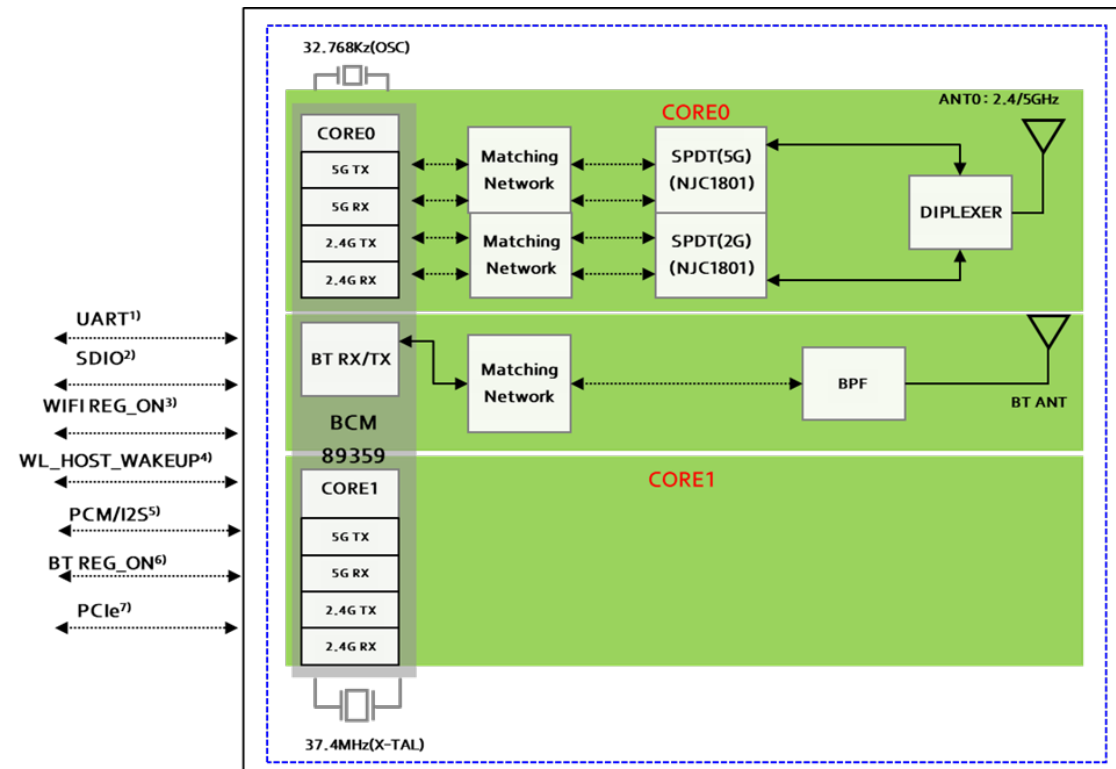


BWR-Y89359 manual

1. BWR-Y89359 Information

- #. BWR-Y89359SMA is a WiFi/Bluetooth Combo Module
- #. Module type : 48 pin SMD type
- #. RoHS compliant
- #. This module has deployed part which are AEC-Q100 qualified

