# MY81SPK02M2

## Bluetooth 3.0+EDR Stereo Audio module

# 1. General Description

The MY81SPK02M2 Bluetooth module is designed using the ISSC IS1681S chip. The module is highly integrated, compact size, low power and high data rate. It requires very few external components to achieve high quality stereo audio streaming with remote control commands.

The MY81SPK02M2 provides remote control keys, operation status indication pins, stereo audio output, AUX input interface and NFC detection interface.

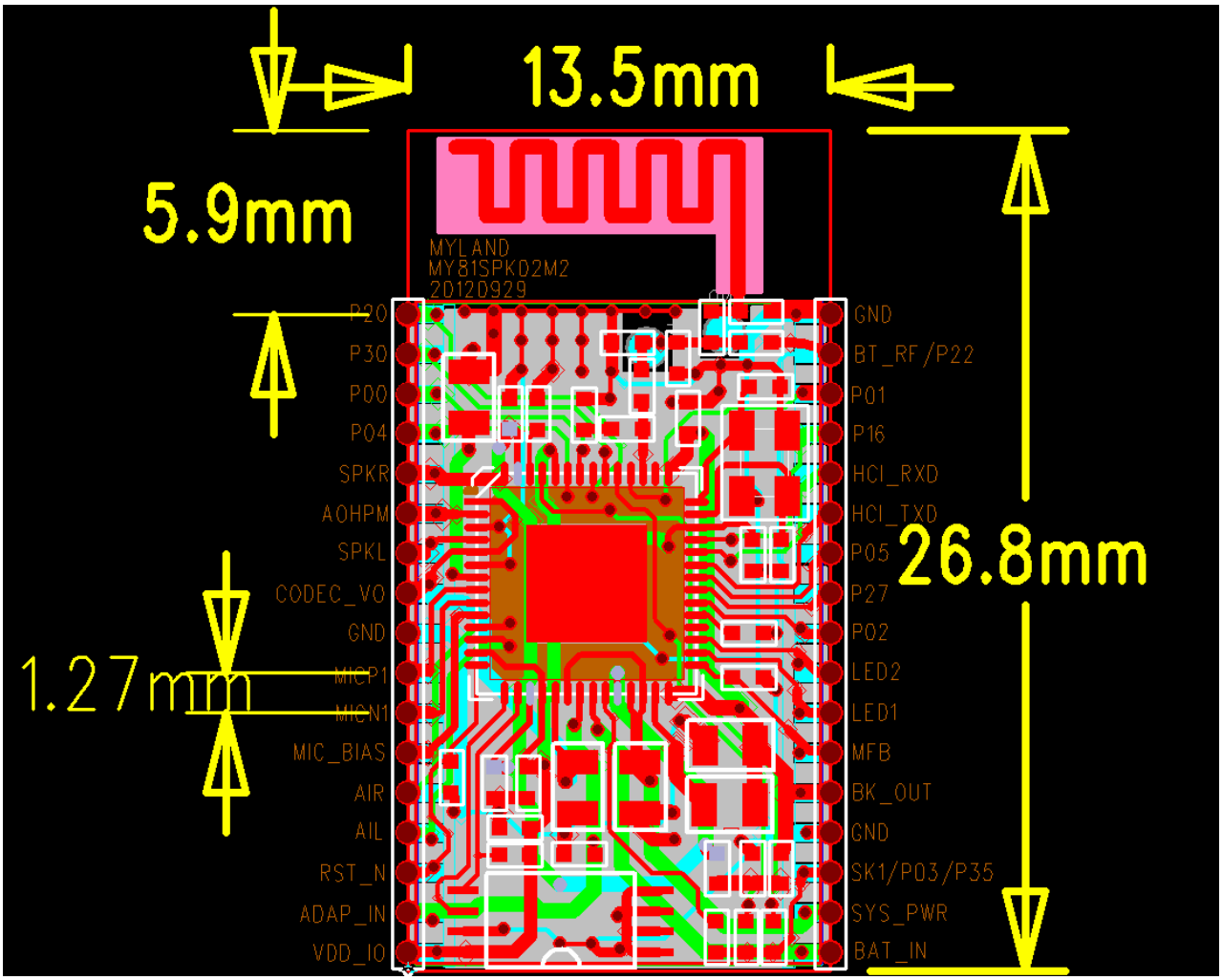
# 2. Features

1. Bluetooth 3.0+EDR compliant
2. Typical +2dBm Class 2 output power
3. Audio DAC: 94dB SNR
4. Build in Max. 250mAH Li-ion battery charging circuit
5. HSP, HFP, A2DP, AVRCP profile support
6. SBC decode for Bluetooth audio streaming
7. Voice prompt
8. Build in Line in interface
9. Build in MIC circuit
10. AGC/AVC， AEC
11. NFC support
12. EQ control
13. Size: 13.5mm x 26.8mm

