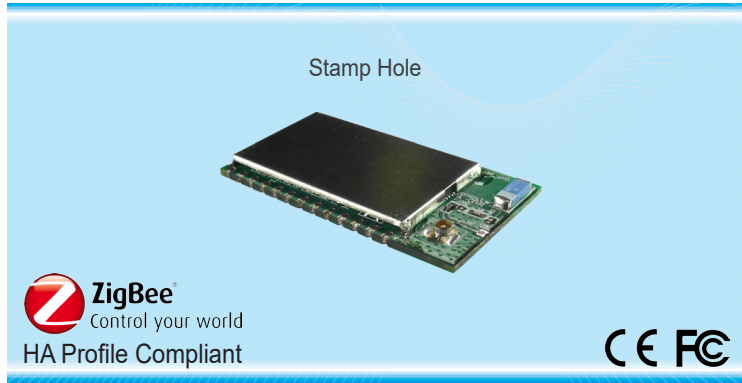


# M02 Series Ultra Range ZigBee Wireless Module



## Features & Benefits

- Easy integration into a variety of systems, particularly applicable for devices using 20 GPIO for UART, SPI, I<sup>2</sup>C, AI, DI and DO
- The M02 ultra range ZigBee wireless module can be used as an end device or router or coordinator for broader networking applications.
- Minimizes development costs and time
- Stamp hole mounting option
- Auto-repair & auto-reconnection for connection stability & integrity
- Power amplifier for extending transmission range
- OTA (over the air) firmware upgrade options on OTA models

## Product Description:

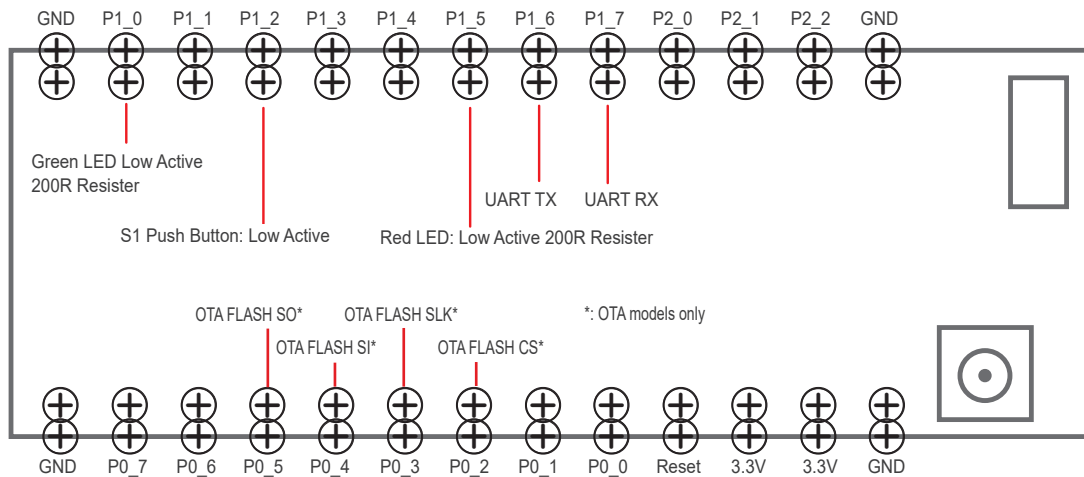
The M02 ultra range ZigBee wireless module's compact design allows easy integration into a variety of systems. The M02 ZigBee module is particularly applicable for devices using 20 GPIO for UART, SPI, I<sup>2</sup>C, AI, DI and DO for building IEEE 802.15.4 compatible ZigBee wireless networks lowering R&D costs and greatly reducing development time. The M02 ZigBee module can be used as an end device, a router or a coordinator.

Nietzsche's M02 ZigBee module can be used in a variety of networking applications such as home automation, health care systems, smart buildings, industrial auto-control measurement and monitoring, and energy efficiency systems. The OTA model provides OTA firmware upgrade options, allowing you to upgrade your M02 ZigBee module to Nietzsche's latest technologies. The M02 ZigBee modules' versatility makes them suitable for a wide range of uses minimizing development costs and time as well as broadening wireless and internet networking capabilities.

## Specifications

Transmitting Protocol	Standard Modbus RTU / ZigBee: HA profile	Antenna	IPEX or Chip Antenna
Addressing	Depends on the customer	I/O Port	20 x GPIO
Wireless Protocol	IEEE 802.15.4 ZigBee2007/PRO	Network Topology	Star/ Tree/ Mesh
Transmission Range	Chip antenna: Up to 100 meters / 328 feet IPEX antenna: Depends on designated antenna's performance	Power Supply	DC 3.3V typical (range: DC 2.2 ~ 3.6V)
Operating Frequency	2.4GHz ISM Band	Operating Environment	-20 ~ +85°C/ -4 ~ +185°F, 0~95% RH
RF Output Power	16 dBm	Dimensions	34(L) x 19(W) x 2.25(H) mm
Receiver Sensitivity	-95 dBm	Weight	3g / 0.1oz
Power Consumption	TX: 180mA / RX: 35mA	Certifications	CE/ FCC / NCC

## Pin Assignment



## Ordering Code & Accessories

Ordering Code	Description	Ordering Code	Description
M02-CCHA0-00	Stamp hole/ ZigBee HA Coordinator/ 3.3V/ Chip Antenna/ OTA	M02-RCHA0-00	Stamp hole/ ZigBee HA Router/ 3.3V/ Chip Antenna/ OTA
M02-CCHA0-01	Stamp hole/ ZigBee HA Coordinator/ 3.3V/ Chip Antenna/ Non-OTA	M02-RCHA0-01	Stamp hole/ ZigBee HA Router/ 3.3V/ Chip Antenna/ Non-OTA
M02-CIHA0-00	Stamp hole/ ZigBee HA Coordinator/ 3.3V/ IPEX Connector/ OTA	M02-RIHA0-00	Stamp hole/ ZigBee HA Router/ 3.3V/ IPEX Connector/ OTA
M02-CIHA0-01	Stamp hole/ ZigBee HA Coordinator/ 3.3V/ IPEX Connector/ Non-OTA	M02-RIHA0-01	Stamp hole/ ZigBee HA Router/ 3.3V/ IPEX Connector/ Non-OTA

NOTE: Contents of this document are subject to change without notice.