
Weebit Nano and CEA-Leti Undertake Environmental Initiative

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Weebit Nano Limited, a leading developer of next-generation memory technologies for the global semiconductor industry, and CEA-Leti, a leading nanotechnology research institute, are undertaking an environmental initiative that will analyse the environmental impact of Weebit's Resistive Random-Access Memory (ReRAM) technology compared to other nonvolatile memory (NVM) technologies.

The Life Cycle Assessment (LCA) will estimate the contribution of Weebit's NVM technology to climate change by quantifying its environmental impact. It will focus on total greenhouse gas (GHG) emissions associated with the uses of mineral, fossil and water resources, energy consumption and gases/chemistry involved with the development, manufacture and operation of the technology.

According to a January 2021 report from the World Economic Forum, 77% of GHG emissions from the electronics industry are attributed to the supply chain, including raw materials mining, manufacture and assembly of electronic components and transportation of the finished product.

Coby Hanoch, CEO of Weebit Nano, said: "With so much of our day to day lives involving devices that run on information and communication technologies [ICT], we are conscious of the rising carbon footprint from these technologies and are looking for opportunities to further reduce our GHG emissions. The choices semiconductor companies make in the design and specification phases, including their choice of memory technologies, play a key role. While AI and IoT have the potential to ultimately create huge efficiencies, there are significant emissions involved in their development and use that we need to be aware of and reduce.

"While Weebit Nano's ReRAM accounts for only a fraction of the overall semiconductor

ecosystem, as the industry develops more and more devices, many at advanced nodes, every initiative counts. Weebit Nano's ReRAM is inherently lower power and as a result we believe it has a smaller GHG emission than other NVM technologies. Our ReRAM is strongly positioned to be a leader in NVM for advanced processes where it is no longer technically or economically feasible to embed Flash memory, and we are constantly innovating on multiple fronts. The results of the Life Cycle Assessment will support further environmental initiatives, cementing Weebit Nano's ReRAM as a key memory technology going forward."

Olivier Faynot, Head of Silicon Component Division at CEA-Leti, said: "Every player in the ICT sector has a role to play in reducing the electronics industry's environmental impact. The NVM assessment we are taking on with Weebit Nano will be valuable in determining main contributors to GHG emissions from the ReRAM supply chain, and will help us examine potential abatement scenarios. This effort is part of an energy efficiency optimisation approach we are recommending toward reducing the carbon footprint of the ICT industry. We must all work together to pursue solutions across processes, circuits, architectures, software, algorithms, use stage, reuse and recycling."

Read the [original article](#) on Weebit Nano.