# Getting Started

InnoPhase IoT software development kit is beneficial for development of integrated applications on Talaria TWO with InnoOS RTOS, lwIP network stack and GCC compiler-based SDK. It helps enable applications, networking and wireless (BLE/Wi-Fi) functionality on Talaria TWO.

# Key Features

1. Ultra-low power 2.4GHz 802.11 b/g/n Wi-Fi connectivity
2. Support for WPA2 (Personal & Enterprise) and WPA3
3. DTIM10 at 57uA enables Wi-Fi connected battery-based applications
4. Full stack including MQTT, mbedTLS for supporting IoT Direct-to-Cloud for a variety of cloud services (AWS, Azure, Google Cloud, IBM Watson, etc.)
5. BLE5.0 w/ Advanced Features LE Coding/FEC (Long-Range), 2M PHY, Extended Advertising
6. Supports Wi-Fi Provisioning over BLE and local device management, plus BLE to Wi-Fi bridging
7. Bluetooth GATT/GAP Profile support, and HCI interface option for host MCU-based BLE profile stacks
8. Advanced security features including Secure Boot, PUF (Physically Unclonable Function) and hardware Crypto Engines
9. Embedded 80MHz Arm Cortex-M3 w/ 512KB SRAM and 2MB Flash
10. Eleven (11) configurable GPIO plus Tx Console port (on GPIO17)
11. Dedicated ADC Input pin
12. Integrated clocks and power management – only a single 3.3V supply needed
13. PCB antenna, U.FL antenna connector, RF Pin, and ceramic antenna options