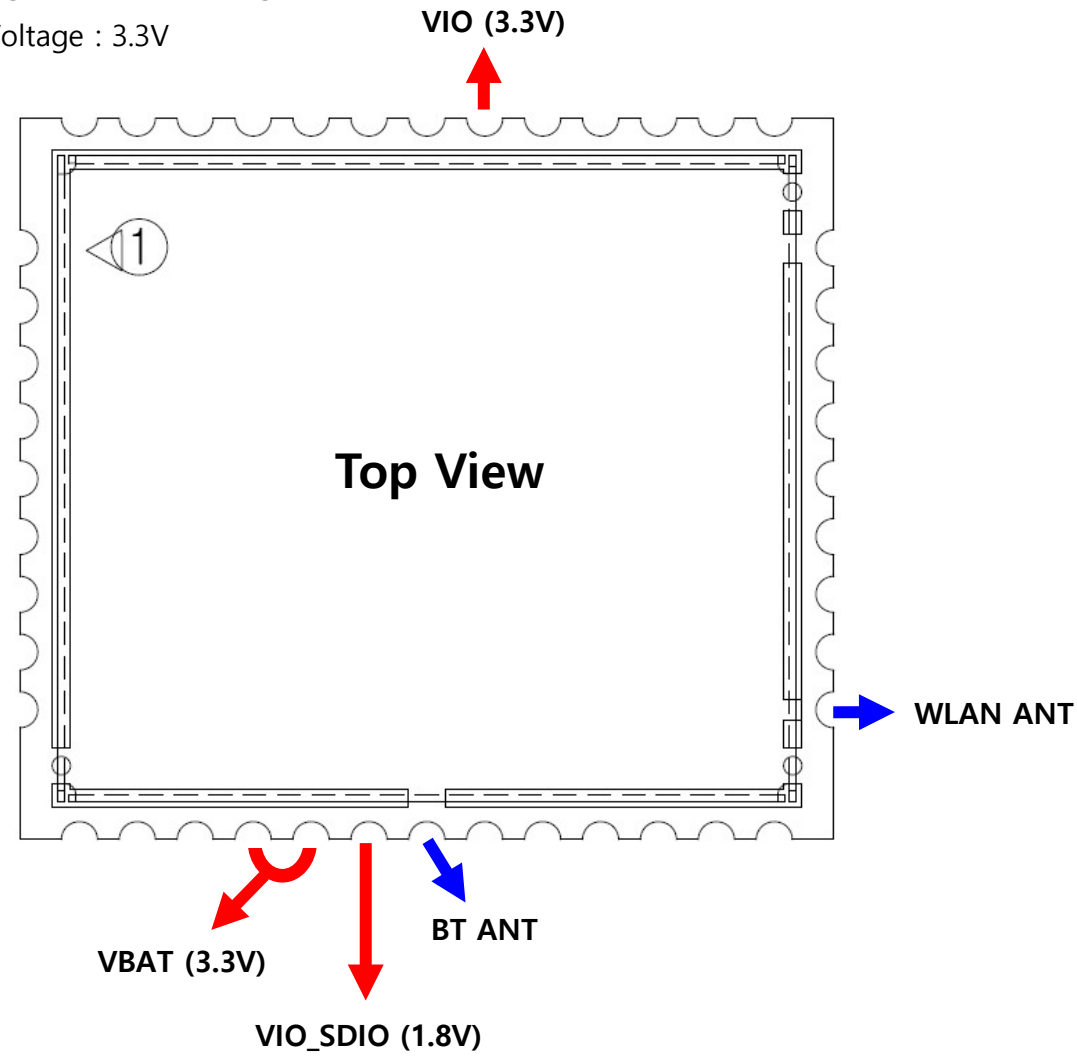
2. Configuration



- 1) Host Interface for Bluetooth: 4 Pins (BT_UART_TXD, BT_UART_RXD, BT_UART_CTS, BT_UART_RTS)
- 2) Audio Interface for Bluetooth: 4 Pins (BT_PCM_CLK, BT_PCM_SYNC, BT_PCM_IN, BT_PCM_OUT)
- 3) Host Interface for Wi-Fi: 6Pins (SDIO_CMD, SDIO_CLK, SDIO_DATA0, SDIO_DATA1, SDIO_DATA2, SDIO_DATA3)
- 4) Bluetooth/Wi-Fi On/Off and Reset: 2Pins (BT_REG_ON for Bluetooth, WIFI_REG_ON for Wi-Fi)
- 5) Controlled by Module to wake-up Host. (Optional)
- 6) External LPO 32.768KHz Clock. (Optional)
- 7) Host Interface for WIFI : PCIe or SDIO

