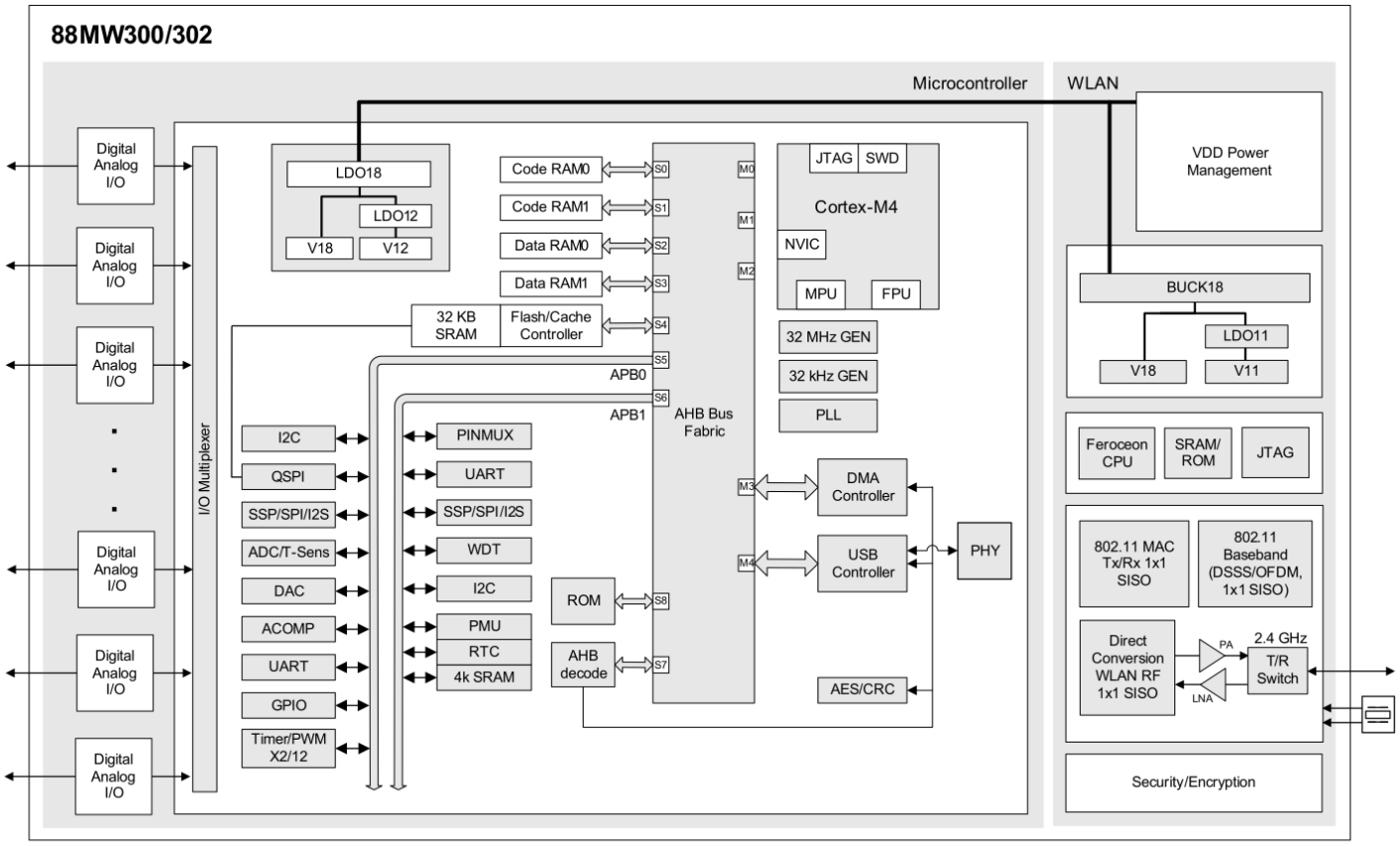
GC-MW300-02-MOEN

WLAN Microcontroller
IEEE 802.11 b/g/n

Datasheet

February 26, 2016

Figure 1 Block Diagram



Applications

- White goods/appliances—refrigerator, washer, dryer, oven range, microwave, dishwasher, water heater, air conditioner
- Consumer devices and accessories—toys, speakers, headset, alarm clock, gaming accessory, remote control
- Home automation—smart outlet, light switch, security camera, thermostat, sprinkler controller, sensor, door lock, door bell, garage door, security system
- Personal health devices—weighing scale, glucometer, blood pressure monitor, fitness equipment
- IoT/wearables—coffee pot, rice cooker, vacuum cleaner, air purifier, smart watch, fitness bracelet, pet monitor
- Commercial/industrial—lighting, building automation, asset management, Point of Sale (POS) sales
- Gateways—Connecting IR, sub-Gig or Legacy RF, Bluetooth Smart, ZigBee, ZWave and other radios to Wi-Fi/IP network

