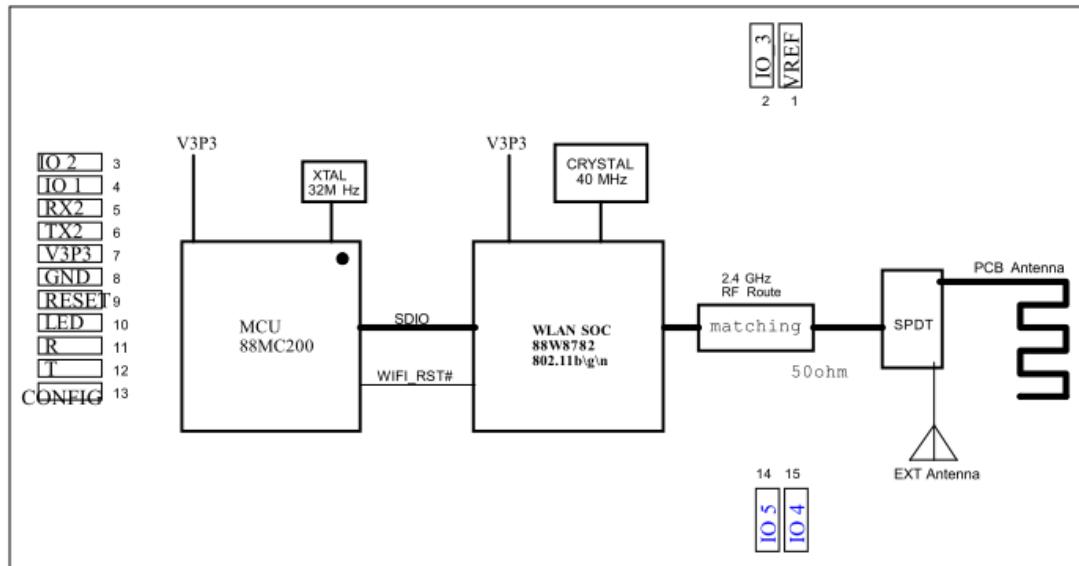


The device is designed to support IEEE802.11b/g/n payload data rates. The device provides the combined functions of Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM) baseband modulation, Medium Access Controller (MAC), CPU, memory, host interfaces, and direct conversion WLAN RF radio on a single module.

On the transmit path, data from the host system is queued in memory by the local CPU. The MAC retrieves data for transmission at the appropriate time.

System Block



IEEE 802.11/Standards

- 802.11 data rates of 1 and 2 Mbps
- 802.11b data rates of 5.5 and 11 Mbps
- 802.11g data rates 6, 9, 12, 18, 24, 36, 48, and 54 Mbps for multimedia content transmission
- 802.11g/b performance enhancements
- 802.11n compliant, with maximum data rates up to 72 Mbps (20 MHz channel) and 150 Mbps (40 MHz channel)
- Wi-Fi Direct connectivity

Frequency Channel Support

Channel	Frequency (GHz)	North America	Europe	Spain	France	Japan MKK
1	2.412	X	X	--	--	X
2	2.417	X	X	--	--	X
3	2.422	X	X	--	--	X
4	2.427	X	X	--	--	X
5	2.432	X	X	--	--	X
6	2.437	X	X	--	--	X
7	2.442	X	X	--	--	X
8	2.447	X	X	--	--	X
9	2.452	X	X	--	--	X
10	2.457	X	X	X	X	X
11	2.462	X	X	X	X	X
12	2.467	--	X	--	X	X
13	2.472	--	X	--	X	X
14	2.484	--	--	--	--	--

Wlan

The device is a fully self-contained small form-factor, single stream, 802.11 b/g/n wifi module, which provide a wireless interface to any equipment with a Serial/GPIO/I2C/ADC interface for data transfer. It integrate MAC, baseband processor, RF transceiver with power amplifier in hardware and all wifi protocol and configuration functionality and networking stack, in embedded firmware to make a fully self-contained 802.11 b/g/n wifi solution for a variety of applications. It support AP and STA wireless networking and support WIFI Direct mode. It can set output power, wifi channel automatically.

The device also can be controlled by Labtool which is a PC software provided by Marvell, and the commands as follow:

11. Get RF Channel

(2.4GHz Channels: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14(JP))

Ex. "11" "11" returns the channel in use.

12. Set RF Channel (decimal)

To place the device on a specific channel, perform the listed command below in Labtool.

Ex. "12 7" The "7" specifies the desired channel for testing.

22. Set Tx Output Power

Command 22 in the labtool can be used to specify output power as well as identifying whether 11B or 11G rate is being used for the test.

Ex. "22 6 15 1" This command will set the output power to "15dBm" on channel "6" and perform an 11G rate transmit. Note that the last parameter is used to specify 11B(with a "0") or 11G(with a "1").

25. Set DutyCycleTx Mode

enabledataRate ((payloadweight =50)(pattern=0)(shortPreamble=0))

pattern: specify the byte length pattern.or -1 as PN9

Placing the device in burst mode can be performed with command “25” after the power is manually set.

Ex. “25 1 4” The first parameter (“1”) enables the command and the (“4”) specifies the data rate, which in this case is 11M.

Ex. “25 0” Using a “0” disables the command and should be performed before executing another command.

Where <Data Rate> is:

Data Rate Code	Data Rate	Data Rate Code	Data Rate
1	1 Mbps	20	MCS 5
2	2 Mbps	21	MCS 6
3	5.5 Mbps	22	MCS 7
4	11 Mbps	23	MCS 8
5	Reserved	24	MCS 9
6	6 Mbps	25	MCS 10
7	9 Mbps	26	MCS 11
8	12 Mbps	27	MCS 12
9	18 Mbps	28	MCS 13
10	24 Mbps	29	MCS 14
11	36 Mbps	30	MCS 15
12	48 Mbps	31	MCS 16
13	54 Mbps	32	MCS 17
14	Reserved	33	MCS 18
15	MCS 0	34	MCS 19
16	MCS 1	35	MCS 20
17	MCS 2	36	MCS 21
18	MCS 3	37	MCS 22
19	MCS 4	38	MCS 23