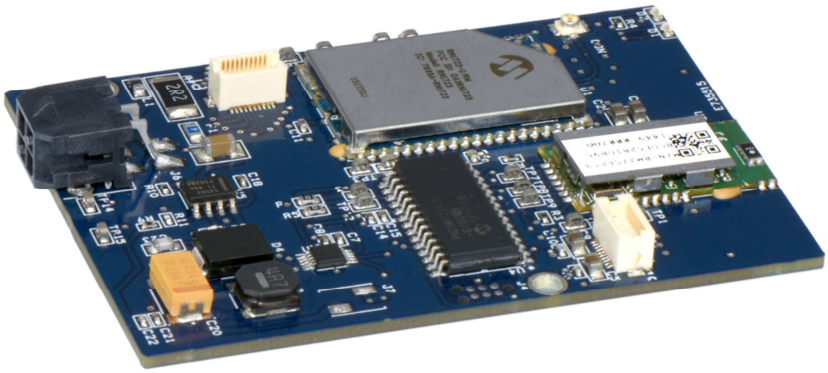
PingPong

Wi-Fi/Bluetooth Board



Product Description

The Wi-Fi/Bluetooth Board is an extension board for the PingPong and can also be used as a standalone product without the need of having the PingPong base board. It provides additional functionality such as Wi-Fi and Bluetooth just by plugging it onto the PingPong. The extension can be very easily controlled in the development environment.
The Wi-Fi/Bluetooth Board has an own microcontroller for a higher performance output and extension connectors to add one or more extension boards to the Wi-Fi/Bluetooth board.

Key Benefits

- Easy installation on the PingPong base board: Plug'n'Play
- Increased connectivity performance with Wi-Fi and Bluetooth
- Own microcontroller on board for higher performance output and standalone possibility
- On-Board connectors for multiple extension boards
- Internet friendly with integrated TCP/IP and UDP/IP stacks

Product Features

- Temperature Range from -20°C to +70°C
- Operating Voltage in standalone mode: 9-60V DC
- Dimensions: 71 x 49 x 12 mm
- Interfaces:
    - 1x Wi-Fi antenna port U.FL
    - 2x extension board connectors
      These connectors feature:
        - UART
        - SPI
        - CAN
        - I²C
        - Power
- Delivery includes 1x embedded WiFi Antenna (ANT-

Software

- RTOS uses C/C++
- Available as open source software
- Compatible with Microchip code configurator MCC

Wi-Fi

- Microchip RN1723 Module
- Ultra-low power consumption
- Firmware configurable transmit power from 0dBm to +12dBm
- Supporting SoftAP and Infrastructure networking modes
- Real-time clock for time-stamping, auto-sleep, and auto-wakeup modes
- Secure Wi-Fi authentication schemes (WEP/WPA/WPA2)
- Frequency Range: 2.405-2.48GHz
- Input Sensitivity: -83.00dBm
- Tx Power Consumption: 120mA at 0dBm
- Rx Power Consumption: 40mA
- Sleep mode: 4µ
- Encryption: AES128

Bluetooth

- Microchip RN4677 Module
- Bluetooth 4.0 Dual Mode module - classic Bluetooth and Bluetooth Low-Energy Support
- Configurable transmit power from 0dBm to +12dBm
- Bluetooth SIG certified module
- Integrated antenna
- Supports GAP, SDP, SPP, and GATT profiles
- Configuration is made easy through ASCII commands via UART
- +2 dBm Transmit Power
- Receiver Sensitivity -90 dBm (Classic); -92 dBm (LE)

Microcontroller

- Microchip PIC18F25K20
- Program Memory: 32 KB Flash
- CPU Speed: 16 MIPS
- RAM: 1,536 bytes
- Data EEPROM: 256 bytes
- Digital Communication Peripherals: 1-UART, 1-A/E/USART, 1-SPI, 1-I2C1-MSSP(SPI/I2C)
- Capture/Compare/PWM Peripherals: 1 CCP, 1 ECCP
- Timers: 1 x 8-bit, 3 x 16-bit
- ADC: 10 ch, 10-bit
- Comparators: 2

Order Code

- **EXT-PP-WIFI/BT**

Extension Boards

- Wi-Fi/Bluetooth
- I/O & Serial Board
- Iridium Satellite
- ISM/RF
- NFC/RFID
- LoRa
- Sigfox

MICROCHIP Authorized Design Partner

Round Solutions GmbH & Co KG
Hans-Boeckler-Strasse 16,
63263 Neu-Isenburg, Germany

Tel. +49 (0) 6102 799 28 0
Fax +49 (0) 6102 799 28 199
info@roundsolutions.com
www.roundsolutions.com