Microprocessor

Processor

- ARM Cortex-M4F, 32-bit
- 200 MHz main bus clock

Memory

- 128 KB ROM
- 512 KB RAM

Flash Controller

- Supports QSPI Flash devices
- Memory-mapped access to QSPI Flash devices
- 32 KB SRAM cache

Digital Interfaces

- 3x I2S stereo (share BCK, DIN pins with PDM)
- 3x SPI master/slave
- 2x I2C master/slave
- 3x UART
- 1x USB OTG 2.0, high-speed
- 1x QSPI
- Up to 50 GPIOs
- 2x wake-up pins

Analog

- 2-step ADC with integrated PGA and configurable resolution/speed
  - 12-bit/2 MHz sample(s) for fast conversion
  - 16-bit/16 kHz sample/s with voice quality
  - 8 single channels or 4 differential channels
- 2-Channel or 1 differential channel DAC, 10-bit/500 ksps
- 2 Analog Comparators with programmable speed/current
- On-die/off-chip temperature sensing and battery monitor

Counters/Timers/PWM

- General Purpose Timers (GPT) with LED PWM support
- Real Time Clock (RTC)
- CM4 system tick
- Watchdog Timer

6. Module size and dimension

MW302 modules physical size (Unit: mm) as follows:

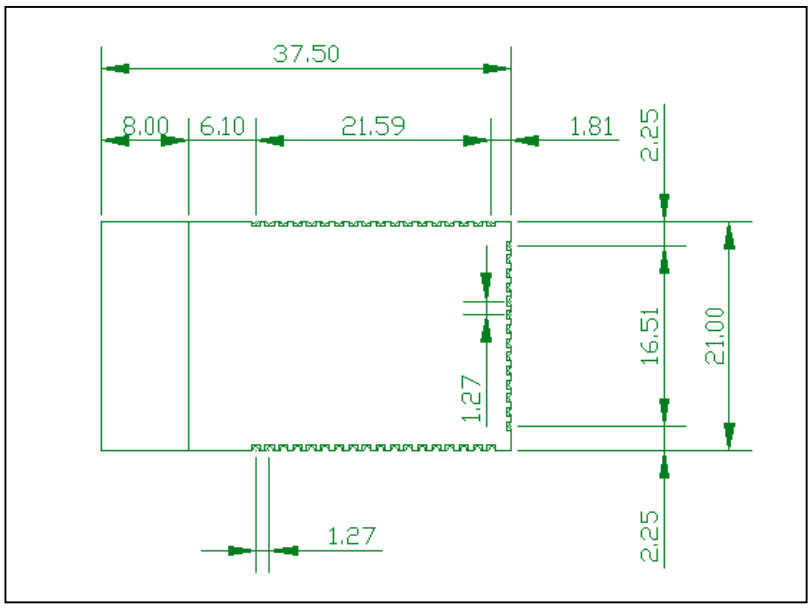


Figure 3 mw302 modules mechanical dimension (Unit: mm)

