

# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

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### Faurecia acquires majority stake in Hella electronics

The French automotive supplier Faurecia has acquired a 60 per cent stake in the German lighting and electronics specialist Hella. The two companies aim to expand their market positions together, particularly in key growth areas such as electromobility.

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### Edge Vision SoC Serves Driver-Monitoring AI Dashcam

Driver monitoring systems have become an essential part of the conversation in automotive safety. While much of the driver-monitoring discussion has been around its use for individuals in passenger cars, there's a huge market in the commercial vehicle sector for monitoring drivers in their trucks to ensure safety and try to prevent accidents, as well as to enable fleet managers to assess risk and drive down insurance costs.

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### CrossBar Aims to Secure Computing with ReRAM

CrossBar Inc. is setting its sights on security with its resistive RAM (ReRAM). The company will apply its technology for use in hardware security applications in the form of ReRAM-based cryptographic physical unclonable function (PUF) keys that can be generated in secure computing applications.

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## TALK TO US



### India's Milestone in Semiconductor R&D: Memory Technology on 180nm CMOS Process

The natural world is analog while computing is digital. Computers perceive the natural world through sensors, whose analog output is converted through a digitizer chip or an analog to digital converter (ADC).

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## EVENTS

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-November 2021- London UK

### [Industry Forecast Briefing](#)

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### Xanadu, Imec Collaborate to Develop Photonic Qubits

Xanadu, the photonic quantum computing specialist, will partner with the Belgian research center Imec to develop the next generation of photonic qubits based on ultra-low loss silicon nitride waveguides.

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## **Faurecia Acquires Majority Stake In Hella Electronics**

The french automotive supplier faurecia has acquired a 60 per cent stake in the german lighting and electronics specialist hella. The two companies aim to expand their market positions together, particularly in key growth areas such as electromobility.

By combining their activities, faurecia and hella will become the seventh-largest automotive supplier worldwide. After taking over 60 per cent of the shares, the french company has announced that they will also take over the remaining shares at a price of 60.96 euros per share. Hella says that the closing of the transaction is subject to regulatory approvals and is expected for the beginning of 2022. In electric mobility, hella is contributing its portfolio in the areas of battery and steering electronics, while faurecia is contributing hydrogen solutions and storage systems.

According to rolf breidenbach, chairman of the hella management board, the two companies “are a very good fit”. Breidenbach says that both partners place a high value on consequent customer orientation, operative excellence and technology leadership

## **Edge Vision SoC Serves Driver-Monitoring AI Dashcam**

Driver monitoring systems have become an essential part of the conversation in automotive safety. While much of the driver-monitoring discussion has been around its use for individuals in passenger cars, there’s a huge market in the commercial vehicle sector for monitoring drivers in their trucks to ensure safety and try to prevent accidents, as well as to enable fleet managers to assess risk and drive down insurance costs.

Serving this market, fleet management technology company KeepTruckin this week said it partnered with edge artificial intelligence (AI) vision system on chip (SoC) firm Ambarella to develop its new aftermarket dashcam for larger commercial vehicles. The new dashcam uses a single Ambarella CV22 SoC to simultaneously provide AI and image processing for its dual-camera system, which integrates one camera for the front advanced driver assistance system (ADAS) with incident recording, and a second RGB-IR camera for the driver-monitoring system (DMS) with driver recording.

## **CrossBar Aims to Secure Computing with ReRAM**

CrossBar Inc. is setting its sights on security with its resistive RAM (ReRAM).

The company will apply its technology for use in hardware security applications in the form of ReRAM-based cryptographic physical unclonable function (PUF) keys that can be generated in secure computing applications. This is a departure from its usual use as non-volatile semiconductor memory, said CEO Mark Davis in a telephone interview with EE Times, and opens new markets for CrossBar’s technology.

A PUF is a physical object that for a given input and conditions, otherwise known as a “challenge,” provides a physically defined “digital fingerprint” output that acts as a unique identifier, most often for a semiconductor device such as a microprocessor. PUF keys aren’t new, but online banking and the emergence of the Internet of the things (IoT) have created opportunities beyond digital security for dedicated electronic devices such as banking cards or payment terminals.

## **India’s Milestone in Semiconductor R&D: Memory Technology on 180nm CMOS Process**

The natural world is analog while computing is digital. Computers perceive the natural world through sensors, whose analog output is converted through a digitizer chip or an analog to digital converter (ADC).

Foundries mass-produce these chips. Ideally, these chips should be identical, but manufacturing variations produce tiny offsets that are only revealed upon testing. This renders a large fraction of chips useless. The tiny offset may be stored in memory once and applied to the output afterward to make each imperfect chip, perfect. Using this method, generic chips can now be designed and application-specific offsets added to make expensive custom chip design redundant, saving time and money for the user.

## **Xanadu, Imec Collaborate to Develop Photonic Qubits**

Xanadu, the photonic quantum computing specialist, will partner with the Belgian research center Imec to develop the next generation of photonic qubits based on ultra-low loss silicon nitride waveguides.

Toronto-based Xanadu was founded in 2016 to develop technology using light particles in quantum computers to perform extremely fast and previously impossible computations at room temperature. The company’s founder and CEO, Christian Weedbrook, said the advantages of the photonics approach include the ability to leverage pre-existing foundries and off-the-shelf optical components. Another advantage is the ability to link photonic chips for scaling a quantum computer up to 1 million qubits.