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## **Home Appliance Manufacturers Get Energy- and Cost-Saving AI with Femtosense/ABOV Semiconductor Collaboration**

*At CES 2024, on-device AI innovator Femtosense will demonstrate sparse AI processing that improves voice control and enables spoken language understanding in cost- and energy-constrained devices*

**SAN BRUNO, California—December 19, 2023**—Consumer-goods manufacturers can now deliver AI-native products that meet energy-saving standards in high volumes at lower costs, thanks to a new partnership between on-device AI innovator Femtosense and ABOV Semiconductor, a leading supplier of motor controls, sensors, remote controls and microcontrollers (MCUs) for digital appliances and home automation systems. At the Consumer Electronics Show (CES) in Las Vegas, January 9-12, Femtosense will show its [Sparse Processing Unit 001](#) (SPU-001) AI inference processor, which enables ultra-low-power AI features that are ready for deployment in hearable and Internet of Things (IoT) products such as true wireless stereo (TWS) earbuds, headsets, hearing aids, remote controls—and now home appliances—with the collaboration with ABOV.

Until now, home appliance manufacturers were unable to add AI features on-device to many mass market products due to the prohibitive power consumption and cost of other AI-capable chips. Femtosense’s first generation AI technology enables voice control and other AI functions in energy and cost-sensitive appliances and devices by leveraging sparse mathematics to strip away the unnecessary work in AI and significantly improve efficiency.

“With ABOV, we’re now able to bring our energy- and cost-efficient AI technology to more manufacturers of smart appliances,” said Sam Fok, Ph.D., CEO and co-founder, Femtosense. “As device and appliance manufacturers add compelling AI features, they need to do it at a price point that consumers can afford and in a way that meets Energy Star, Ecodesign and other energy efficiency standards. Solving this problem at scale is a big market for our sparse AI technology, which compresses AI workloads for real-time applications on devices and at the edge.”

### **ABOV/Femtosense collaboration provides appliance manufacturers with a competitive edge**

According to Choi Won, CEO of ABOV Semiconductor, “Femtosense’s SPU-001 aligns seamlessly with ABOV’s relentless quest to provide high-performing, energy-efficient MCUs to its customers, including global home appliance companies.”

# FEMTOSENSE

“Recognizing the rising demand for AI functions in home appliances, we believe the AI integrated solutions created through our collaboration with Femtosense will give our customers a competitive edge by adding convenience and smart functionality to everyday appliances,” Choi added. “By offering the 'always-on' function with low-power MCUs, we aim to empower these appliances with leading-edge technology without compromising on energy efficiency.”

## **Femtosemense’s venture funding, ABOV partnership diversifies the market for energy-efficient AI**

Femtosemense has raised \$12 million in seed, Series A, and strategic funding through 2023. The company used earlier investments to achieve volume production of its SPU-001, and the ABOV partnership expands the market for the Femtosemense on-device AI technology to manufacturers of home appliances, consumer electronics, smart home devices and fabless systems-on-a-chip (SoCs). Femtosemense and ABOV will integrate the companies’ products, support initial clients and develop joint products that provide energy-efficient AI capabilities to mass markets.

“Together with Femtosemense, we are confident that we can elevate our customers' technological experience, drive growth, and lay a robust foundation for a truly interconnected world,” Choi said.

## **Meet Femtosemense at CES 2024**

Femtosemense will show its SPU-001 on-device AI chip, which enables AI features in real integrations ready for deployment, at private meetings at CES. Developers and business leaders who want to bring tangible value through AI to mass-market products should request a meeting at [femtosemense.ai/ces2024](https://femtosemense.ai/ces2024).

## **About Femtosemense, Inc.**

Femtosemense enables real-time, on-device AI using sparse, localized mathematics. The company’s products provide efficient, scalable and affordable AI to mass market electronics like hearables, appliances, wearables, security, TVs, smart homes, industrial and automotive. Femtosemense is based in Silicon Valley and has partners worldwide. For more information, visit [www.femtosemense.ai](https://www.femtosemense.ai).

## **About ABOV Semiconductor Co., Ltd.**

ABOV Semiconductor is a South Korea-based company that is a leading provider of microcontrollers for the consumer electronics, industrial automation, automotive, and IoT sectors. The company empowers cutting-edge technology that can elevate its operations to new heights with its high-performance and cost-effective solutions. ABOV Semiconductor has set industry precedents with its robust R&D capabilities, close customer collaborations, and dynamic response to market changes. For more information about ABOV Semiconductor, please visit the website at [www.abov.co.kr](https://www.abov.co.kr).