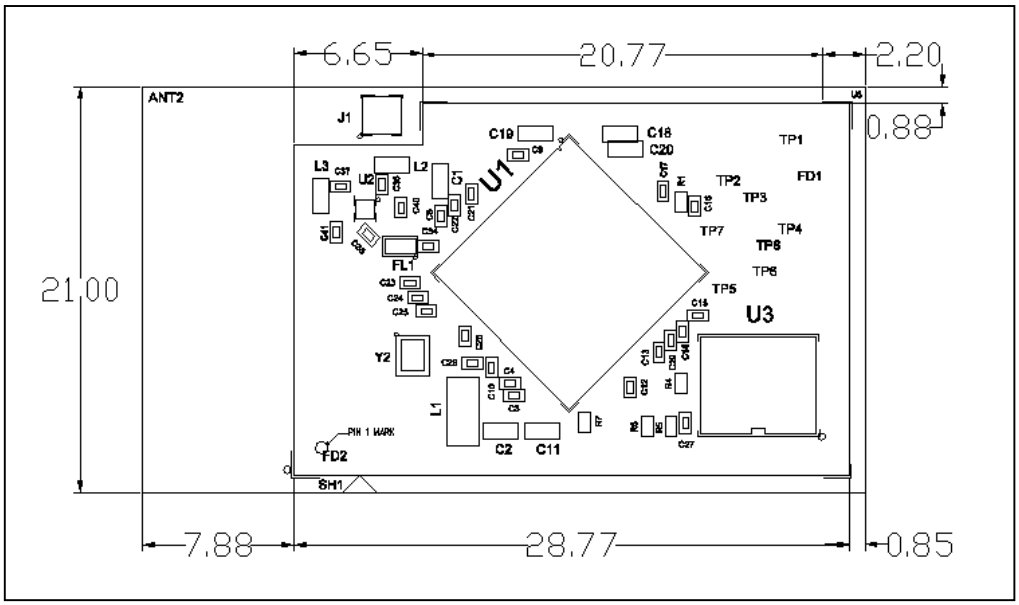


Figure 4 mw302 modules mechanical dimension (Unit: mm)

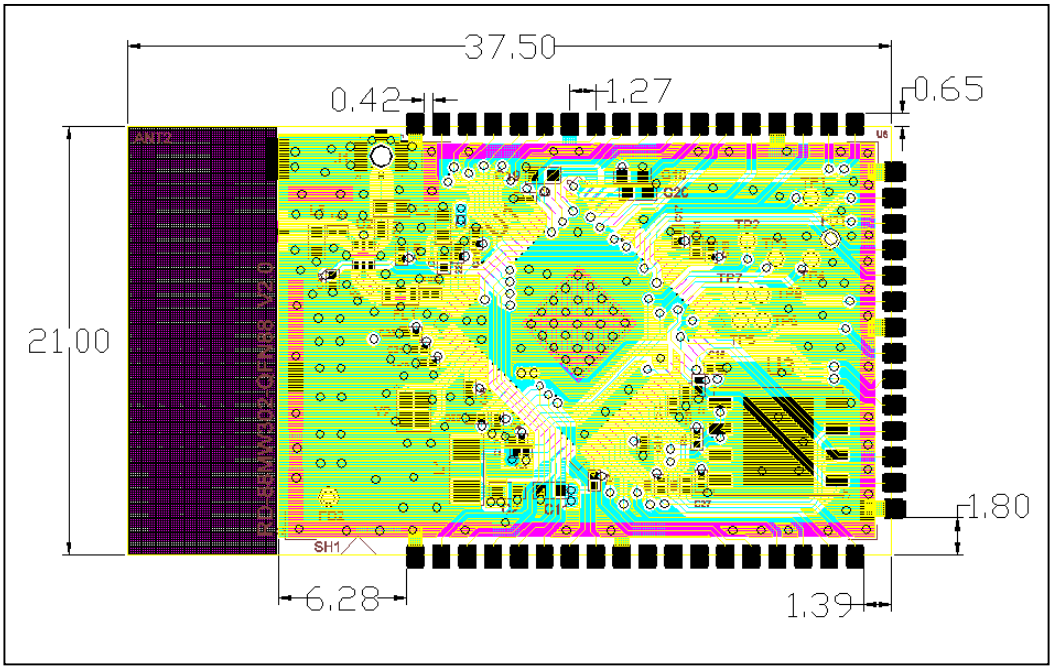
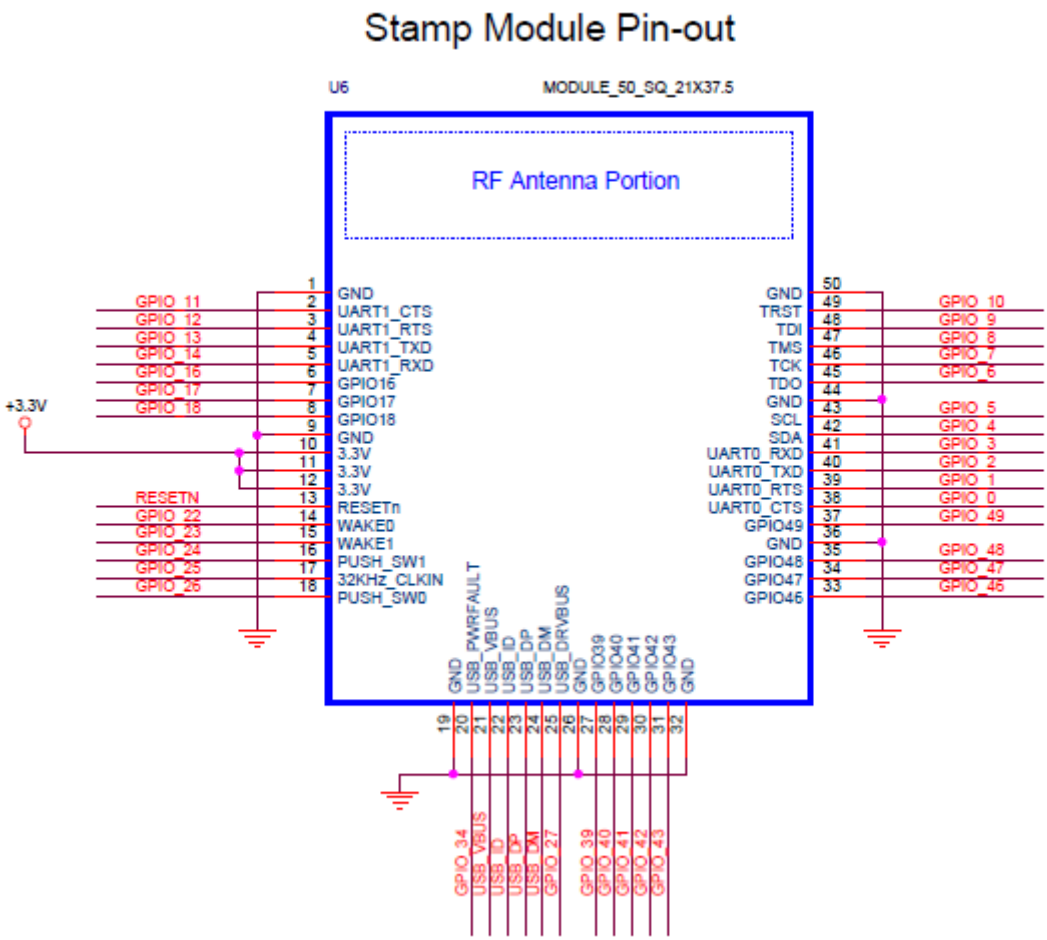


