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TALK TO US

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Built on its seventh-generation EyeQ architecture, and fabbed in a 5nm processing technology, Mobileye claims its EyeQ Ultra SoC can offer performance equivalent to 10 of its EyeQ5s in a single package. EyeQ Ultra will also be able to handle fully autonomous Level 4 driving as defined by the Society of Automotive Engineers (SAE), meaning vehicles equipped with EyeQ Ultra will require no human intervention when automated driving features are engaged — though the option for manual input is still available.

Mercedes Applies Neuromorphic Computing in EV Concept Car

The Mercedes Vision EQXX concept car, promoted as "the most efficient Mercedes-Benz ever built," incorporates neuromorphic computing to help reduce power consumption and extend vehicle range. To that end, BrainChip's Akida neuromorphic chip enables in-cabin keyword spotting as a more power-efficient way than existing AI-based keyword detection systems.

As automakers shift their focus to electric vehicles, many are struggling to squeeze every last volt from a single battery charge. The need to reduce power consumption in vehicle electronic systems has therefore become critical to extending EV range.

Touting Vision EQXX as "a car that thinks like you," Mercedes promises range of more than 1,000 km (about 620 miles) on a single charge.

Intel building $20bn factory in Ohio to support US semiconductor supplies

Chip maker Intel has said it will invest $20 billion to build a new factory in Ohio, in an attempt to help alleviate a global shortage of semiconductors that power everything from phones to cars to home appliances while also signalling the giant company's commitment to manufacturing crucial technology products in the US.

Ohio governor Mike DeWine said the move is a message to China "because this is about national security is so vitally important that we make these chips right here in the United States of America".

Semiconductor shortage to drive 50% of top 10 car makers to design their own chips by 2025

The move could also create a new technology hub in central Ohio as related businesses that support chip manufacturing open new facilities and bring expertise to the region.

Post-Fire, ASML Expects 20 Percent Sales Growth in 2022

ASML, the lone supplier of extreme ultraviolet (EUV) lithography equipment used by chipmakers to extend Moore's Law, has shrugged off damage from a fire at a Berlin plant and expects sales this year to grow by about 20 percent.

"We currently believe that we can manage the situation, and that we will not see a significant impact on our EUV output in the year 2022," ASML CEO Peter Wennink said after the company announced its quarterly results this week. "We expect about 20 percent growth as compared to 2021."

During the first quarter of 2021, ASML received from Intel Corp. the first order for its EXE:5200, the equipment vendor's latest high-volume EUV manufacturing tool. Shipments are scheduled to begin in 2024. ASML said the EXE:5200 would allow chipmakers to reach process nodes well beyond the current threshold–2nm–for at least another ten years.

AI expands HBM footprint

High bandwidth memory (HBM) is becoming more mainstream. With the latest iteration's specifications approved, vendors in the ecosystem are gearing to make sure it can be implemented so customers can begin to design, test and deploy systems.

Avery Design Systems has built a verification platform based on its own tested verification IP (VIP) portfolio to enable pre-silicon validation of design elements, including HBM3, by providing memory models, protocol checkers, performance analysis, and compliance test-suites. (Courtesy Avery Design Systems) (Click on the image for a larger view.)

The massive growth and diversity in artificial intelligence (AI) means HBM is less than niche. It's even become less expensive, but it's still a premium memory and requires expertise to implement. As a memory interface for 3D-stacked DRAM, HBM achieves higher bandwidth while using less power in a form factor that's significantly smaller than DDR4 or GDDR5 by stacking as many as eight DRAM dies with an optional base die which can include buffer circuitry and test logic.