CyberPower

Important FCC notice:

In accordance with FCC Part 15C and RSP-100, this module is listed as a Modular Transmitter device.

The user must comply with all of the instructions provided by the Grantee, which indicate the installation and/or operating conditions necessary for compliance.

The antenna of this transmitter must not be co-located or operating in conjunction with any other antenna or transmitters within a host device, except in accordance with FCC multitransmitter product approval procedures. Only external antenna (Max. gain of dipole antenna is 2.74dBi) as AN2400-39A14BBF can be used for this module, and the printed antenna is not used.
The module has allowed to use. In USA and Canada, the number of operation frequency channel is 11.

Technical Specification	**Value**
Operating Frequencies	802.11b/g/n HT20 : 2412 MHz ~ 2462 MHz
Channel Spacing	802.11b/g/n HT20 : 5MHz
Channel number	802.11b/g/n HT20 : 11
Operation Voltage	12Vdc
Modulation	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Antenna gain	2.16dBi

The final Host is required to comply with all applicable FCC equipment authorization regulations, requirements and other device functions that are not associated with the transmitter module. For example, compliance must be ensured:

- regulations for other transmitter portions within a host product;
- requirements for unintentional radiators (Part 15 Subpart B), such as digital devices, computer peripherals, radio receivers, etc.;
- additional authorization requirements for the non-transmitter functions on the transmitter module (i.e., SDoC or certification) as appropriate (e.g., Digital radio transmitter modules usually contain digital logic functions for the Data interface to the Host product)
- need to follow the instructions shown in the FCC publication "KDB 996369 D04 Module Integration Guide" which can be found under the following link: xxxxxxxxxxx

Changes or modifications not expressly approved by the host device or module manufacturer could void the user's authority to operate the equipment.

FCC Label Instructions
The outside of final products that contains this module device must display a label referring to the enclosed module. This exterior label can use wording such as the following**: "Contains Transmitter Module FCC ID: 2AFG8CPWMU01"** or "**Contains FCC ID: 2AFG8CPWMU01**." Any similar wording that expresses the same meaning may be used.
Additionally, there must be the following sentence on the device, unless it is too small to carry it:

“This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.”

If the final product is to be sold in Canada, then this exterior label should use wording such as the following: “Contains Transmitter Module IC: **11470A-CPWMU01**”

USER MANUAL

The following statements should be inside the user manual of the final products that contains this module:

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Canada:

L’émetteur exempt de licence contenu dans le présent appareil est conforme aux CNR d’Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes :
1) L’appareil ne doit pas produire de brouillage;
2) L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions:
1) this device may not cause interference,
2) this device must accept any interference, including interference that may cause undesired operation of the device.

The antenna of this transmitter must not be co-located or operating in conjunction with any other antenna or transmitters within a host device, except in accordance with FCC multitransmitter product approval procedures. Only external antenna (Max. gain of dipole antenna is 2.74dBi) as AN2400-39A14BBF can be used for this module, and the printed antenna is not used.

1. Characteristic Option

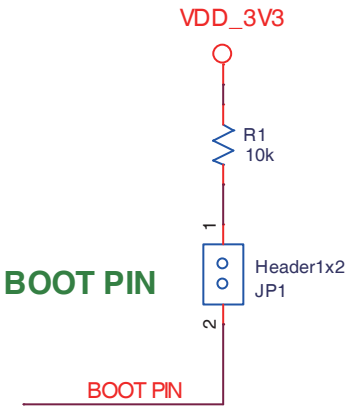
1.1 Boot mode

At startup, boot pins are used to select one out of three boot options:

- Boot from user Flash
- Boot from system memory
- Boot from embedded SRAM

The boot loader is located in system memory. It is used to reprogram the Flash memory by using USART1(PA9/10), USART2(PD5/6), USB OTG FS in device mode (PA11/12) through DFU (device firmware upgrade), I2C1(PB6/7), I2C2(PB10/3), I2C3(PA8/PB4), SPI1(PA4/5/6/7), SPI2(PB12/13/14/15) or SPI3(PA15, PC10/11/12).

BOOT0	Low	Boot from user Flash
	High	Boot from system memory / embedded SRAM



WM-N-BM-30 set the BOOT0 to GND, the Boot mode is Main Flash memory. When BOOT0 set to High, the BOOT mode is system memory.

1.2 Low Power mode

By default, the microcontroller is in Run mode after a system or a power-on reset. In Run mode the CPU is clocked by HCLK and the program code is executed. Several low-power modes are available to save power when the CPU does not need to be kept running, for example when waiting for an external event. It is up to the user to select the mode that gives the best compromise between low-power consumption, short startup time and available wakeup sources.

The devices feature three low-power modes:

- Sleep mode (Cortex™-M3 core stopped, peripherals kept running)
- Stop mode (all clocks are stopped)
- Standby mode (1.2 V domain powered off)

1.3 MOS for WIFI_3V3 Power ON/OFF

External MOS for VDD_WIFI_3V3 power switch , can use one GPIO pin to control power ON/OFF