Figure 5 mw302 modules mechanical dimension (Unit: mm)



FCC Caution: Any changes or modifications not expressly
approved by the party responsible for compliance could void the user's
authority to operate this equipment.
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.
This device and its antenna(s) must not be co-located or operating in conjunction
with any other antenna or transmitter.
15.105 Information to the user.
(b) For a Class B digital device or peripheral, the instructions furnished the
user shall include the following or similar statement, placed in a prominent
location in the text of the manual:
Note: This equipment has been tested and found to comply
with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful
interference in a residential installation. This equipment generates, uses and
can radiate radio frequency energy and, if not installed and used in
accordance with the instructions, may cause harmful interference to radio
communications. However, there is no guarantee that interference will not
occur in a particular installation. If this equipment does cause harmful
interference to radio or television reception, which can be determined by
turning the equipment off and on, the user is encouraged to try to correct the
interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which
the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This eq
uipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
The module should not be installed and operated simultaneously with other radios except additional RF
exposure was evaluated for simultaneously transmission.
The availability of some specific channels and/or operational frequency bands are country dependent and are
firmware programmed at the factory to match the intended destination.
The firmware setting is not accessible by the end user.
The final end product must be labelled in a visible area with the following:
“Contains Transmitter Module **2AFC3-MW300**”

IC Caution:

This device complies with Industry Canada licence-exempt RSS standard(s).
Operation is subject to the following two conditions: (1) This device may not cause in terference, and (2) This device must accept any interference, including interference th at may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux apparei ls radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage
radioélectrique subi, même si le
brouillage est susceptible d'en compromettre le fonctionnement.