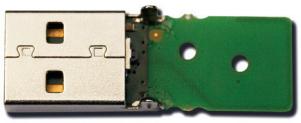
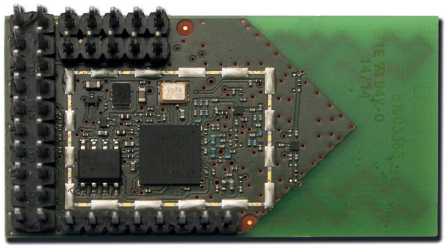
Features and benefits

Benefits

System integrator's solution

- Modular hardware and firmware
- Application configurable firmware
- Configuration tools
- Reference designs for:
  - I2S module
  - USB dongle





Target applications

Standard firmware

- Subwoofers (for sound bars)
- Stereo Speakers 2.0/2.1
- Multi room audio
- IAD streaming audio
- Roaming in-house audio

Custom applications

- Lync compliant professional headsets
- Headphones
- Tour guide systems
- Microphones
- Conferencing systems
- Belt packs for music industry

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