# 3. Application

- High quality stereo headset
- High quality stereo speaker and HiFi
- High quality wireless stereo audio receiver

# 4. Outline Dimension & Pin Definition



| Pin No. | I/O | Name | Description |
|---|---|---|---|
| 1 | I/O | P20 | GPIO, default pull-high input<br>System Configuration, H: Application L: Baseband(IBDK Mode) |
| 2 | P | P30 | GPIO, default pull-high input<br>Line-in detection, 1: no line-in detected; 0: line-in detected |
| 3 | I/O | P00 | GPIO, default pull-low input. Slide Switch Detector |
| 4 | I/O | P04 | GPIO, default pull-high input<br>Audio AMP Enable or NFC detect |
| 5 | AO | SPKR | R-channel analog headphone output, single-ended application only |
| 6 | AO | AOHPM | Headphone common mode output/sense input |
| 7 | AO | SPKL | L-channel analog headphone output, single-ended application only |
| 8 | AP | VDDA | Reserve for external cap to fine tune audio frequency response |
| 9 | AP | AGND | Audio ground |
| 10 | AI | MIC1_P | Mic 1 mono differential analog positive input |
| 11 | AI | MIC1_N | Mic 1 mono differential analog negative input |
| 12 | AP | MIC_BIAS | Microphone biasing voltage |
| 13 | AI | AIR | Stereo analog line in, R-channel |
| 14 | AI | AIL | Stereo analog line in, L-channel |
| 15 | I/O | RST_N | System Reset Pin |
| 16 | P | ADAP_IN | Power adaptor input |
| 17 | P | VDDIO | VDDIO pin, for calibration only<br>Do not add external power to this pin |
| 18 | P | BAT_IN | Battery input |
| 19 | P | SYS_PW | System Power Output |
| 20 | I/O | SK1/P03 | Default SAR input for battery detection<br>This pin can be re-defined as GPIO P03 |
| 21 | P | GND | Digital ground |
| 22 | P | BK_OUT | Buck feedback sense pin |
| 23 | P | MFB | Multi-Function Push Button key<br>Combined Play/Pause key when A2DP enabled. |
| 24 | P | LED1 | LED Driver 1 |
| 25 | P | LED2 | LED Driver 2 |
| 26 | I/O | P02 | GPIO, default pull-high input<br>PLAY/PAUSE button |
| 27 | I/O | P27 | GPIO, default pull-high input，Forward button |

| | | | |
|---|---|---|---|
| 28 | I/O | P05 | GPIO, default pull-high input，REW button |
| 29 | O | HCI_TXD | HCI TX data |
| 30 | I | HXI_RXD | HCI RX data |
| 31 | I/O | P16 | GPIO, default pull-high input<br>Volume down button |
| 32 | I/O | P01 | GPIO, default pull-high input<br>Volume up button |
| 33 | AIO | BT_RF/P22 | NC for on board PCB antenna/ Audio AMP Enable Antenna matching if an external antenna is used |
| 34 | P | GND | Digital ground |
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# 5. BQB Approval


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|---|---|
| Qualified Design ID (QD ID) | B020022 \| Export PICS |
| PRD 1.0 ID (QP ID) | |
| Design Name | Bluetooth speaker module (MY8XSPK02M2) |
| Wi-Fi® Certification ID | |
| Subsetted Designs | Date Created: Sep 23, 2012 / Type: Main / PICS: PICS |
| Member Company | Myland Ltd |
| Specification Name | 3.0 |
| Core Spec Addenda | N/A |
| Design Model Number | MY8XSPK02M2, where X means 1~9 |
| Hardware Version Number | SPKV002 |
| Software Version Number | SPKV002 |
| Qualification Assessment Date | September/28/2012 |
| Listing Date | September/28/2012 |
| Design Description | Bluetooth Speaker Module with A2DP, AVRCP, HFP, HSP, GAVDP, PBAP profiles |
| Product Type | End Product |

Revision History

| Version | Date | Description |
|---|---|---|
| V0.1 | 2012-9-10 | First draft |
| V0.2 | 2012-10-10 | QDID added |

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