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STMicroelectronics 32-Channel Ultrasound

STMicroelectronics has expanded its family of advanced ultrasound transmitters by adding a 32-channel variant with high output current for portable applications. The new transmitter, STHVUP32, provides $\pm 800\text{mA}$ aimed at portable systems that demand extra drive capability for a coaxial cable-mounted probe.

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Honeywell Partners with IISc-SID to Help Boost Tech Innovations

Honeywell Hometown Solutions India Foundation (HHSIF), the philanthropic arm of Honeywell, in partnership with Indian Institute of Science's (IISc) Society for Innovation and Development (SID) will continue to support deep-science startups to encourage entrepreneurship and scientific innovations to support society

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Ambiq Launches AI SDK for Ultra-Low Power MCUs

Ambiq Micro is the latest microcontroller maker to build its own AI-focused software development kit (SDK). The combination of Ambiq's Neural Spot AI SDK with its ultra-low power sub-threshold and near-threshold technologies will enable efficient inference:

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TALK TO US



Infineon Gets Green Light for Dresden 300-mm Fab

Infineon Technologies announced it is kicking off the construction project of its 300-mm fab expansion in Dresden, Germany. Completion is planned for 2026. Infineon capitalizes on the decarbonization and digitization megatrends by continuously expanding its manufacturing capacities.

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Gridspertise and ST Expand Collaboration

Gridspertise and STMicroelectronics (ST) have entered a new phase of their long-term collaboration on smart-meter technologies. The announcement was made at DistribuTECH 2023..

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STMicroelectronics 32-Channel Ultrasound Transmitter Suited to Handheld Scanners

STMicroelectronics has expanded its family of advanced ultrasound transmitters by adding a 32-channel variant with high output current for portable applications. The new transmitter, STHVUP32, provides $\pm 800\text{mA}$ aimed at portable systems that demand extra drive capability for a coaxial cable-mounted probe.

Joining the portfolio alongside the 64-channel STHVUP64, the new 32-channel version contains similar features to increase performance and integration in next-generation affordable, high-performing scanners for medical and industrial applications. These include innovations to maximize image quality, built-in digital beam steering, a space-saving driver architecture, and low power consumption.

The STHVUP32 has 5-level output capability, in addition to the common 3-level output, which enhances flexibility to optimize the picture quality. Its high output current allows driving the scanner's piezoelectric transducer at high speed to enable multiple imaging modes

Honeywell Partners with IISc-SID to Help Boost Tech Innovations in India

Honeywell Hometown Solutions India Foundation (HHSIF), the philanthropic arm of Honeywell, in partnership with Indian Institute of Science's (IISc) Society for Innovation and Development (SID) will continue to support deep-science startups to encourage entrepreneurship and scientific innovations to support society. The objective of the initiative is to bridge the gap that startups face between incubation and early seed investments.

This initiative is a part of Honeywell's Start Up Support Program, which has been running for the past few years. The initiative also helps to increase collaboration between industry and technology-based start-ups in furthering the innovations for successful outcomes. The startups supported through the program range from highly advanced healthcare start-ups like Azooka Labs, HealthSeq Precision Medicine, Equine Biotech, Protein Design, Siamaf Healthcare, Mimyk Medical Simulations, PathShodh Healthcare, and Theranutilus, to those in the sustainability space such as Openwater.in.

Ambiq Launches AI SDK for Ultra-Low Power MCUs

Ambiq Micro is the latest microcontroller maker to build its own AI-focused software development kit (SDK). The combination of Ambiq's Neural Spot AI SDK with its ultra-low power sub-threshold and near-threshold technologies will enable efficient inference: Ambiq's figures have keyword spotting at less than a millijoule (mJ). This efficiency will suit IoT devices, especially wearables, which are already a big market for the company.

Artificial intelligence applications on Cortex-M devices require specialized software stacks over and above what's available with open-source frameworks, such as TensorFlow Lite for Microcontrollers, since there are so many challenges involved in fine-tuning performance, Carlos Morales, Ambiq Micro's VP of AI, told EE Times.

"[Arm's CMSIS-NN] has optimized kernels that use [Arm's cores] really well, but getting the data in and moving it to the next layer means there are a lot of transformations that happen, and [Arm] has to be general about that," he said. "If you carefully design your datapath, you don't have to do those transformations, you can just rip out the middle of those things and just call them one by one—and that gets very efficient."

Infineon Gets Green Light for Dresden 300-mm Fab

Infineon Technologies announced it is kicking off the construction project of its 300-mm fab expansion in Dresden, Germany. Completion is planned for 2026. Infineon capitalizes on the decarbonization and digitization megatrends by continuously expanding its manufacturing capacities. In September 2021, the German chipmaker inaugurated a €1.6 billion power semiconductor fab in Villach, Austria. It now plans to invest about €5 billion in the Dresden plant.

"We are investing €5 billion in an additional plant in Dresden, and it's the biggest single investment in the history of our company to date," Infineon CEO Jochen Hanebeck said during the group's recent Virtual Annual General Meeting 2023.1 "These additional capacities will meet rising demand for our customers in the second half of the decade, and we are expanding our position as a global supplier in the field of power systems."

Gridspertise and STMicroelectronics Expand Collaboration

Gridspertise and STMicroelectronics (ST) have entered a new phase of their long-term collaboration on smart-meter

The two companies' collaboration started in the early 2000's with one of Gridspertise's shareholders Enel; today more than 65 million Gridspertise smart meters deployed in Spain, Eastern Europe, and Latin America leverage the power-line communication (PLC) technologies provided by ST. Moreover, ST's latest PLC system-on-chip has been integrated in Gridspertise smart meters for Italy to enable a near real-time cyber-secure communication channel for in-home devices; the so-called Chain 2 technology. Now, Gridspertise and ST are working together to extend Chain 2 to new metering solutions in the Gridspertise portfolio, making it suitable for the U.S. and other geographies.