



## Synaptics Resonate™ Revolutionizes Audio and Haptics For Embedded Displays

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**Uses display as a sound and haptics transducer to reduce space, cost, and power while bringing a more immersive and interactive experience to users of industrial, automotive, and consumer IoT devices**

NUREMBERG, Germany, March 14, 2023 (GLOBE NEWSWIRE) -- Synaptics® Incorporated (Nasdaq: [SYNA](#)) today announced [Synaptics Resonate™](#), a game-changing solution that uses a display's surface as a sound and haptics transducer to provide a more immersive audio and interactive user experience while reducing space, cost, and power consumption for Internet of things (IoT) devices. The innovative technology enables slim, bezel-less, and inherently dustproof and waterproof designs. This allows developers to bring the benefits of Synaptics Resonate™ to industrial, automotive, and consumer electronics applications such as TVs, smart appliances, portable media players, toys and gaming platforms, smartphones, automotive displays, monitors, and laptops.

***Embedded World 2023: Learn more about Synaptics Resonate and Synaptics' latest advances in wireless, edge AI, and automotive technology in Booth #4A-259, or follow us on [LinkedIn](#).***

"Though display-enabled audio concepts have existed previously," said Vineet Ganju, VP and GM of the Audio business unit at Synaptics, "Synaptics' break-through innovations enable the ability to exceed the audio performance of dynamic speakers at a fraction of the size and power consumption. For the first time, product manufacturers can reap the benefits of piezo-enabled audio and haptics."

Synaptics Resonate™ replaces the dynamic speakers and linear resonant actuators (LRAs) typically used for audio and haptic feedback, respectively, with piezoelectric transducers placed on the rear of the display glass. These are driven by a proprietary amplifier and algorithms such that the audio emanates directly from the surface of the glass to provide a line-of-sight, immersive viewing experience with a high sound pressure level (SPL) and excellent audio fidelity. The design avoids the compromises of side-or down-firing speakers, a consequence of modern, thin industrial design trends.

The same transducers produce the haptic feedback, resulting in more contextually relevant, dynamic haptic engagement for gaming and more precise system control applications. As the transducers are piezoelectric, they can also be used to detect pressure for a third axis of control for touch interfaces. These combine to provide a crisper, more responsive and more intuitive interactive experience for the end user.

### Key features and benefits

- Integrated IoT display, audio, and haptics for ease of implementation in a slim, bezel-less design with reduced system cost and a smaller footprint
- Up to 80% greater power efficiency compared to micro speaker designs
- Line-of-sight audio for a more immersive viewing experience, with excellent loudness and fidelity
- Dynamic haptic capability for contextual feedback in gaming and other applications
- Pressure sensing for a third axis of control for touch interfaces
- Eliminates audio ports to enable more elegant and environmentally protected designs
- Synaptics Resonate can be applied to any surface to turn it into a smart surface with audio, haptics, and touch pressure sensing

### Availability

Synaptics Resonate™ is sampling now. To learn more:

- Visit [www.synaptics.com/resonate](http://www.synaptics.com/resonate)
- Contact your [local sales representative](#)
- Visit Synaptics at Booth 4A-259 at Embedded World: Email [press@synaptics.com](mailto:press@synaptics.com) or [sales@synaptics.com](mailto:sales@synaptics.com) for a personal appointment

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### About Synaptics Incorporated:

Synaptics (Nasdaq: [SYNA](#)) is changing the way humans engage with connected devices and data, engineering exceptional experiences throughout the home, at work, in the car, and on the go. Synaptics is the partner of choice for the world's most innovative intelligent system providers who are

### Synaptics Resonate™ Re-Imagines Audio For Embedded Displays



Synaptics Resonate turns a standard display into an audio and haptics transducer while reducing power consumption, providing a more immersive viewing experience, and enabling dustproof and waterproof systems.

integrating multiple experiential technologies into platforms that make our digital lives more productive, insightful, secure, and enjoyable. These customers combine Synaptics' differentiated technologies in touch, display, and biometrics with a new generation of advanced connectivity and AI-enhanced video, vision, audio, speech, and security processing. Follow Synaptics on [LinkedIn](#), [Twitter](#), and [Facebook](#), or visit [www.synaptics.com](http://www.synaptics.com).

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