

## impC002 preview – launch Q1 2019

### Industrial-grade connectivity for IoT

Built with the same technology that powers over a million WiFi and Ethernet products, the impC002 provides unmatched flexibility, enabling quick, cost-effective development and deployment of robust, secure IoT applications.

Delivered as a plug-in M2/NGFF format card, the impC002 is easy to integrate and allows products to evolve to newer cellular standards over time without redesign.

Uniquely, there is no activation – the device is ready to use out of the box. You pay only for months where the device is active, and data is automatically pooled between devices on the same account.



The device supports both LTE cat M1 and NB-IoT networks on multiple bands, allowing a single SKU to be used globally anywhere either of these networks are deployed. GSM EDGE quad-band fallback is also supported.

Location services are provided by a built-in GNSS engine, with support for multiple GNSS services.

The impC002 also supports concurrent cellular and WiFi connections, allowing applications to pick the best – or lowest cost – method to connect to the internet at any time.

As with all imps, every device in the field also has a paired cloud virtual machine, enabling efficient and flexible cloud-to-cloud integration to almost any service or enterprise backend. This architecture also reduces cellular data usage.

#### Secure OS

- impOS provides secure connectivity and resource/power management
- Fail-safe OTA updates of OS & app
- Integrated BLE stack for external radio

#### Connectivity

- LTE cat M1, NB-IoT (NB1), GSM
- Band support LTE-FDD: 1/2/3/4/5/8/12/13/18/19/20/26/28
- Band support LTE-TDD: 39 (cat M1)
- Band support GSM: 850/900/1800/1900
- GPS/GLONASS, BeiDou, Galileo, QZSS
- Supports WiFi on host PCB

#### Processor

- 96MHz ARM Cortex-M4F
- 512kB flash and >180kB RAM for app

#### Physical

- M2/NGFF (key E) to host
- 2x u.FL antenna (cellular, GNSS)
- 38.50 x 26.85 x 4.5mm (TBC)
- Operational range -35 to +75C (extended range -40 to +85C with RF derating)

#### Comprehensive I/O

- 44 software configurable GPIOs
- 7 UARTs, 5 SPIs, 4 I<sup>2</sup>Cs
- 11 ADCs, 2 DACs

#### Electrical

- Radio power 250mA (LTE), 2A peak (GSM)
- MCU power max 50mA @ 3.3v
- <5mA idle on-network
- <20uA sleep modes

**Note: specifications subject to change before release**

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