CX20708 Super Wideband Voice Input Processor SoC

Complies with Skype Certification requirements for TV solutions

Conexant's CX20708 is industry's first dedicated Super Wideband Voice Input Processor SoC for Telepresence and Speech Recognition applications. This highly integrated SoC features high-fidelity 16-bit ADC, microphone pre-amp, Asynchronous Sample Rate Converter, Sync Buffer, and our award-winning Digital Signal Processor.

The included advanced super-wideband voice processing algorithms deliver a crisp clear, full-duplex, low-latency, audio experience, requiring as little as two matched high-sensitivity unidirectional microphones. The flexible USB and I^2S/I^2C interfaces are ideal for integration in the High Definition Camera module or directly inside the Television/ Set-Top-Box.

The CX20708 is a turnkey, single-chip solution that compensates for microphone self-noise, eliminates ambient noise, and maximizes long distance voice pick-up, all withoutloading the host CPU. This allows the system designer to achieve a consistent level of voice performance cross software applications and fast to market.

Conexant offers complete an Evaluation Kit (EVK), including the EVK board, data sheet, reference design schematics, AVL, and sample silicon.

Key Features	Benefits
I^2S/USB Interface	Flexible topology to match with the host system
Integrated Super Wideband Voice Processing	Higher performance voice quality
Far Field Pickup Microphone and Beam Forming	Only require minimum of 2 microphones for long range speakerphone and speech recognition usage
Integrated microphone pre-amp, ADC, and DSP	Single chip voice input
Sub-band Acoustic Echo Cancellation	Enable full duplex speech recognition.

Applications

- Telepresence/Unified Communication Device
- Speech Recognition applications

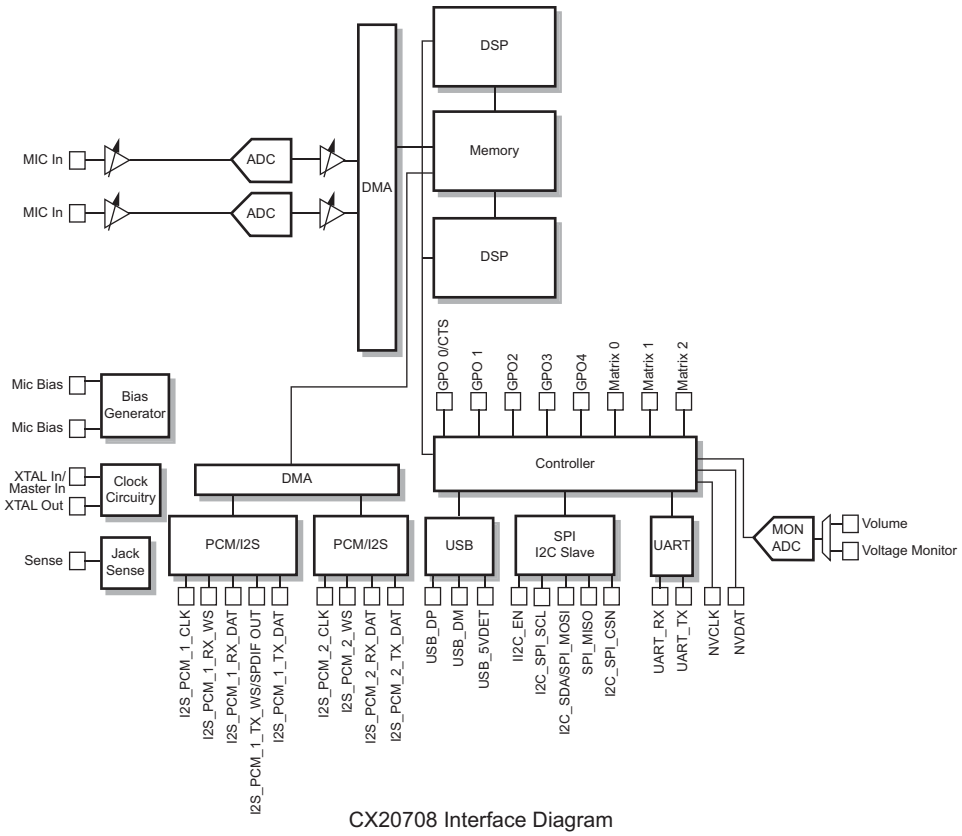
Part Number CX20708

Description Super Wideband Voice Input Processor SoC

CX20708 Features

CODEC

- High Fidelity 16-bit ADC
- Configurable Microphone Pre-amp, up to 40 dB
- Mic Bias
- On-chip, 50 MIPS, Dual Core Audio Processor
- Fractional SRC and Sync Buffers
- Serial Data Interface (I2S/PCM)
- I^2C Control Interface
- USB 2.0, Full Speed UAC compliant interface, Slave
- Support Asynchronous USB Audio Data Transfer Mode
- Super Wideband Voice Processing Algorithms
- Sub-band Acoustic Echo Canceller
- Beam Forming
- In-band Acoustic Noise Reduction
- Far Field Pickup Microphone Auto Gain Control
- Parametric Microphone EQ
- Audio sample rate: 8,16, 24, 32, 44.1, 48 kHz
- 9x9mm 76 QFN Package



CX20708 Interface Diagram

Conexant Product Portfolio

Conexant's comprehensive product portfolio includes solutions for imaging, audio, video surveillance, and embedded modem applications.

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