



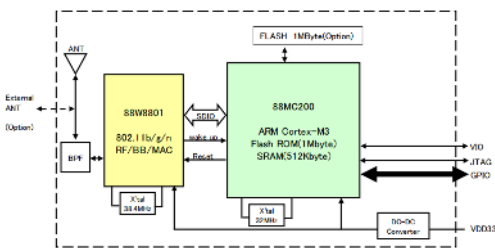
## Features

- Provides tools that enable you to develop smart devices that communicate wirelessly using standard Wi-Fi communications and the LonTalk/IP control networking protocol
- Includes software development tools for the IzoT CPM 4200 Wi-Fi Module
- Enables development of C and C++ applications for the CPM 4200 module using the popular open-source Eclipse integrated development environment (IDE)
- Includes two IzoT CPM 4200 Wi-Fi EVB evaluation boards with a Raspberry Pi compatible I/O connector for rapid prototyping and testing of your wireless devices
- Includes the IzoT Commissioning Tool EVK Edition for easy installation of control networks with any combination of wired and wireless devices
- Includes an IzoT Router 2 with FT and Ethernet interfaces for easy integration of wired and wireless devices
- Includes a sample IzoT CPM 4200 Wi-Fi Module for initial prototyping of your custom hardware
- Includes plug-in for the free open source Wireshark network protocol analyzer that can be used to capture, analyze, characterize, and display network packets so you can pinpoint network or device faults and identify potential solutions

## Build Wireless Devices for the Industrial IoT

The IzoT CPM 4200 Wi-Fi EVK is a hardware and software development kit for developing devices using IEEE 802.11b/g/n Wi-Fi wireless communications that can communicate with wired and wireless devices based on the IzoT Platform. With the IzoT CPM 4200 Wi-Fi EVK, you can use the IzoT Platform to create highly reliable communities of devices for the Industrial Internet of Things using the CPM 4200 Wi-Fi Module, and develop your applications using the C or C++ programming languages.

Your IzoT devices can collect physical data from sensors built to monitor things including temperature, humidity, light-level, power-consumption, air quality, or moisture, and make the data available to other IzoT devices within the community. Using data received from other IzoT devices and locally attached sensors, your IzoT devices can also control physical actuators such as LED dimmers, motor controllers, damper controllers, and solenoids. You can use the Wi-Fi CPM 4200 Wi-Fi EVK for the following:



- Create and edit C/C++ code and the IzoT Markup Language (IML) to implement your device's functionality and network interface
- Compile, build, download and debug your application to one of the included Wi-Fi Evaluation Boards (EVBs) or to your own custom devices based on the CPM 4200 Wi-Fi Module
- Test with prototype I/O hardware with the included EVBs or use your own custom device to build and test your I/O hardware
- Install your device into a LonTalk®/IP or LON network and test how your device interoperates with other LonTalk/IP or LON devices on the same Wi-Fi channel, or on other LonTalk/IP or LON compatible channels such as Ethernet or Free Topology (FT) twisted pair.

A rich set of LONMARK® and IoT standard profiles and data types is included that you can use to reduce application development time.

## Specifications

### Development PC Requirements

#### Operating System

- Microsoft Windows 10 (64-bit and 32-bit), Windows 8.1 (64-bit and 32-bit), Microsoft Windows 8 (64-bit and 32-bit), or Microsoft Windows 7 (64-bit and 32-bit)

#### Minimum Hardware

- Pentium® 366MHz equivalent processor or higher, meeting the minimum requirements for the installed version of Microsoft® Windows
- 2 GB RAM

### Available I/O Peripherals

- 4 32-bit general purpose timers with selectable clock source, programmable clock divider, and pre-scaler
- 2 universal asynchronous receiver transmitters (UARTs) supporting up to 115.2 kbps with auto flow control support and programmable data format
- 2 I2C interfaces supporting up to 2 Mbps
- 1 quad serial peripheral interface (QSPI) supporting up to 200 Mbps synchronous serial communication
- 1 synchronous serial protocol (SSP) interface supporting SSP and SPI devices

- 2 analog to digital converters (ADCs) with selectable decimation rates providing effective resolutions from 10 to 16 bits
- 1 digital to analog converter (DAC) with 10-bit resolution and up to 500 kHz throughput
- 17 general purpose input/outputs (GPIO) that can be configured as general purpose inputs or outputs

### CPM 4200 EVB Specifications

#### Processor

- Marvell 88MC200 32MHz ARM Cortex-M3

#### Memory

- 1Mbyte flash on CPM 4200 module
- 1Mbyte flash on CPM 4200 EVB
- 512Kbyte SRAM

#### Radio

- Marvell 88W8801 Wi-Fi SoC
- IEEE 802.11bgn, channels 1 – 13
- 2.4GHz band
- DSSS and OFDM modulation
- Up to 54Mbps transfer rate
- -82 dBm minimum sensitivity
- STA mode and AP mode, can be used simultaneously
- On-board or external antenna, selectable by application

#### Communications Protocols

- LonTalk/IP, TCP/IP, HTTP, HTTPS, TLS/SSL, DNS, DHCP, WPA, WPS

#### Radio Standards and Certifications

- USA: FCC 15C – FCC ID EW4DWMW077E
- Europe (Modules and EVK/EVB Global Editions only):
  - » EN300 328 – Test Report 10614990S-B
  - » EN301 489-1/-17 – Test Report 10614990S-A
  - » EN60950-1 – Test Report 10614576H
  - » EN62311
- Canada (Modules and EVK/EVB Global Editions only): RSS-Gen Issue 4:2014 – IC 8093A-DWMW077E
- Japan (Modules and EVK/EVB Global Editions only): TELEC T-401 – ID 007-AD0006

#### Operating Input Voltage

- 5VDC

#### External Power Supply

- 5V, 5W wall mount power supply

#### Environmental Specifications

- -40°C to +85°C (operating and non-operating)
- 20% to 85% RH @ 50°C (operating and non-operating)

#### Dimensions

- 76mm x 100mm (3" x 4")

## Ordering Information

**Model 10080R-10-133U:** IzoT CPM 4200 Wi-Fi EVK US Edition

**Model 10080R-10-133:** IzoT CPM 4200 Wi-Fi EVK Global Edition

**Model 28133R-US:** IzoT CPM 4200 Wi-Fi EVB US Edition

**Model 28133R:** IzoT CPM 4200 Wi-Fi EVB Global Edition

**Model 56550R:** IzoT CPM 4200 Wi-Fi Module