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The Global Semiconductor Industry Analysts

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Apple Gets in on 6G Definition Race

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Startup Transforms Image Sensing with Flat Meta-Optic Technology

Metalenz, a Boston-based spinout of Harvard University, has come out of stealth mode to unveil its meta-optic lens technology. The company aims to replace plastic lenses with waveguides built from silicon nanostructures made in the same foundries that produce microelectronics and CMOS image sensors, and using standard semiconductor processes.

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Chipmakers Halt Production in Texas After Power Outages

Samsung, NXP and Infineon have stopped operations at chip fabs in Texas after a surprise cold wave caused power outages in the US state that is a major energy supplier. The chipmakers halted production in the city of Austin around Feb. 16 after notification of power cuts by Austin Energy.

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TALK TO US



Globalfoundries Eyes 'Trusted' DoD Status

GlobalFoundries is seeking "trusted accreditation" for its most advanced U.S. fab after securing certification under U.S. export controls to manufacture chips for sensitive military and aerospace applications.

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TSMC to Raise \$9 Billion for Expansion Amid Shortages

TAIPEI — Taiwan Semiconductor Manufacturing Co. (TSMC) said that it plans two sales of bonds that would raise about \$9 billion to expand production, possibly helping to ease a critical shortage of silicon.

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Apple this week posted new jobs looking for 6G wireless systems research engineers, as the race to define 6G picks up. It has posted jobs in Cupertino and San Diego for wireless research systems engineers for 5G/6G.

While the next 'G' is not yet defined and the world is still rolling out 5G, there is a huge race globally to start research and to experiment with the potential materials and the wireless communications technologies that could define 6G. While I covered some of the initial thinking on what 6G might look like in 2018 after a visit to Oulu, Finland, the first limited deployments of whatever 6G is going to be may not happen before 2030.

Startup Transforms Image Sensing with Flat Meta-Optic Technology

Metallenz, a Boston-based spinout of Harvard University, has come out of stealth mode to unveil its meta-optic lens technology. The company aims to replace plastic lenses with waveguides built from silicon nanostructures made in the same foundries that produce microelectronics and CMOS image sensors, and using standard semiconductor processes.

The company also announced it has raised \$10 million from 3M Ventures, Applied Ventures LLC, Intel Capital, M Ventures and TDK Ventures, along with Tsingyuan Ventures and Braemar Energy Ventures. It will use this funding to scale production and accelerate the development of miniature optics on chip technology.

Chipmakers Halt Production in Texas After Power Outages

TAIPEI — Samsung, NXP and Infineon have stopped operations at chip fabs in Texas after a surprise cold wave caused power outages in the US state that is a major energy supplier.

The chipmakers halted production in the city of Austin around Feb. 16 after notification of power cuts by Austin Energy. There's no word from the companies on when production will resume or how big the impact will be on output.

Austin power providers are prioritizing service to residential areas and for critical health, safety and human services, NXP said in a press statement. As a result, power has been suspended to Austin chipmakers, including NXP at its two Austin facilities, the company added. "With prior notice, appropriate measures have safely been taken for the facilities and wafers in production," the Austin American-Statesman newspaper cited Samsung spokeswoman Michele Glaze as saying.

Globalfoundries Eyes 'Trusted' DoD Status

GlobalFoundries is seeking "trusted accreditation" for its most advanced U.S. fab after securing certification under U.S. export controls to manufacture chips for sensitive military and aerospace applications.

The chip maker, which already operates trusted facilities at two former IBM foundries, said this week it is expanding its manufacturing partnership with the Defense Department to include its Fab 8 facility in Malta, N.Y. The manufacturing agreement certifies compliance with the U.S. International Traffic in Arms (ITAR) and Export Administration Regulations.

DoD recently unveiled a "Zero Trust" strategy designed to boost the security of its systems and supply chain, including its semiconductor suppliers. Globalfoundries said this week it is in talks with Pentagon officials to qualify Fab 8 as a trusted facility.

TSMC to Raise \$9 Billion for Expansion Amid Shortages

TAIPEI — Taiwan Semiconductor Manufacturing Co. (TSMC) said that it plans two sales of bonds that would raise about \$9 billion to expand production, possibly helping to ease a critical shortage of silicon.

In a Feb. 9 board meeting, the world's largest chip foundry approved the issuance of corporate bonds in Taiwan for as much as NT\$120 billion (approximately \$4.4 billion) and provided a guarantee to subsidiary TSMC Global to issue US dollar-denominated corporate bonds for up to \$4.5 billion that would fund capacity expansion as well as pollution-prevention measures.

In the board meeting, TSMC also approved the establishment of a wholly owned subsidiary in Japan to expand research on materials for three-dimensional chips, with a paid-in capital of up to ¥18.6 billion (approximately \$186 million). The announcement follows an unconfirmed report that TSMC plans to open its first overseas chip-packaging facility in Japan.