

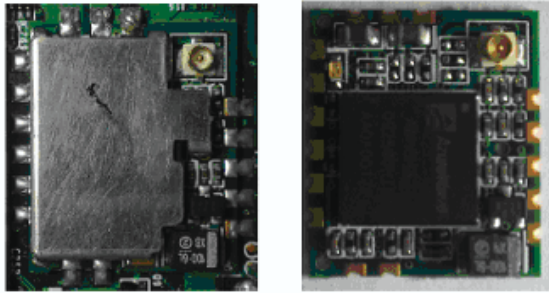
SDM-11BG WLAN Module

User Manual

(English Version)

SDM-11BG WLAN Module

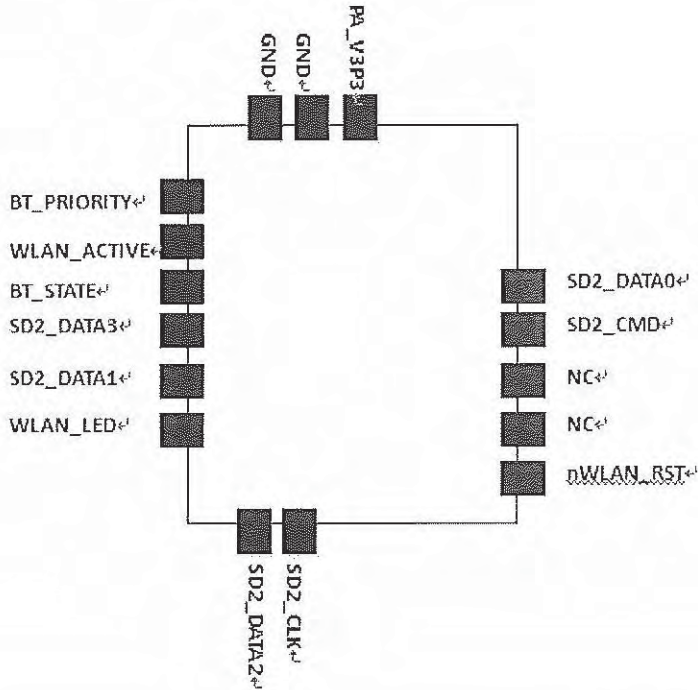
Product Specification

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| <p>Features:</p> <ul style="list-style-type: none">- Core IC: AW-GH321- IEEE 802.11b/g compliant- designed for mobile devices- supports WPA/WPA2/WEP 64-bit & 128-bit encryption- w/o Antenna- Dimension: 20.3 x 17.0 x 3.0 mm- SDIO interface | <p>Model #: SDM-11BG WLAN Module <u>IEEE802.11b/g compliant</u></p>  |
|---|--|