3. Specification

- 1) Operating temperature Range : -40 ~ +85°C
- 2) Power Voltage : 3.3V



1	PCIE_CLK_P	17	WL_REG_ON	33	BT_UART_RTS_N
2	PCIE_CLK_N	18	BT_REG_ON	34	BT_UART_CTS_N
3	PCIE_TD_N	19	BT_PCM_CLK	35	BT_UART_RXD
4	PCIE_TD_P	20	BT_PCM_SYNC	36	BT_UART_TXD
5	SDIO_CLK	21	BT_PCM_IN	37	VIO
6	SDIO_CMD	22	BT_PCM_OUT	38	SDIO_DIS
7	SDIO_DATA3	23	WL_ANT_CORE0	39	PCIE_EN
8	SDIO_DATA2	24	GND	40	PCIE_PME_L
9	SDIO_DATA1	25	LPO	41	PCIE_PERST_N
10	SDIO_DATA0	26	GND	42	PCIE_CLKREQ
11	SECI_IN	27	VER_VOLTAGE	43	PCIE_RD_P
12	SECI_OUT	28	WL_HOST_WAKE_UP	44	PCIE_RD_N
13	VBAT	29	GND	45	GND
14	VBAT	30	GND	46	GND
15	VIO_SDIO	31	WL_ANT_CORE1	47	GND
16	BT_ANT	32	SDIO_PAD	48	GND

4. Module Integration Guide

1) Applicable FCC Rule

CFR 47 Part 15.247, 15.407

2) Operational Condition

The module is limited to OEM installation ONLY. The OEM integrator is responsible for ensuring that the end-user has no manual instruction to remove or install module.

3) Limited Module Procedure

BWR-B89359SMA is limited Module. The module doesn't have its own power supply regulation.

Therefore, the host product manufacturer must design the host product so that a constant voltage of 3.3V is applied to the module.

4) Trace antenna designs : N/A

4. Module Integration Guide

5) RF Exposure consideration (CFR 47 Part 1, 1.1307(b), 1.1310)

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

6) Antenna

This modular has PCB pattern antenna. Any changes of antenna designs might require additional assessment.
The Host antenna type shall be same type and antenna gain shall be less or equal to below information

Antenna Gain		
	Frequency (MHz)	Antenna Gain (dBi)
Bluetooth	2 400 ~ 2 483.5	3.36
WLAN (2.4G)	2 400 ~ 2 483.5	1.22
WLAN (5G)	5 150 ~ 5 250	3.49
	5 250 ~ 5 350	3.98
	5 470 ~ 5 725	4.83
	5 725 ~ 5 850	2.30

4. Module Integration Guide

7) Label and compliance information

The end user manual shall include all required regulatory information/warnings shown in this manual.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains FCC ID : 2ADQJ-Y89359" any similar wording that expresses the same meaning may be used.

8) Information on test modes and additional testing requirements

This modular was tested in standalone configuration. Integration of this modular into a host equipment would require additional testing.

9) Additional testing, Part 15 Subpart B disclaimer

The grantee should include a statement that the modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. If the grantee markets their product as being Part 15 Subpart B compliant (when it also contains unintentional-radiator digital circuitry), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

4. Module Integration Guide

10) ISED Statement

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.

Le présent appareil est conforme aux CNR d'Industrie 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, et (2) L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Please notice that if the IC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains IC : 28512-Y89359" any similar wording that expresses the same meaning may be used.

L'étiquette d'homologation d'un module d'Innovation, Sciences et Développement économique Canada devra être posée sur le produit hôte à un endroit bien en vue, en tout temps. En l'absence d'étiquette, le produit hôte doit porter une étiquette sur laquelle figure le numéro d'homologation du module d'Innovation, Sciences et Développement économique Canada, précédé du mot « contient », ou d'une formulation similaire allant dans le même sens et qui va comme suit : Contient IC : 28512-Y89359 est le numéro d'homologation du module.

4. Module Integration Guide

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 cm (7.8 inches) between the antenna and your body.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC définies pour un environnement non contrôlé.

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm (7,8 pouces) entre l'antenne et votre corps.

REMARQUE: LE FABRICANT NE PEUT ÊTRE TENU RESPONSABLE DES INTERFÉRENCES RADIO OU TÉLÉVISÉES CAUSÉES PAR DES MODIFICATIONS NON AUTORISÉES DE CET APPAREIL. CES MODIFICATIONS PEUVENT ANNULER L'AUTORITE DE L'UTILISATEUR A FAIRE FONCTIONNER L'APPAREIL.