

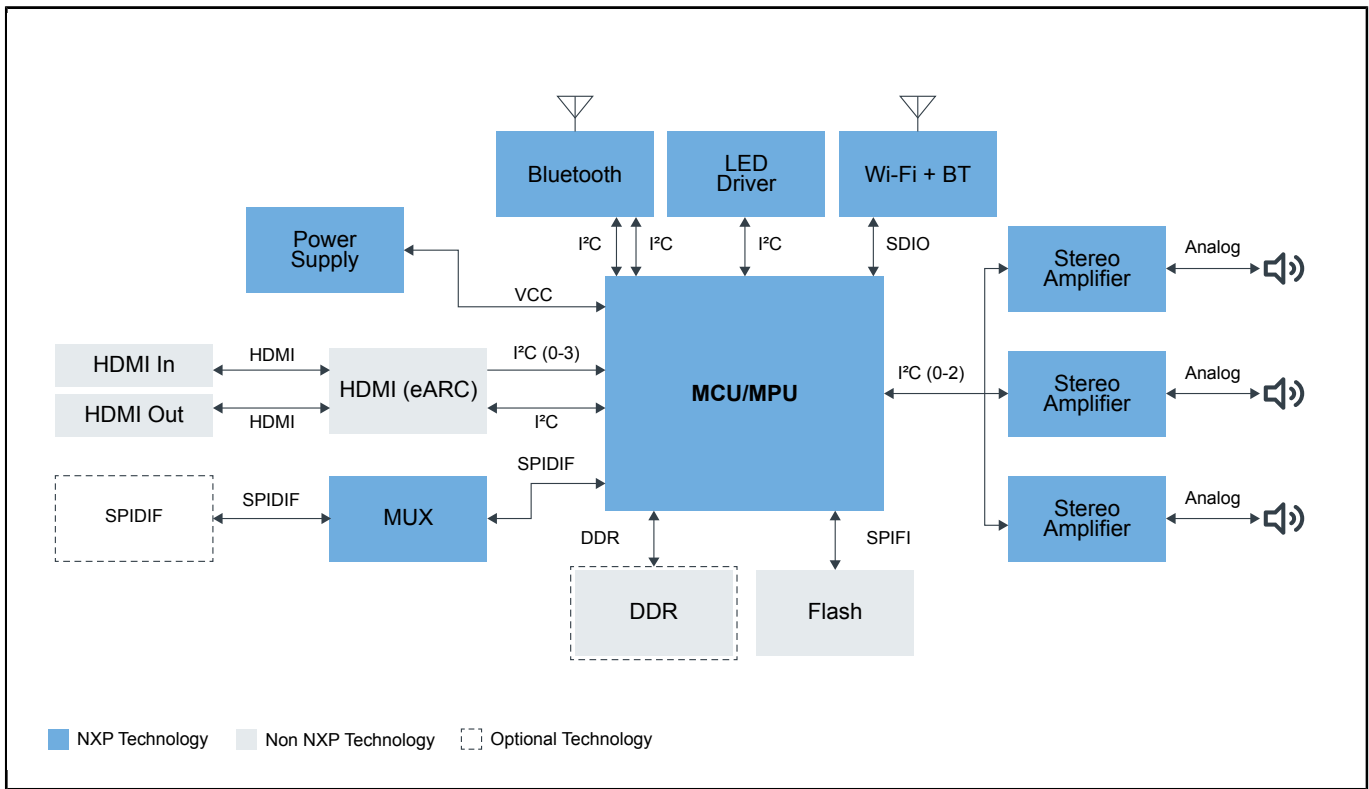


Soundbar

Last Updated: Aug 5, 2022

With TVs getting thinner, the in-device sound quality has become very limited. Users are now using separate sound bar or speakers to get higher audio quality and complexity. With i.MX 8M family, create one-chip solution with flexible SW audio framework (Immersiv3D) to handle audio decode and pre/post processing (supporting Dolby Atmos), latency control, audio distribution and also easy to add voice assistant services (AVS and GVA) with multichannel AEC and beamforming to create an immersive experience.