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Pin Definition



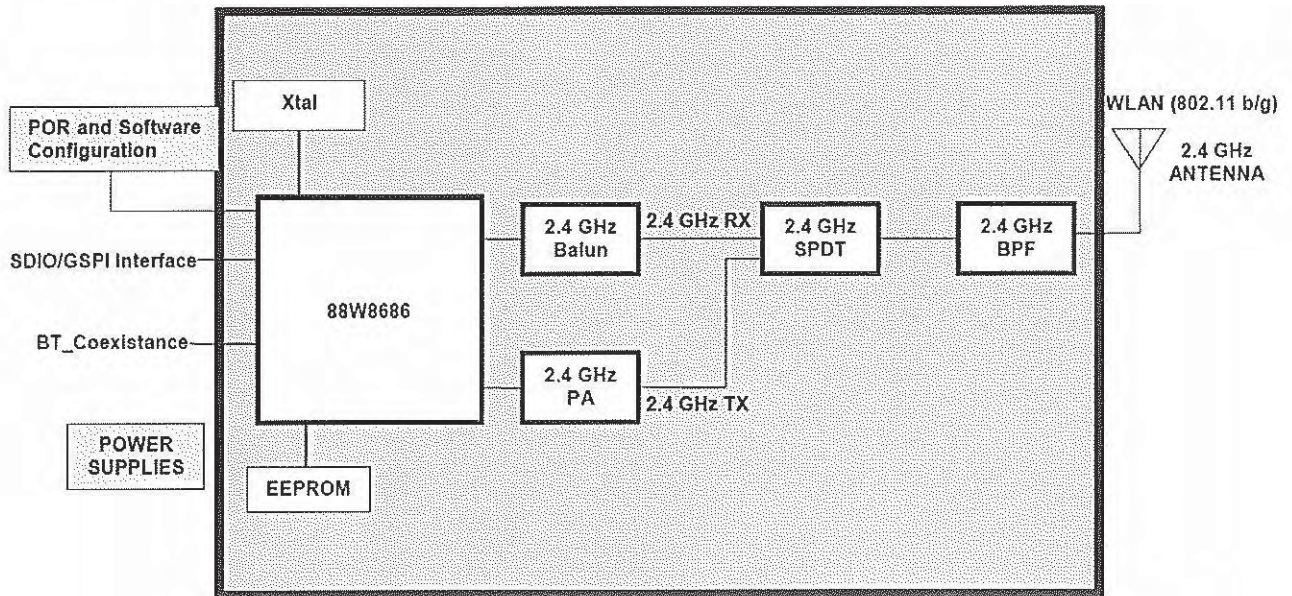
| Pin No. | Pin Name | I/O | Description |
|---------|-------------|--------------|----------------------------|
| 1 | nWLAN_RST | Input | Input Reset Signal to WLAN |
| 2 | NC | --- | Not Connected |
| 3 | NC | --- | Not Connected |
| 4 | SD2_CMD | Input | SDIO Command Line |
| 5 | SD2_DATA0 | Input/output | SDIO data line |
| 6 | PA_V3P3 | --- | 3.3V Power Input |
| 7 | GND | --- | System Ground |
| 8 | GND | --- | System Ground |
| 9 | BT_PRIORITY | Input | BT Status input to WLAN |
| 10 | WLAN_ACTIVE | Output | WLAN Status output to BT |
| 11 | BT_STATE | Input/output | Program Input/output line |
| 12 | SD2_DATA3 | Input/output | SDIO data line |
| 13 | SD2_DATA1 | Input/output | SDIO data line |
| 14 | WLAN_LED | Output | WLAN Status |
| 15 | SD2_DATA2 | Input/output | SDIO data line |
| 16 | SD2_CLK | Input | SDIO clock input |

Specifications Table

| | |
|-------------------------------|--|
| Model Name | AW-GH321 |
| Product Description | Wireless LAN Module IC |
| WLAN Standard | IEEE 802.11b/g, Wi-Fi compliant |
| Host Interface | SDIO |
| Voltage | 3.3V+/- 10% |
| Temperature | Operating: -20 ~ 85°C ; Storage: -40 ~ 125°C |
| Humidity | 15% ~ 95% |
| Dimension | 9.6mm x 9.6mm x 1.3mm |
| Package | LGA |
| Weight | Less than 10 grams |
| Frequency Range | 2.4 GHz ISM radio band |
| Number of Channels | 802.11b: USA, Canada and Taiwan – 11 Most European Countries – 13 France – 4, Japan – 14 802.11g: USA and Canada – 11 Most European Countries – 13 |
| Modulation | DSSS, OFDM, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM |
| Output Power | 802.11b: typical 15dBm +/- 1.5dBm 802.11g: typical 12dBm +/- 1.5dBm |
| Antenna | One RF port on pad |
| Receive Sensitivity | 802.11b: typical -85dBm at 11Mbps 802.11g: typical -70dBm at 54Mbps |
| Data Rates | 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps |
| Medium Access Protocol | CSMA/CA with ACK |
| Power Consumption | TX g mode 54MHz: 288.48mA(CW mode) b mode 11MHz: 296.02mA(CW mode) RX g mode:173.75 mA b mode:207.15 mA Deep Sleep Mode: 0.422mA |
| Operating Range | Open Space: ~300m ; Indoor: ~100m (The transmission speed may vary according to the environment) |

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|---------------------------------------|--|
| Security | <ul style="list-style-type: none"> □ WEP 64-bit and 128-bit encryption with H/W TKIP processing □ WPA/WPA2 (Wi-Fi Protected Access) □ AES-CCMP hardware implementation as part of 802.11i security standard |
| Operating System Compatibility | Win CE 4.2/.NET, Win CE 5.0, Linux, Pocket PC 2004/2005 |
| Co-Existence | Bluetooth and cell phone(GSM/DCS/WCDMA/UMTS/3G) co-existence |

Block Diagram



Description

SDM-11BG WLAN module is designed with AW-GH321 wireless LAN module IC which compliant with IEEE802.11 b/g standard. It also supports WPA/WPA2/ WEP 64-bit & 128-bit encryption and external antenna must be applied to th module via J1 connector. It communicates with host device by SDIO Interface and external 3.3V dc power must be supplied to the module.

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

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.

CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

RF exposure warning .

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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.