



NovaUCD

Technology Licensing Opportunity



RIoT - A Low Power RF Receiver for IoT Applications

- Driving down power consumption in IoT wireless sensors



Opportunity:

By the year 2030 there are expected to be more than a trillion electronic devices in wireless sensor networks. Such devices will be embedded everywhere, from smart structures, including the home, to autonomous vehicles and within the human body. A critical requirement for these devices is that they must be low cost and energy efficient.

To meet these requirements researchers from University College Dublin have designed and fabricated an ultra low power RF receiver that halves power consumption when compared to the existing state of the art. This technology meets the Bluetooth Low Energy (BLE) standard with a world record for minimum power consumption in a RF receiver.

Applications:

Embedded electronic devices for wireless sensing in Internet-of-Things and wireless sensing applications.

Key Features/Advantages:

- 0.7V type II phase tracking receiver fabricated in 28nm CMOS.
- World record for minimum power consumption in a RF receiver.
- 1.2mW measured power consumption - current industry standard $\geq 5mW$.
- Meets requirements of Bluetooth Low Energy standard.
- Sub-mW power consumption possible.

In collaboration with:



Value Proposition:

Smallest power consumption currently available in a RF wireless receiver architecture.

Market:

Wireless Communications and Networks, Consumer Electronics, Internet-of-Things, Autonomous Vehicles, Aerospace and Defence.

Lead Inventors:

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US provisional patent application.



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