Soundbars Block Diagram

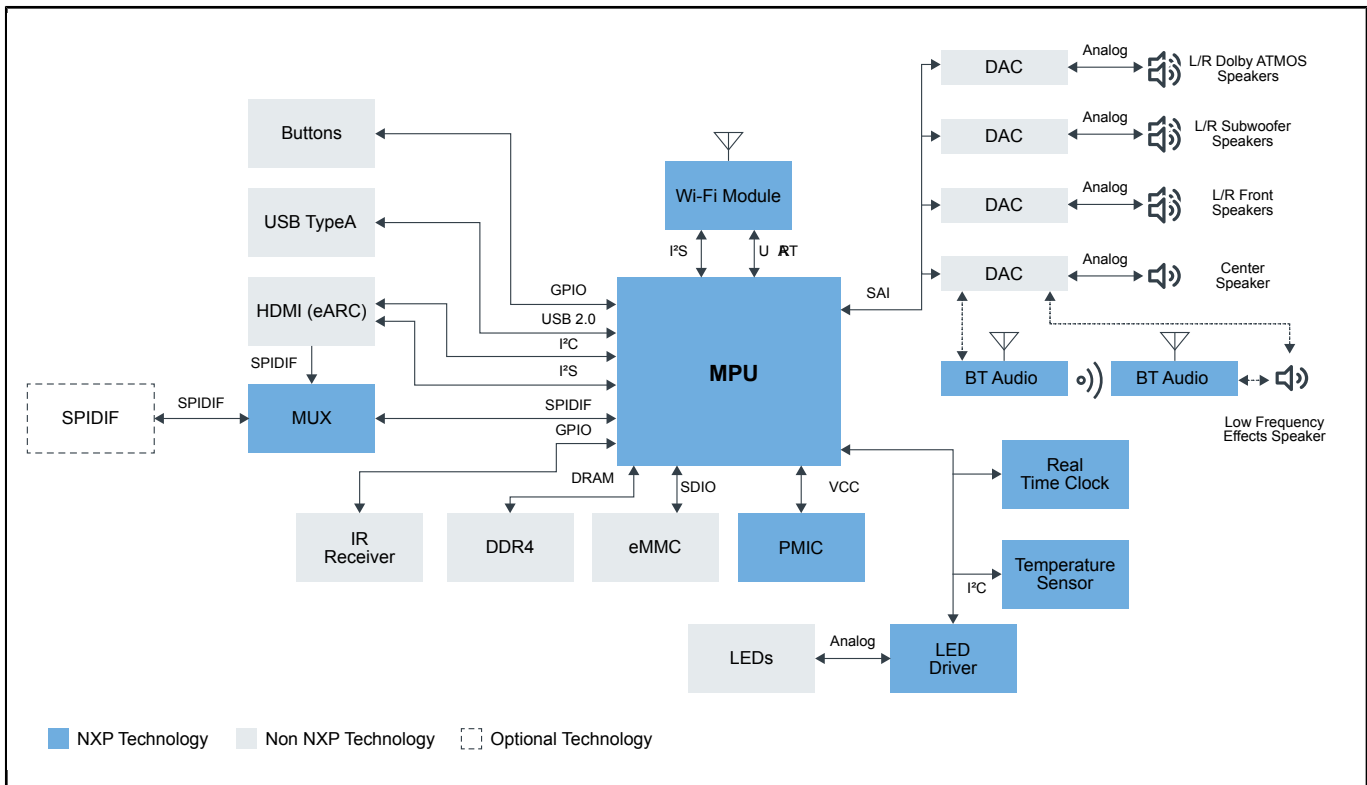


Recommended Products for Soundbars

MCU/MPU	<ul style="list-style-type: none"> • i.MX RT600 Crossover MCU with Arm® Cortex®-M33 and DSP Cores • i.MX RT1060 Crossover MCU with Arm® Cortex®-M7 Core • i.MX 8M Mini - Arm® Cortex®-A53, Cortex-M4, Audio, Voice, Video
---------	--

	<ul style="list-style-type: none"> • i.MX 8M Nano Family - Arm® Cortex®-A53, Cortex-M7 • i.MX 8M Plus – Arm® Cortex®-A53, Machine Learning, Vision, Multimedia and Industrial IoT
Power Supply	<ul style="list-style-type: none"> • PCA9450: Power Management IC (PMIC) for i.MX 8M Mini/Nano/Plus
Bluetooth	<ul style="list-style-type: none"> • NXH3670: Ultra-low Power, Low Latency Audio for Wireless Gaming Headphone
Wi-Fi + BT	<ul style="list-style-type: none"> • 88W8987 (Automotive): 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution
Stereo Amplifier	<ul style="list-style-type: none"> • TDF8597TH: I²C-Bus Controlled Dual Channel 43 W/2 Ω, Single Channel 85 W/1 Ω Class-D Power Amplifier with Full Diagnostics
LED Driver	<ul style="list-style-type: none"> • PCA9955ATW: 16-channel Fm+ I2C-bus 57 mA/20 V constant current LED driver
Analog Switch (MUX)	<ul style="list-style-type: none"> • NX3L1G3157: Low-Ohmic Single-Pole Double-Throw Analog Switch

3D Soundbars Block Diagram



Recommended Products for 3D Soundbars

MCU	<ul style="list-style-type: none"> • i.MX 8M Mini - Arm® Cortex®-A53, Cortex-M4, Audio, Voice, Video • i.MX 8M Nano Family - Arm® Cortex®-A53, Cortex-M7 • i.MX 8M Plus – Arm® Cortex®-A53, Machine Learning, Vision, Multimedia and Industrial IoT
-----	--

WiFi + BT	<ul style="list-style-type: none"> • 88W8987 (Automotive): 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution
Power Management	<ul style="list-style-type: none"> • PCA9450: Power Management IC (PMIC) for i.MX 8M Mini/Nano/Plus
Real-Time clock	<ul style="list-style-type: none"> • PCA85063A: Automotive Tiny Real-Time Clock/Calendar with Alarm Function and I²C-bus
Temperature sensor	<ul style="list-style-type: none"> • PCT2075: I²C-Bus Fm+, 1 Degree C Accuracy, Digital Temperature Sensor And Thermal Watchdog
Analog Switch (MUX)	<ul style="list-style-type: none"> • NX3L1G3157: Low-Ohmic Single-Pole Double-Throw Analog Switch
Software	<ul style="list-style-type: none"> • IMMERSIV3DAF: Immersiv3D™ Audio Framework Software
LED Driver	<ul style="list-style-type: none"> • PCA9955BTW: 16-Channel Fm+ I²C-Bus 57 MA/20 V Constant-Current LED Driver
BT Audio	<ul style="list-style-type: none"> • NXH3670: Ultra-low Power, Low Latency Audio for Wireless Gaming Headphone

View our complete solution for [Soundbar](#).

Note: The information on this document is subject to change without notice.

www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2022 NXP B.V.