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INP3010/3011EVB-A Talaria TWO™ Evaluation Kits

Complete Solution for Evaluating the Performance and Capability of Talaria TWO Modules

The INP3010/3011 EVB-A evaluation kits are available for measuring the performance and capability of the Talaria TWO INP1010/1011 modules. The modules use InnoPhase's award-winning Talaria TWO Multi-Protocol Platform with Wi-Fi and BLE for wireless data transfer, an embedded Arm Cortex-M3 for system control and user applications plus advanced security elements for device safeguards.

The kits include an Arduino UNO format baseboard with an INP1010 or INP1011 module attached. The boards can be used in stand-alone mode or attached to an Arduino UNO compatible host or shield board. The baseboards have all module GPIOs accessible through either an internal 20-pin header or the Arduino connectors. Power is supplied from USB, host Arduino board or battery connector. Also mounted on the baseboards are environmental sensors for capturing temperature, humidity, pressure and light.

Ultra-Low Power Wireless Modules for Battery-Based IoT Designs



INP3010 (Includes INP1010 w/ PCB Antenna)



INP3011 (Includes INP1011 w/ U.FL Connector)



Ultra-Low Power

Industry's lowest Wi-Fi power consumption enables battery-based cloud-connected IoT products



Superior Integration

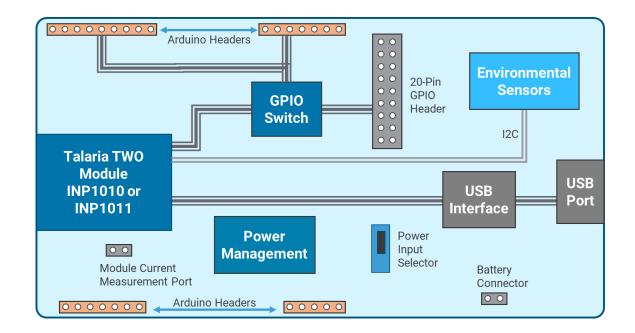
Complete module solution including embedded microcontroller, clocks, passives and antenna connections



Programmable radio protocols can be easily changed within microseconds through software APIs

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INP3010/INP3011 Block Diagram



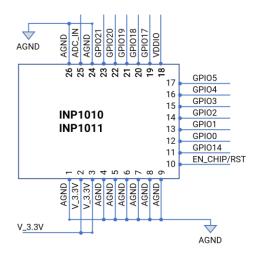
INP3010/INP3011 EVB-A Kit Contents

Product	INP3010	INP3011
Baseboard	EVB-A Baseboard, Arduino UNO Compatible (75.0mm x 53.3mm x 10mm)	
Talaria TWO Module Included (Mounted on Baseboard)	INP1010 (w/ PCB Antenna)	INP1011 (w/U.FL Antenna Connector)
Environmental Sensors (Mounted on Baseboard)	Temperature & Humidity (Sensirion SHTC3) Pressure (Bosch BMP388) Light (TI OPT3002)	
USB Interface	USB2.0	
USB Cable	Male USB A to Male USB Micro-B	
Antenna	Not Included	Stub Antenna with Cable & U.FL Connector
Battery Holder	Dual "AA" Battery Holder with Wired Connector	
Accessories	4x Stand-Offs and 4x Screw Nuts (Attached)	
Software	Available for Download at: <u>http://www.innophaseinc.com/talaria-two-modules</u>	

PRODUCT BRIEF

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INP1010/1011 Module Information



INID1010/INID1011 Product Specifications

INP1010/1011 Features

- Fully Integrated Module Including All **Required Clocks & Passives**
- Agency and Standards Certifications
- Hostless Operation Using Internal Arm Cortex-M3, or Connect to a Host MCU **Through UART/SPI Ports**
- Twelve (12) Configurable GPIO Ports
- Ultra-Low Power Wi-Fi Connectivity
- BLE5.0 with Advanced Features
- Full SDK Environment for Application • Development
- Arduino Compatible EVB Available for Evaluation

INP1010/INP1011 Product Specifications		
Wi-Fi Technology	802.11 b/g/n, up to MCS7 Single-stream (1x1)	
Bluetooth Technology	BLE 5.0 w/ Advanced Features: 2Mbps PHY, LE Coding (Long-Range), Extended Advertising	
Frequency Band	2.4GHz	
Application Processor	Arm Cortex-M3, 80MHz	
Embedded Memory	512KB SRAM, 2MB Flash	
Host Interface Options	UART, SPI (slave)	
Peripherals	GPIO, 10-bit SAR ADC, PWM, PDM, SPI, UART JTAG, I2C, and I2S	
Hardware Based Security	PUF (Physically Unclonable Function), Crypto Engines, Secure Boot	
WiFi Active Mode Power/Performance (@ 3.3V)	TX Current Consumption/Output Power802.11b DSSS 1 Mbps178 mA (+17.5 dBm)802.11g OFDM 54 Mbps100 mA (+15.5 dBm)802.11n OFDM 65 Mbps MCS781 mA (+12.5 dBm)RX Current Consumption/Sensitivity802.11b DSSS 1Mbps31 mA (-96 dBm)	
WiFi Power Save Mode 802.11b, 1 Mbps (Clean Environment, @ 3.3V)	150 μA (DTIM = 3) 97 μA (DTIM = 5) 57 μA (DTIM = 10)	
BLE Active Mode Power Consumption (@ 3.3V)	27 mA RX 52 mA TX (0dBm), 77mA TX (+10dBm)	
Deep Sleep Mode (@ 3.3V)	11-19 μ A (RTC, memory retained, depends on amount of memory retained)	
Temperature Range	-40°C to +85°C	
Antenna	PCB Antenna (INP1010) U.FL Connector (INP1011)	
Packaging Information	21.6mm x 19.1mm x 2.5mm (height includes shield) 26 Castellated Pins	

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