

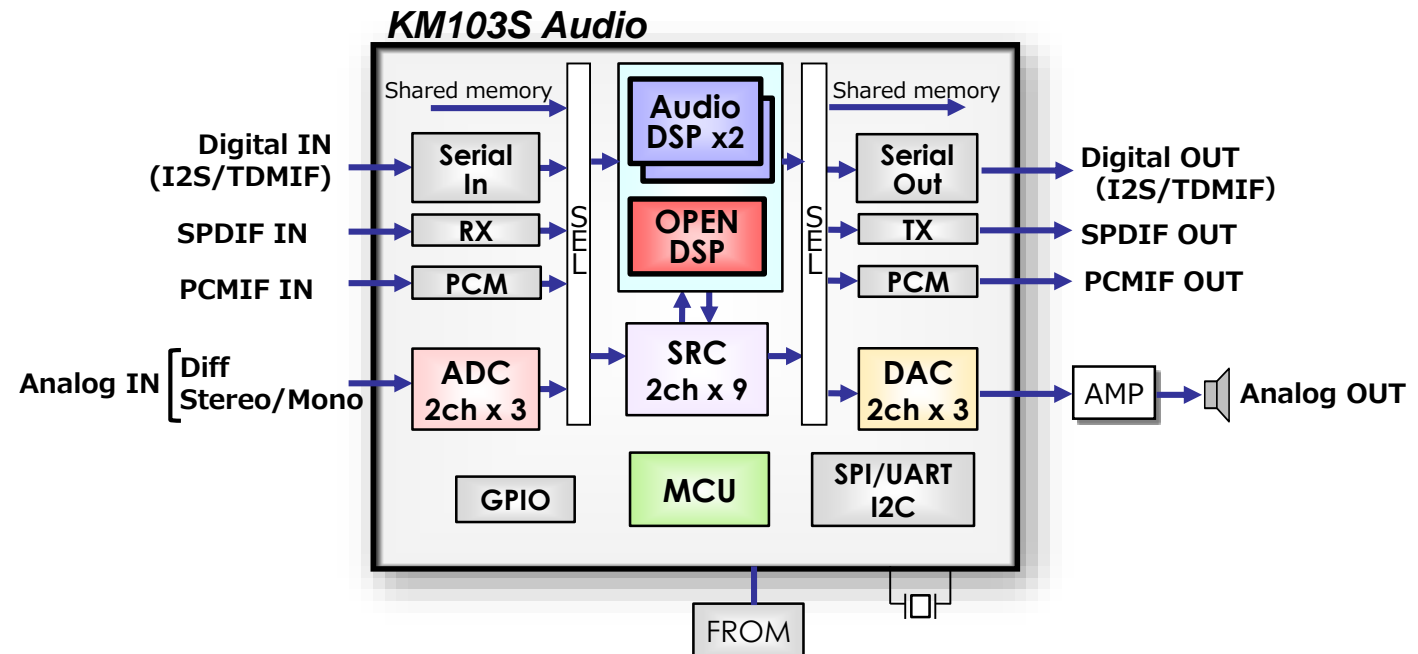
Audio Integrated DSP **KM103S Audio Series**

Nuvoton Technology Corporation Japan

- **What is KM103S Audio ?**

- KM103S Audio is Audio integrated DSP for multi-channel audio signal processing

- MAX 12CH processing
- Analog / Digital interface
- Wide range Sampling Rate Converter
- Multi core DSP
- Graphical User Interface Tool
- Built-in MCU
- AEC-Q100 support



