

User Manual

Model Name: SWZ1 (Sigma Design SD3402) (ZWave Embedded Module)

Revision: 1.0

Issue Date: 2010/05/14



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Revision History

Edition #		Reason for revision	Issue date	Author
1.0	●	Initial Draft Document	2010/05/14	Lydia Tsai
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Federal Communication Commission Interference Statement

Federal Communication 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 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.

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.

**Wistron
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Canadian ICES-003

C Statement

This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

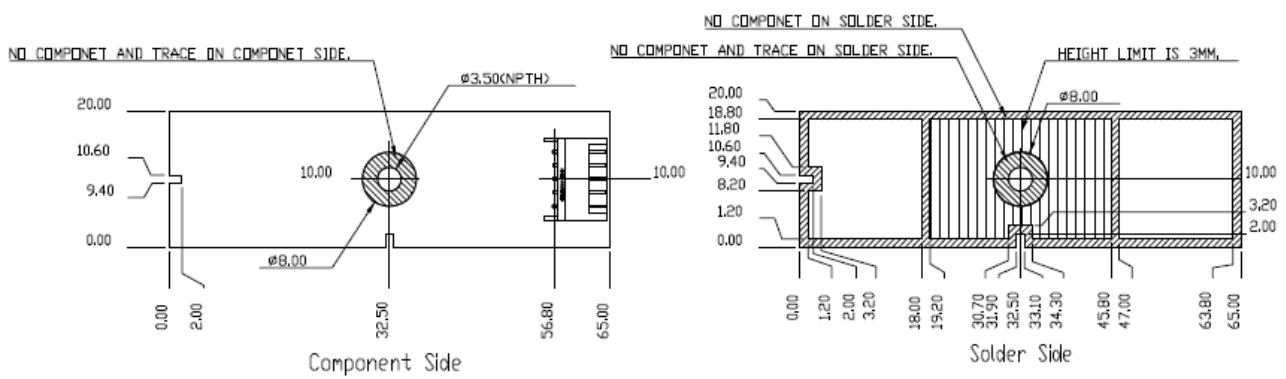
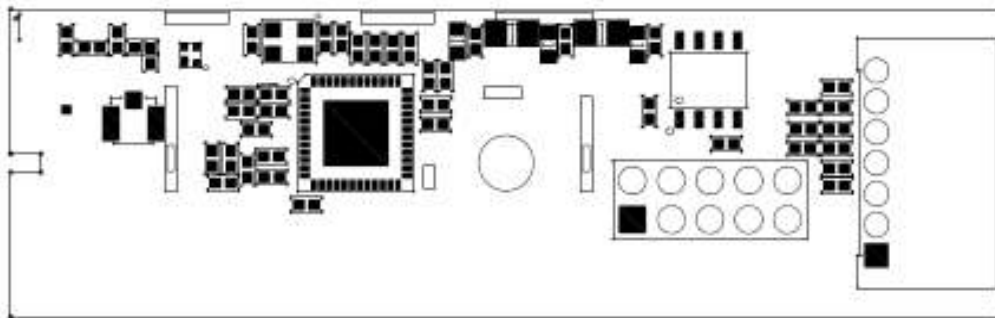
1. General Description

The SWZ11 module is ZWave single chip solutions for embedded module. It's very small and cost-effective modules and complete wireless solution for application in home control and AV control consisting of an integrated multi band, multi channel, multi speed RD transceiver. And SWZ1 use an 8051 microcontroller, a comprehensive set of peripherals, RAM, OTP memory storage for user application software and the ZWave software. Through an integrated HW key matrix scanner, SWZ1 had on-chip IR coding support, the ID learning features, its low power design, and advanced power management.

2. Usage & Key Features

- ✓ SWZ1 is the perfect solution for managing energy consumption in the home.
- ✓ SWZ1 enable the right solutions to the consumer through
 - Home Health Care
 - Home Security
 - Energy Management
 - Entertainment Control
- ✓ Using Z-Wave SD3402 Single Chip
- ✓ 64 kbyte OTP memory for Z-Wave protocol + API + customization device application SW
- ✓ W/I printed ANT on the board
- ✓ URAT available for general use
- ✓ AES-128 security hardware acceleration
- ✓ Power-on reset / brown-out detector which is active in all power modes.

3. Module Outline



4. Pin Configuration & RF Spec.

◆ Main Parts:

- IC SD3402 Single Chip, QFN48
- TXC- XTAL 32MHz, 12pF
- Atmel- Serial EEPROM, SPI, 128K
- KYOCERA SF16-0908M4UU01 SAW Filter
- TAI- TA0602A SAW Filter

◆ PCB Dimension: 65 x 20 mm

◆ Antennas: Printed ANT on the board

◆ Z-Wave SD3403 single chip:

- QFN48 (7x7mm)
- Optimized 8051 CPU Core
- 64kbyte OTP memory
- 16kbyte data SRAM

◆ RF communication:

- FSK / GFSK/ 4-FSK modulation
- Band
- Data rate 9.6 / 40 / 100 kbit/s

◆ Power Consumption

- TX: 30~40mA
- RX: 30~35mA

◆ 7-pin Connector's pin definition

- Pin1: +3.3V
- Pin2: TXD
- Pin3: RXD
- Pin4: RESET
- Pin5: Power_On (Low for power on; High_3.3V for power off)

- Pin6: IR_IN
- Pin7: GND

◆ **Z-Wave Frequencies:**

- RF frequency US, 9.6kbit/s 908.42 MHz
- RF frequency US, 40kbit/s 908.40 MHz
- RF frequency US, 100kbit/s 916.00 MHz

5. Shielding Mechanical Dimension

