

# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

16 September 2019

### Startup Boasts Private Label Model for SSD Architecture

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### Microchip Combats the CPU/Memory Bottleneck

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### Smart Grid for Electric Vehicles

Electric mobility will change the energy and automation market, contributing to significant investment in smart cities. These changes coincide with the evolution toward a cleaner, more decentralized, and digitized environment.

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### TALK TO US



### Imagination Launches Services Business for IP Verification

Imagination Technologies has launched a consultancy services side to its business for design and verification of its intellectual property (IP). Called IMG Edge, it will offer tailored consultancy, hosting and deployment support packages to address the complex and expensive challenges involved when bringing compute-focused systems on chip (SoCs) to market.

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### The Next Wave of IoT Bluetooth Devices Might Not Have Batteries

The Bluetooth 5 standard was designed primarily to share information between devices within the confines of the home or a car and in a workplace. That said, the new version of Bluetooth has properties that should make it attractive for some Internet of things applications

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## **Startup Boasts Private Label Model for SSD Architecture**

TORONTO — In amongst a stream of announcements at Flash Memory Summit (FMS) in August was a relatively new player hoping to make its mark with its own SSDs and controllers for data center and hyperscale applications.

Fadu Technology is a fabless startup focused on advancing flash storage technology with a combination of its own controllers, customized software, and M.2 and U.2 SSD designs. In addition to its own architecture, Fadu is also approaching the market with a different, less common business model. It sells its controller as a turnkey solution with customized firmware and its Bravo XL SSD design to OEMs wishing to manufacture their own storage devices or through a private label model using consigned Toshiba XL-FLASH and FADU SSD manufacturers to deliver complete, privately labeled NVMe SSDs.

## **Microchip Combats the CPU/Memory Bottleneck**

TORONTO — Microchip chose to enter the memory infrastructure market at the Flash Memory Summit with the introduction its SMC 1008, a serial memory controller designed to alleviate the bottleneck between the CPU and memory.

Microchip's SMC 1000 8x25G enables CPUs and other compute-centric SoCs to use four times the memory channels of parallel attached DDR4 DRAM within the same package footprint, according to product marketing manager Jay Bennett in a telephone interview with EE Times. From a CPU point of view, the number of embedded cores has been steadily increasing, but the memory bandwidth capability of that CPU has not been keeping pace. "Individual cores within the CPU are each individually experiencing a decrease in aggregate bandwidth and also an aggregate increase in the latency for each of their individual transactions," he said.

## **Smart Grid for Electric Vehicles**

Electric mobility will change the energy and automation market, contributing to significant investment in smart cities. These changes coincide with the evolution toward a cleaner, more decentralized, and digitized environment. Electric vehicle (EV) charging could create local constraints and stability problems on electricity grids and reduce the environmental benefits of electrification. Investment and infrastructure to support electric mobility will change significantly from one place to another.

The infrastructure will have the objective of distributing energy — in combination with grid edge technologies, such as microgrid and intelligent buildings — and integrating it into smart grids, in order to fully exploit the flexibility of electric mobility while allowing the stability of the energy system.

## **Imagination Launches Services Business for IP Verification**

Imagination Technologies has launched a consultancy services side to its business for design and verification of its intellectual property (IP). Called IMG Edge, it will offer tailored consultancy, hosting and deployment support packages to address the complex and expensive challenges involved when bringing compute-focused systems on chip (SoCs) to market.

IMG Edge comprises platforms, consultancy and methodologies, and includes state-of-the-art design, verification and validation solutions, backed by consultancy and Imagination's end-to-end design and verification expertise. Providing access to Imagination's data center, tools, methodologies, virtual platforms and hardware accelerators, combined with tailored domain expertise, Imagination said IMG Edge customers will save 10+ millions of dollars and months of project time. IMG Edge can be fully personalized to meet the individual requirements of its customers and their key markets, such as automotive, consumer, industrial, mobile and security.

## **The Next Wave of IoT Bluetooth Devices Might Not Have Batteries**

The Bluetooth 5 standard was designed primarily to share information between devices within the confines of the home or a car and in a workplace. That said, the new version of Bluetooth has properties that should make it attractive for some Internet of things applications. Atmosic Technologies is focusing on low-power Bluetooth 5 wireless platforms to enable networks of IoT devices that are, as the company says, "Forever Connected, Anywhere."

The new Bluetooth 5 offers performance improvements over legacy Bluetooth of four times the range, twice the speed, and eight times the bandwidth. Bluetooth 5 extends the functions that were already provided by the previous versions and aims at greater flexibility and interaction between the network-connected devices.