KM103S Audio Target Applications

Automotive

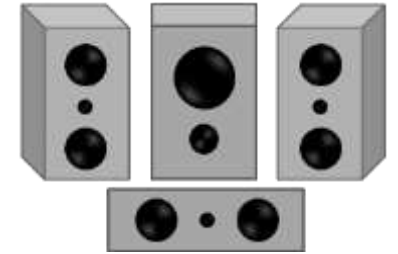


- ✓ Display Audio
- ✓ Audio Amplifier
- ✓ Rear Seat Entertainment

Consumer, Communication



- ✓ Audio Mixer / Amplifier



- ✓ Multi-ch Speaker



- ✓ Conference system / Karaoke



- ✓ Musical instrument

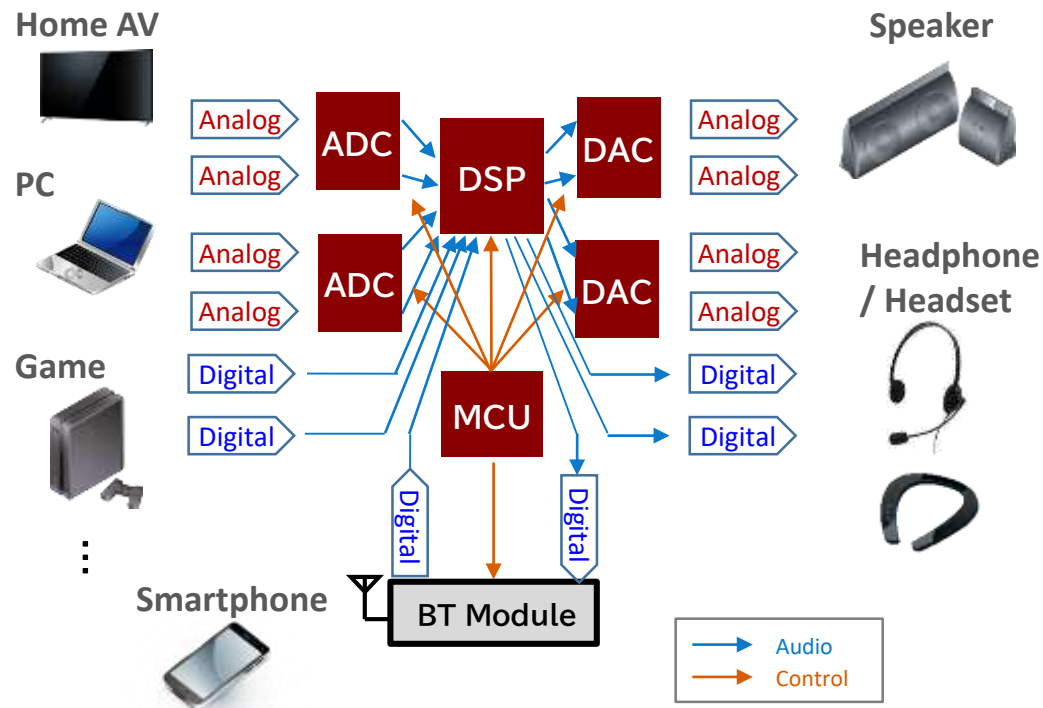


- ✓ Chair

- **Simply connection**
 - Centrally manage multi device connections

Before

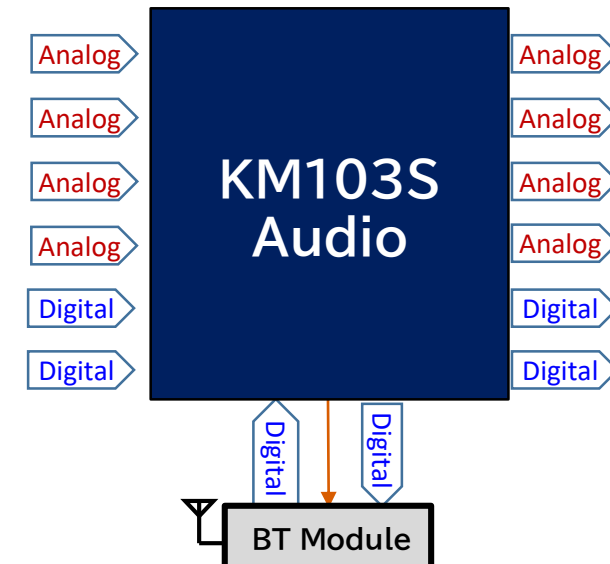
✓ **Complicated**



IC
6 to 1

After

- ✓ **Simple Connect**
- ✓ **Reduce BOM cost**
- ✓ **Reduce PCB size**



- ✓ **Ready-to-use GUI tools and EVKs**
