

# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

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### Flexible RFID ICs Used in Anti Counterfeit Solutions

Chinese packaging materials firm BSN intends to use flexible electronics firm PragmatIC's RFID ICs in a new printing facility focused on anti-counterfeit solutions for fast-moving consumer goods (FMCG), online sales, and pharmaceutical drugs.

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### 'Unhackable' Microprocessor to Secure Encrypted Data

Researchers at NYU Abu Dhabi (NYUAD) have designed a co-processor that relies on partially homomorphic encrypted (PHE) execution, enabling it to perform computations directly on encrypted data.

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### IIoT to get a Boost from Private 5G Networks

The rollout of 5G technology will have sweeping implications for the Industrial IoT, but won't impact all IIoT applications in the near term, according to Gerardo Giaretta, the head of Industry 4.0 at Qualcomm.

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### TALK TO US



### Startup Automates Type 1 Diabetes Management

Dealing with chronic disease can be a big chore both for affected patients. As Erik Huneker, CEO of French medical device startup company Diabeloop said last week at the Leti Innovation Days in Grenoble, "A person with type 1 diabetes needs to think and make a decision about 40-50 times a day about how much to eat and how much insulin to take."

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### EVENTS

#### [Silicon Chip Industry Seminar](#)

10 June - 2019 – London UK

#### [Industry Forecast Briefing](#)

– 17 Sept 2019 – London UK

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### Rockley Raises \$52M for Silicon Photonics Tech

Rockley Photonics has raised \$52 million in a first closure of its Series E funding round, from both current investors and new investors, including Morningside Technology Ventures of Hong Kong. Rockley's silicon photonics technology builds optical transceiver components in silicon and co-packages them with digital electronics, such as a switching ASIC.

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## **Flexible RFID ICs Used In Anti Counterfeit Solutions**

Chinese packaging materials firm BSN intends to use flexible electronics firm PragmatIC's RFID ICs in a new printing facility focused on anti-counterfeit solutions for fast-moving consumer goods (FMCG), online sales, and pharmaceutical drugs.

BSN is part of the Baoshen Group, one of China's leading packaging material suppliers for footwear, apparel, bags, furniture, cosmetics and accessories, with an annual capacity of 7 billion print items and 1 billion RFID labels. PragmatIC's ConnectIC products will be used in BSN's new Eprint line of RFID products.

The ConnectIC family, released earlier this year, provides connectivity solutions using HF RFID proximity identification aimed at smart packaging, and targets markets such as food and beverage, personal and home care, pharmaceutical and healthcare.

## **'Unhackable' Microprocessor to Secure Encrypted Data**

Researchers at NYU Abu Dhabi (NYUAD) have designed a co-processor that relies on partially homomorphic encrypted (PHE) execution, enabling it to perform computations directly on encrypted data.

Processors in PCs and smartphones currently compute on ordinary, unencrypted data only. The new processor, CoPHEE, mitigates data leakage and limits threats and vulnerabilities from hackers, by computing directly using encrypted data without decryption.

The project is led by NYUAD assistant professor of electrical and computer engineering Michail Maniatakos, with contributors including research engineers at NYUAD's center for cyber security (NYUAD CCS) Mohammed Nabeel and Mohammed Ashraf, NYUAD CCS post-doctoral associate Eduardo Chielle, and NYU alumni and assistant professor of electrical and computer engineering at the University of Delaware, Nektarios Tsoutsos. The project is funded by GlobalFoundries, which is owned by Mubadala, an investment firm based in Abu Dhabi.

## **IIoT To Get a Boost From Private 5G Networks**

The rollout of 5G technology will have sweeping implications for the Industrial IoT, but won't impact all IIoT applications in the near term, according to Gerardo Giaretta, the head of Industry 4.0 at Qualcomm.

5G will offer enormous benefits in areas like smart factories, but won't immediately be a solution for applications that are relatively simple and require massive scale deployment, such as smart meters and many farming and agricultural applications, said Giaretta, senior director of product management at Qualcomm, in a keynote address at the Sensors Expo & Conference 2019 in San Jose on Thursday.

## **Startup Automates Type 1 Diabetes Management**

Dealing with chronic disease can be a big chore both for affected patients. As Erik Huneker, CEO of French medical device startup company Diabeloop said last week at the Leti Innovation Days in Grenoble, "A person with type 1 diabetes needs to think and make a decision about 40-50 times a day about how much to eat and how much insulin to take."

This makes management of diabetes a perfect candidate for the utilization of artificial intelligence. That's why Huneker's company has developed what he claims is the world's first autonomous medical device, which uses machine learning in real time to determine the optimum insulin to administer automatically to a patient without them having to even think about it.

Type 1 diabetes affects about 2 million people in Europe and what Diabeloop aims to do with its closed loop medical system is to help people with the condition try and live normal lives by improving their treatment dramatically.

## **Rockley Raises \$52M for Silicon Photonics Tech**

LONDON — Rockley Photonics has raised \$52 million in a first closure of its Series E funding round, from both current investors and new investors, including Morningside Technology Ventures of Hong Kong. Rockley's silicon photonics technology builds optical transceiver components in silicon and co-packages them with digital electronics, such as a switching ASIC. This latest funding brings the total raised by Rockley to \$165 million.

Silicon photonics is particularly attractive for the data center market, where intra-data center links require increasing bandwidth and speed. Rockley is also targeting consumer sensors and LiDAR applications.

Of the \$52 million total, \$30 million came from Rockley's strategic partner, Hengtong Opto-Electric Co, a Chinese manufacturer of fiber optic cables. The companies have a joint venture, in Suzhou, China, where they manufacture and sell 100G and 400G DR4 transceivers for data centers using Rockley's LightDriver Engine.