PRODUCT BRIEF

DEEPCRAFT™ Audio Enhancement

DEEPCRAFT™ Audio Enhancement is an Edge AI solution that enhances speech quality by removing unwanted noise, optimized for power-efficiency on Infineon's PSOC™ Edge MCUs

Edge device providers need to ensure voice capabilities provide great user experiences with accurate, real-time responsiveness in challenging noisy environments.

DEEPCRAFT™ Audio Enhancement uses AI models to deliver exceptional voice clarity by separating environmental noise from the user's speech. Whether it's enabling hands-free control of smart home devices, improving voice commands in wearables, or enhancing user interaction with appliances, DEEPCRAFT™ Audio Enhancement ensures a seamless, high-quality experience.

The solution makes it easy to customize for various use cases and is specifically focused on speeding up design, test and implementation:

- Modular Functionality: Select only the Audio Enhancement features required for your product to minimize hardware resource usage
- Step-by-Step Assistance: Access training videos, code examples, and application notes to speed up configuration and implementation
- Readily combines with DEEPCRAFT™ Voice Assistant to create a power-optimized voice recognition solution that performs in noisy environments

Ready to enhance your edge device's audio capabilities? Discover how DEEPCRAFT™ Audio Enhancement can transform your product design with advanced AI-powered capabilities.

Key benefits

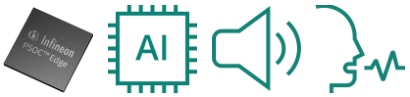
- Enables a high-quality voice user experience (UX) with accurate, real-time responsiveness resulting in smarter, more intuitive devices
- Delivers industry-leading power efficiency through AI acceleration
- Intuitive tools and resources enable rapid product design, test and implementation
- Integrates with DEEPCRAFT™ Voice Assistant for a complete voice recognition solution

Key features

- Noise Suppression to remove environmental noise
- Acoustic Echo Cancellation to remove device-generated noise
- Beamforming to isolate the intended voice audio

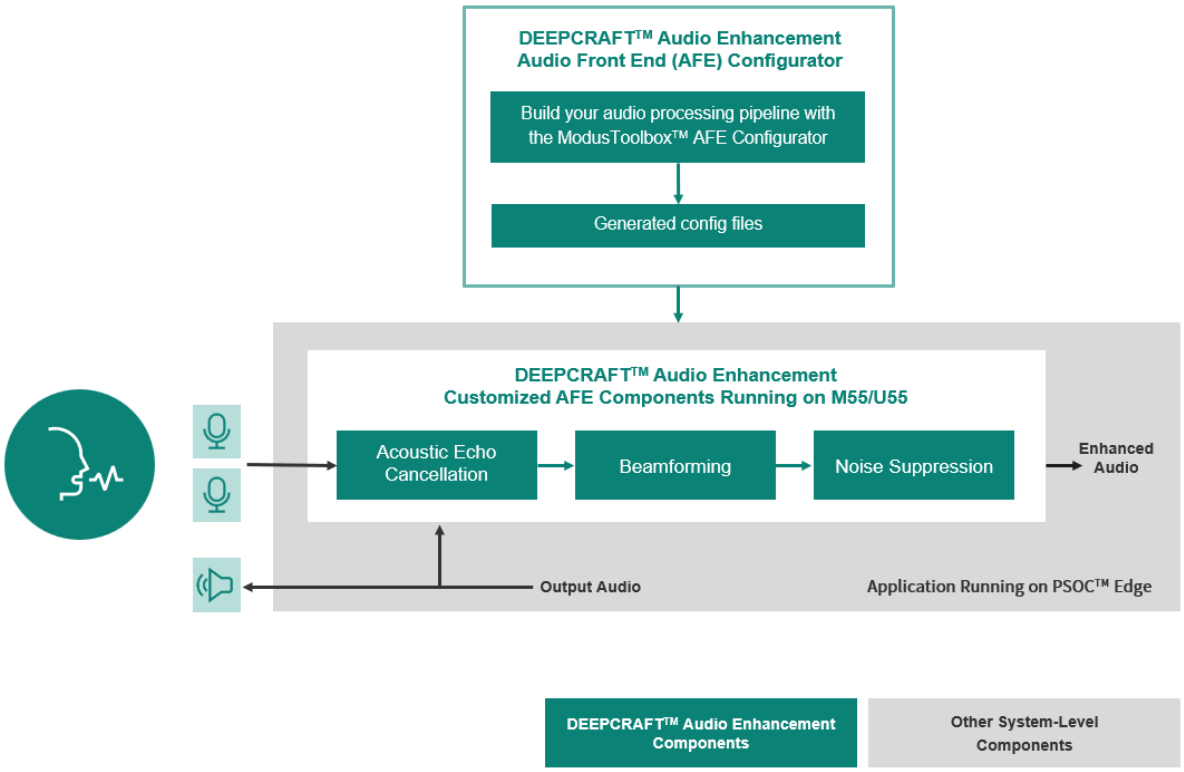
Key applications

HMI	Smart Home	Wearables	Robotics	Security
Appliances Industrial Device UI Factory Automation	Thermostat Speakers Door Locks	Fitness Watches AR/MR/VR Glasses Audio Accessories	Vacuum Cleaners Vacuum Robots Service Robots Industrial Robotics	Security Cameras



PRODUCT BRIEF

DEEPCRAFT™ Audio Enhancement System Overview



Specification and compatibility

Supported microcontrollers:	PSOC™ Edge MCUs
Supported compilers:	Arm® Compiler for Embedded, LLVM
Supported operating systems:	FreeRTOS
Supported hardware platforms:	PSOC™ Edge E84 Evaluation Kit, PSOC™ Edge E84 AI Evaluation Kit
Compatible software products:	DEEPCRAFT™ Voice Assistant

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