- ✓ **Various Audio software libraries**
- ✓ **Supports DSP Partner algorithms**
- ✓ **In-house sound technology**
(3D surround, Noise Cancellation, etc.)



3D surround for headrest speakers

Development Tools

Evaluation Board (KE-S010HAA)



SDK (Software Development Kit)
with sample software

- Boot sequence
- Device driver
- I2C/UART, Audio DSP API

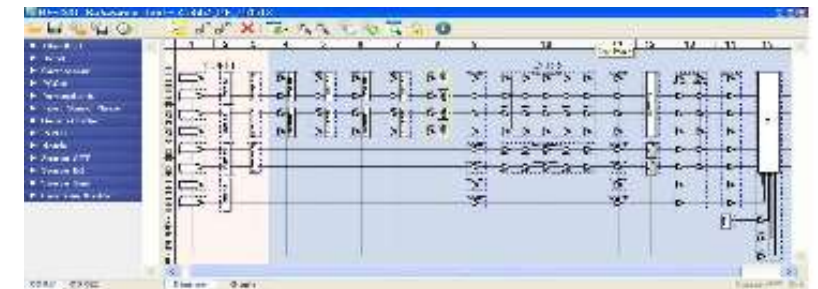
PC control Box
(KU-S04MONACO)



MCU On-board
debug & program (Nu-EX1)



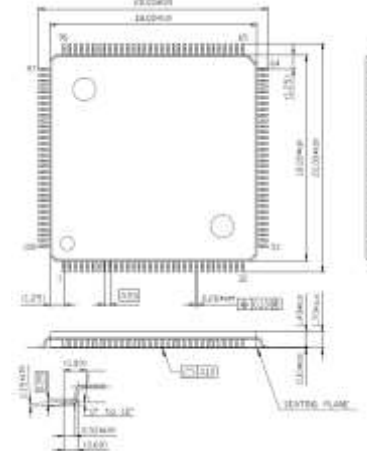
Audio Flow Design Tool (AUCRET)



- ✓ **Two Package types**
 - LQFP128, LQFP216
- ✓ **Automotive grade support**
 - AEC-Q100 Grade3

