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The Global Semiconductor Industry Analysts

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STMicroelectronics Rad-Hard ICs Target 'New Space'

Built with low–earth orbit (LEO) in mind, STMicroelectronics' latest series of radiation–hardened ICs boast a plastic package with a total ionization dose immunity up to 50 krad(Si), enabling next–gen satellites to provide earth observation and broadband internet from the relative safety of LEOs.

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BioZ AFE reduces size and power for wearables, patches

A new analog front-end (AFE) chip claims to significantly reduce the size and extend the life of bioimpedance (BioZ) remote-patient monitoring (RPM) devices that provide clinical-grade vital sign measurements for patient health assessment in wellness wearables and medical-grade patches.

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3D printing challenges multi-GHz component constraints

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TALK TO US

Arm to Make 15% Headcount Cut as it Prepares for Life Beyond Nvidia

Reports emerged that Arm is looking to cut up to 15% in its headcount in the U.S. and U.K, from its total of around 6,500 worldwide staff.
In a statement, Arm said, "Like any business, Arm is continually reviewing its business plan to ensure the company has the right balance between opportunities and cost discipline.

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Russia and The 5G Cold War

The advance of the massive Russian army into Northern Ukraine (hampered though it is by logistical concerns) has reawakened Europe to a type of fighting it has not witnessed on a large scale for 75 years: A brutal, urban slogging campaign where casualties — both civilian and military — continue to grow apace.

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Future Horizons Ltd, • 44 Bethel Road • Sevenoaks • Kent TN13 3UE • England
Tel: +44 1732 740440 • Fax: +44 1732 740442
e-mail: mail@futurehorizons.com• http://www.futurehorizons.com/
Affiliates in Europe, India, Israel, Japan, Russian, San Jose California, USA

STMicroelectronics Rad-Hard ICs Target 'New Space

Built with low–earth orbit (LEO) in mind, STMicroelectronics' latest series of radiation–hardened ICs boast a plastic package with a total ionization dose immunity up to 50 krad(Si), enabling next–gen satellites to provide earth observation and broadband internet from the relative safety of LEOs. Hello new space, goodbye old space.

ST's newest LEO series includes a data converter, a voltage regulator, an LVDS transceiver, a line driver, and five logic gates. They possess high immunity to total non–ionizing dose and single event latch-up immunity up to 62.5MeV.cm²/mg, can withstand temperatures between –40 to 125 degrees Celsius, and are based on AEC-Q100 specifications — all which ST claims will enable them to meet the rising demand to deploy additional satellite constellations thanks to both their low-cost plastics packaging and the allure of what new space can offer.

BioZ AFE reduces size and power for wearables, patches

A new analog front-end (AFE) chip claims to significantly reduce the size and extend the life of bioimpedance (BioZ) remote-patient monitoring (RPM) devices that provide clinical-grade vital sign measurements for patient health assessment in wellness wearables and medical-grade patches. Bioimpedance analysis is a popular and convenient way for healthcare professionals to measure body fat percentage and body composition like respiration and impedance cardiography.

MAX30009, an AFE on a chip, monitors a range of BioZ modalities through simultaneous I and Q measurements, 2-electrode (bipolar) and 4-electrode (tetrapolar) configurations. And that enables flexible inputs for BioZ modality measurements as well as a wide range of sample rates to support various medical BioZ measurements.

3D printing challenges multi-GHz component constraints

It's not news that operating frequencies for wireless and even wired circuits are rapidly moving up the spectrum. The reality is that while it wasn't long ago that operating at just a gigahertz or two was considered a testbench accomplishment, we now have mass-market consumer products designed for the multi-GHz range and moving up fast with 5G. The physical implications are well known; as frequencies increase and wavelengths shrink, so do the relevant dimensions and allowable tolerances of components, board tracks, and well, everything.

At these tiny dimensions, making and using even basic components such as connectors are a major challenge. Take, for instance, coaxial cables that have diameters on the order of a millimeter or two. Connectors and waveguides always had tight dimensional tolerances and the need for some ruggedness.

Arm to Make 15% Headcount Cut as it Prepares for Life Beyond Nvidia

Reports emerged today (Tuesday) that Arm is looking to cut up to 15% in its headcount in the U.S. and U.K, from its total of around 6,500 worldwide staff.

In a statement, Arm said, "Like any business, Arm is continually reviewing its business plan to ensure the company has the right balance between opportunities and cost discipline. Unfortunately, this process includes proposed redundancies across Arm's global workforce." The spokesperson added in an email to EE Times, "If the proposals go ahead, we anticipate that around 12-15% percent of people in Arm would be affected globally. Roles in the U.K. and the U.S. will be primarily affected. Some roles will be placed at risk of redundancy while a consultation process is followed, whereas others will be impacted sooner according to local employment legislation. The exact process will vary by location."

Russia and The 5G Cold War

The advance of the massive Russian army into Northern Ukraine (hampered though it is by logistical concerns) has reawakened Europe to a type of fighting it has not witnessed on a large scale for 75 years: A brutal, urban slogging campaign where casualties — both civilian and military — continue to grow apace.

The West, namely the United States and its NATO allies, doesn't have many options to respond to this aggression (no-fly zones, etc.) unless they are willing to draw Russia into a new world war. So sanctions are the only real response to the Ukraine conflict that the opposing allies can muster.

Everything from oil and gas, to bank accounts, to luxury yachts has been frozen or blocked by the European Union, the United Kingdom, and the U.S. Beyond the more obvious embargos, technological punishments have featured heavily among the prohibitions handed down so far.