



Press release

CSEM's forthcoming Bluetooth Dual-Mode silicon IP sets new benchmarks for low energy operation to power the next generation of portable audio devices

CSEM joins forces with GLOBALFOUNDRIES to deliver best-in-class Bluetooth Dual-Mode silicon IP for next generation portable audio

Neuchatel, 15 October 2020 – CSEM, a leader in ultra-low-power RF design, announced today at the [GLOBALFOUNDRIES® \(GF®\) Global Technology Conference \(GTC\) EMEA](#) that CSEM has released its Bluetooth Dual-Mode silicon IP on GF's 22nm FD-SOI (22FDX®) platform for next generation of portable audio devices.

Most wireless portable audio devices, from stereo headphones to earbuds and portable speakers, rely today on Bluetooth Classic, the high data-rate version of Bluetooth. While supporting high-quality audio, Bluetooth Classic uses up to 10X more energy than Bluetooth Low Energy (BLE), making long battery life a challenge. LE Audio, the BLE version of streaming audio, was announced earlier this year, however even the most optimistic forecasts see co-existence of BT Classic and BLE for at least several years to come.

CSEM is now poised to change this paradigm with the release of a dual-mode (BT&BLE) RF platform offering Bluetooth Classic power consumption on par with BLE, allowing for long play times even from small batteries. The first beneficiaries of this new platform will be True Wireless earbuds (TWS) and hearables. CSEM's new dual-mode IP follows in the footsteps of IcyTRX, the world's leading RF IP for BLE. Available on GF's 55nm CMOS amongst others, IcyTRX provides low power connectivity for millions of chips worldwide.

Thanks to the high performances and energy-efficiency of GF's 22FDX, CSEM was able to design a dual-mode version "IcyTRX-DM" at a low area footprint, cutting the BLE power by a half, while keeping state-of-the-art RF performances (sensitivity, output power, immunity against interferers). IcyTRX-DM features BLE supporting the latest BT5.2 revision designed to consume down to 3mW, and as low as 4mW in BT Classic EDR mode.

Alain-Serge Porret, CSEM's Vice President of Integrated & Wireless Systems says, "The advanced low-power capabilities of GLOBALFOUNDRIES 22FDX platform combined with their excellent support has enabled us to exceed expectations in this game-changing product."

"Our collaboration with CSEM is focused on enabling our mutual customers with proven IP to deliver low-power and cost-efficient IoT connectivity solutions," said Mark Ireland, vice president of Ecosystem and Design Solutions at GF. "The availability of CSEM's IP on GLOBALFOUNDRIES 22FDX platform delivers a Bluetooth solution that enables customers to address the challenging power demands of the portable audio device market."



IcyTRX-DM is available for licensing to qualified customers.

You can meet CSEM at GTC 2020 - Globalfoundries Technology Conference, Munich, October 16th [Link](#).

Additional information

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About CSEM

CSEM—technologies that make the difference

CSEM, founded in 1984, is a Swiss research and development center (public-private partnership) specializing in microtechnology, nanotechnology, microelectronics, system engineering, photovoltaics, and communications technologies. Around 500 highly qualified specialists from various scientific and technical disciplines work for CSEM in Neuchâtel, Zurich, Muttenz, Alpnach, and Landquart.

Further information is available at www.csem.ch

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