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The Global Semiconductor Industry Analysts

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Signalchip designs India's first indigenously designed chip

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Wind of Change for Cloud Computing

When both Intel and Nvidia said in their latest quarterly announcements that data center spending slowed a chill went down my spine. With smartphones slowing and the Internet of Things rising slower than once hoped, the cloud has been one of the largest and most steady drivers in tech.

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Improving Safety Standards for AV

PARIS — The developers of the functional automotive safety standard ISO 26262 aren't resting on their laurels. They've embarked on the creation of a separate standard (ISO 21448), described as "Safety of the Intended Functionality (SOTIF)."

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TALK TO US



Surprise! More 5G complications

As network operators furtively roll out 5G services, the cellular communications industry is learning about 5G on the fly, finding one unexpected challenge after another. It's more difficult than they had anticipated, and in response they're incurring greater startup costs than they'd originally budgeted for.

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Edge Computing Wants Smarter IoT Devices

TORONTO — The evolution of edge computing means that internet of things (IoT) devices need more smarts to make decisions rather just shipping data to be crunched to the cloud — this means that more memory is required without increasing its footprint.

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Signalchip Designs India's First Indigenously Designed Chip

Bengaluru-based fab-less semiconductor start-up Signalchip, after eight years of relentless R&D work and a never-say-die attitude, has unveiled India's first semiconductor chip for 4G/LTE and 5G NR (New Radio) modems.

Co-founded by Himamshu Khasnis and Rajesh Mundhada, Signalchip has designed what is said to be India's first LTE chip with the 4G/LTE modem, LTE baseband modem, LTE transceiver and 5G transceiver under the Agumbe chipset family, all of which will support all LTE/5G-NR bands up to 6GHz. These chips put India into an elite group of countries that own this widely used technology.

Wind Of Change For Cloud Computing

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To some extent the slowdown is the law of large numbers. More than a half dozen major hyperscalars have gone from nothing to global giants in the past decade. After years of breakneck expansions, growth likely will settle to single-digit rates going forward, veteran market watcher Linley Gwennap told me.

Prepare, but don't panic. One hyperscaler alone has plans for 81 data centers it aims to fill in the next 18 months, some of them modest in size. Also, a group of second-tier players is emerging focused on specific cloud segments or geographies, Intel's data center marketing manager Lisa Spelman told me.

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ISO 21448 is said to complement ISO 26262, picking up where ISO 26262 has left off.

The group was motivated to develop SOTIF to avoid unreasonable risks for ADAS and autonomous vehicles (AVs) — even in the absence of malfunctions by hardware and software in vehicles — that might encounter trouble on the road.

Indeed, even ADAS and AV systems otherwise deemed safe — because their hardware complies with ISO 26262 and their software is bug-free — could still fail in some instances. "We don't think ISO 26262 is enough" to guarantee safety, Riccardo Mariani, Intel Fellow and chief functional safety technologist, told EE Times. The industry has seen the "Uber accident and other events in which autonomous-driving technologies were misbehaving."

Surprise! More 5G complications

As network operators furtively roll out 5G services, the cellular communications industry is learning about 5G on the fly, finding one unexpected challenge after another. It's more difficult than they had anticipated, and in response they're incurring greater startup costs than they'd originally budgeted for.

One ray of sunshine: millimeter wave (mmWave) signals are more robust than many had feared. So far it seems the worries about rain fade and soft obstructions, such as foliage, were overblown.

A critical element of 5G is virtualizing the network, with the goal of making communications networks endlessly configurable to suit the various and changing needs of network users. On-demand network reconfigurability creates a need to make sure that each new configuration is delivering what was ordered. By definition, testing in advance is not possible.

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TORONTO — The evolution of edge computing means that internet of things (IoT) devices need more smarts to make decisions rather than just shipping data to be crunched to the cloud — this means that more memory is required without increasing its footprint.

Adesto Technologies' latest non-volatile memory (NVM) family is aimed at both consumer and industrial IoT devices that need to be able to do more than just ship data off to the cloud. Dubbed FusionHD, it's an extension of the company Fusion family but with more intelligence at low power and increased density, said Paul Hill, senior marketing director for the company's serial flash products group.

The product line includes support for the new Serial Flash Reset Signaling Protocol (JESD252) and the latest version of the Serial Flash Discoverable Parameter (SFDP) standard (JESD216D) to make it easier for system designers to deliver smarter, more efficient, and more user-friendly devices.