



Summit THX Speaker Module

Approved by THX™ Wireless Speaker Module



HARDWARE PRODUCT BRIEF

Superior Sound Made Simple

Summit Wireless® Standard Distance Technology is a robust wireless audio solution optimized for home theater audio applications. This product improves the home theater experience by delivering innovative features and capabilities in four key areas:

- **Robust Wireless Network:** Use of the uncongested U-NII band radio spectrum provides vastly superior performance and noise immunity compared to solutions using 2.4/5.8 GHz spectrums
- **High Quality Audio:** 8-channel, 24-bit uncompressed audio, delivered at 44.1, 48, and 96 kHz audio sample rates; A fixed source-to-speaker latency of 5.1 ms at 48 kHz and 2.6 ms at 96 kHz audio sample rates; Inter-channel delay between speakers of $\pm 1 \mu\text{s}$
- **Easy Setup:** Simplified home theater audio sweet-spot programming (MyZone™) enables home theater setup in less than 30 minutes in most cases
- **Independent I2C Control Bus:** Low bandwidth wireless I²C control bus between TX and RX modules; Maximum 30 kbps for monitoring speaker statistics, data updates, and feedback control features
- **Interoperability:** Summit Wireless Technology fully supports the Wireless Speaker and Audio (WiSA™) Association's interoperability specification; Consumers purchasing speakers bearing the WiSA logo can be assured that the speakers have been certified to the WiSA specification and will work flawlessly with WiSA-certified audio transmitters

Summit Standard Distance RX Module Description

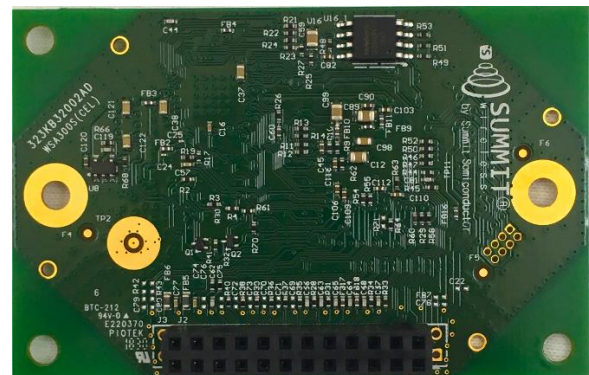
The Summit Standard Distance Receive Module is a compact, production-ready module designed to mate with the amplifier in active speakers in a Summit Wireless Technology HD audio solution. The Summit Receive Module includes a patent-pending, low-cost, integrated high-gain quad-diversity PCB antenna, which provides superior wireless performance without external antennas. A 2x24, 100 mil standard header provides I²S digital audio, power, and control signals for the amplifier and power supply.

Features

Three separate audio filter channels, each with twelve programmable bi-quad digital filters, provide speaker driver equalization performance superior to that possible with analog crossovers, while eliminating the cost and complexity of passive crossover components. Each filter channel provides a programmable delay to compensate for up to 23 cm (9.1 in) of driver offset. Up to ten different "voices" can be programmed, enabling the speaker to be end-user settable for near-field and mid-field applications, or optimized for different music types (for example, pop, classical, jazz, environmental).



Summit SD RX Module Top View



Summit SD RX Module Bottom View

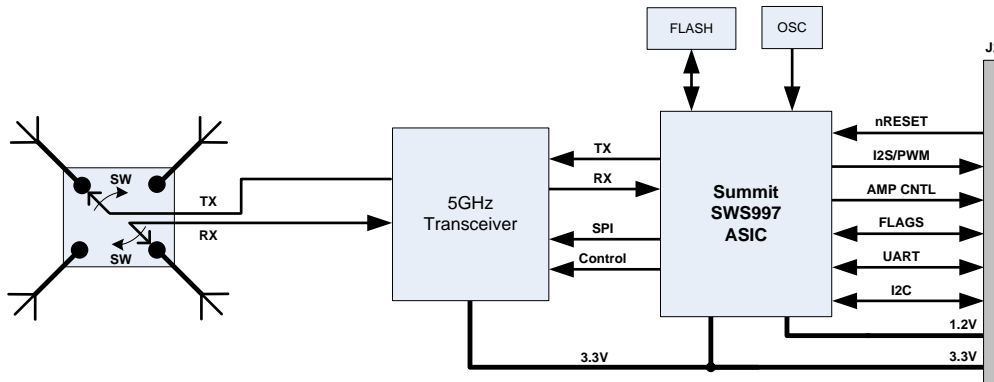


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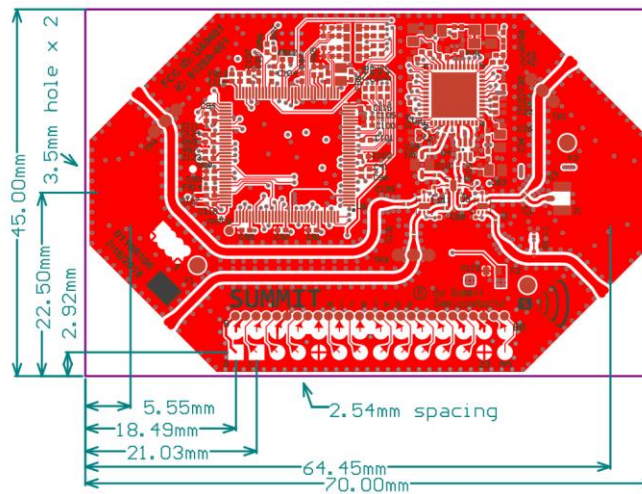
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Summit SD RX Module Block Diagram



Summit SD RX Module Assembly Drawing

Specifications

Parameter	Performance
Audio Sampling Rates	24 bit audio: 44.1 kHz, 48 kHz and 96 kHz audio sampling rate support
Power	3.3 VDC @ 250 mA (typical); 1.2 VDC @ 185 mA (typical)
Latency (I2S source to RX output)	Fixed 5.1 ms @ 48 kHz sample rate, 2.6 ms @ 96 kHz sample rate
Inter-channel Delay Error	±1 μs (Speaker-to-speaker timing skew)
Frequency Band	U-NII 5.1-5.8 GHz; 24 non-overlapping channels (varies by country), DFS support
Certifications	FCC Part 15 & DFS for US/Canada, EU, Japan, Australia/New Zealand; WiSA

Ordering Information

SKU	Description
444-2264	Summit approved by THX module with built in programmable bi-quad digital filters



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