

ID R&D and Synaptics First to Deploy Voice Biometrics on NPU for Smart Home Applications

Integration with proven AI-enriched audio processing SoC delivers edge-based voice biometrics with unprecedented performance

NEW YORK, NY, UNITED STATES, February 1, 2021 /EINPresswire.com/ -- [ID R&D](#), the award-winning biometric and liveness detection technology company, announced an integration with Synaptics® on its VideoSmart™ VS600 platform that leverages SyNAP™ technology to enable edge computing devices to take advantage of

sophisticated [voice biometrics](#) for fast and accurate user identification, authentication, and personalization. The Synaptics and ID R&D solution works with an array of voice-enabled smart home devices including set-top boxes, smart speakers, displays, and security systems.



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The first-of-its-kind capability is the result of integrating ID R&D’s voice biometrics and voice anti-spoofing onto the neural network processing unit (NPU) of the Synaptics VS600 high-performance multimedia System-on-a-Chip (SoC) solution. Synaptics’ proven and versatile NPU supports trillions of operations per second with on-device execution of deep-learning models. ID R&D’s breakthrough ability to tap into the NPU enables the use of sophisticated algorithms that result in highly accurate AI-based voice

biometrics on an extremely small footprint.

Moving the inferencing component of the voice biometric capabilities off the CPU where they traditionally reside to the NPU results in more than a 10x speed improvement, a reduction of CPU utilization by a factor of three, and a significant reduction in RAM requirements.

Additionally, the integration includes voice liveness to detect spoofing attacks such as recordings or voice deepfakes.

“This is the first known commercial application of voice biometrics with liveness on an NPU for smart home applications. The speed of the voice biometric processing is faster than real-time -- meaning we can identify a speaker in a family group even before they are finished speaking a wake word and a command to a home-based smart device,” said John Amein, SVP at ID R&D. “Previous systems have been limited by the capacity of the core CPU, which is not optimized for neural networks. This integration makes it possible to implement more sophisticated algorithms, opening up new use cases. We expect to enable voice for higher security levels necessary for use cases like payments, highly responsive identification of a person among a group for personalized responses, and a more natural user experience for authentication.”

“The ability to instantly and reliably recognize a specific user on a shared device enables seamless personalization of controls and content without the frustrations associated with remembering and typing passwords,” said Vineet Ganju, VP of Marketing, Edge Computing at Synaptics. “The solution also enables restricted access where needed, such as enabling parental controls.”

The first software build from ID R&D will be available on Synaptics’ VS600 development kits in February 2021. For more information [contact Synaptics sales](#) and read more on [synaptics.com](#).

About ID R&D

ID R&D is an award-winning provider of AI-based voice and face biometrics and liveness detection. With one of the strongest R&D teams in the industry, ID R&D consistently delivers innovative, best-in-class biometric capabilities that raise the bar in terms of usability and performance. Our proven products have achieved superior results in industry-leading challenges, third-party testing, and real-world deployments in more than 40 countries. ID R&D’s solutions are available for easy integration with mobile, web, messaging, and telephone channels, as well as in smart speakers, set-top boxes, and other IoT devices. ID R&D is based in New York, NY. Learn more at <https://www.idrnd.ai>.

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