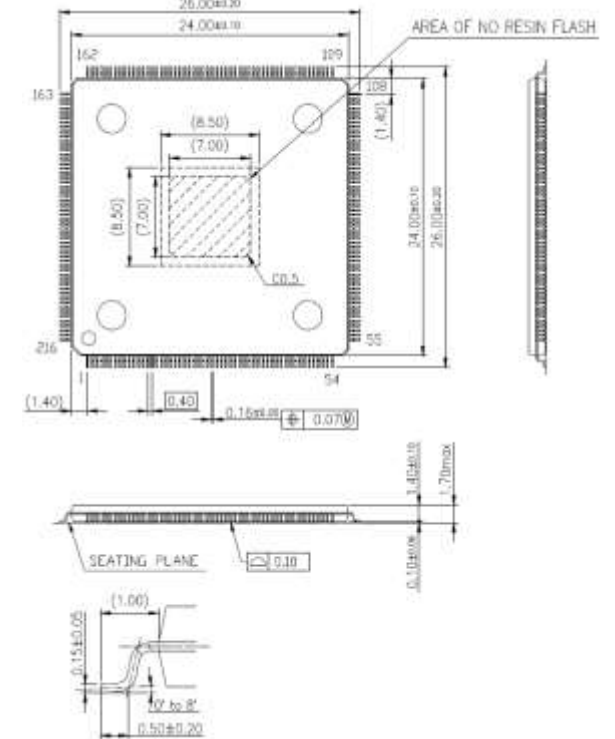
KM103S0H0QAA / KMZS0H0QAAUB

LQFP128 18x18



KM103S0G0QAA / KMZS0G0QAAUB

LQFP216 24x24

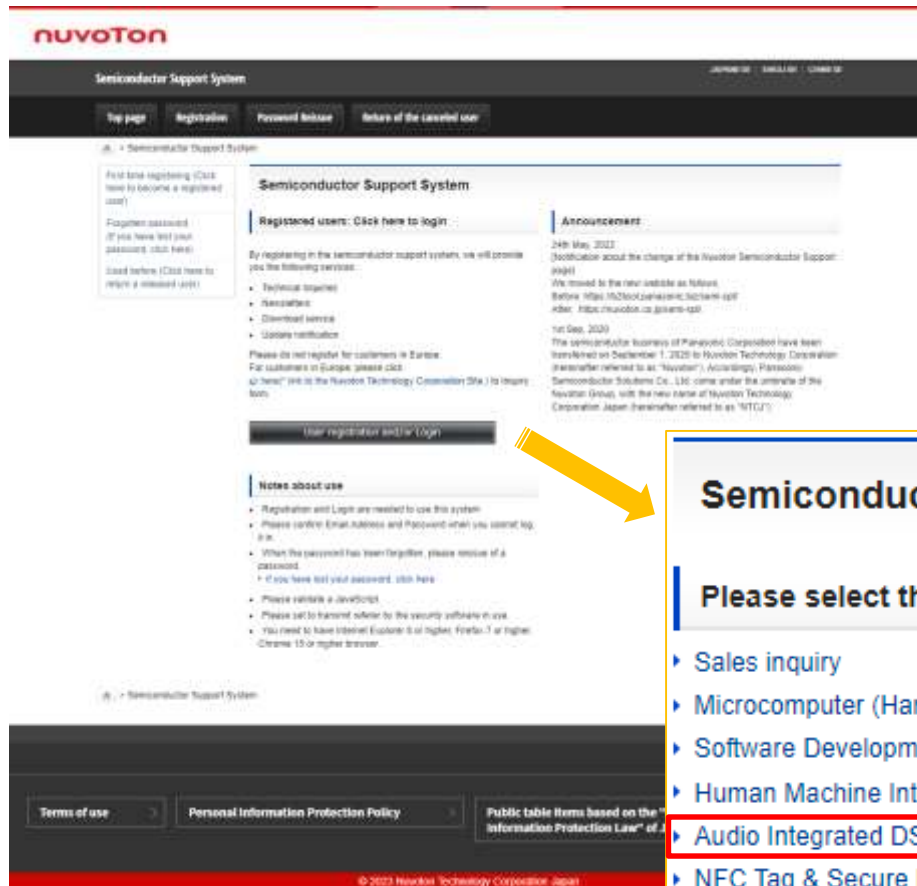


KM103S Audio Series				
part number	Grade	Package	Operating Temperature	
			Ambient	Junction
KM103S0H0QAA	Non-Automotive	LQFP128	0~70℃	125℃
KMZS0H0QAAUB	Automotive	LQFP128	-40~85℃	125℃
KM103S0G0QAA	Non-Automotive	LQFP216	0~70℃	125℃
KMZS0G0QAAUB	Automotive	LQFP216	-40~85℃	125℃

- Documents and Support tools are available on Web site

Semiconductor Support System

<https://nuvoton.co.jp/semi-spt/general/?lang=en&>



User registration is required to use Semiconductor Support System

Below documents and tools are available

- ✓ • Product Brief
- ✓ • Data Sheet
- ✓ • Development tools (under preparation)

Technical Q&A support available

nuvoTon