Wistron NeWeb

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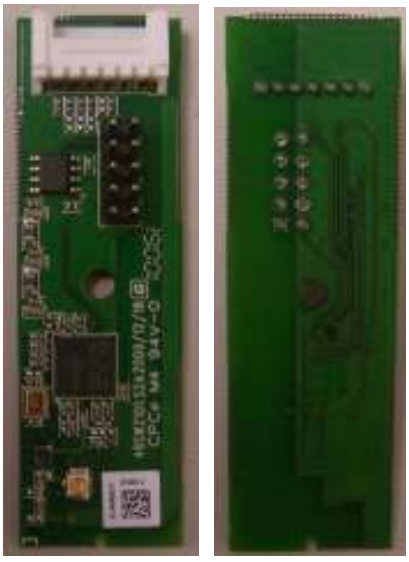
User Manual

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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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.

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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 á la norme NMB-003 du Canada.

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1. General Description

The SWZ11 module is ZWave single chip solutions for embedded module. It's very small and cost-effective modules and comlete 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 micorcontroller, 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 Signle 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.

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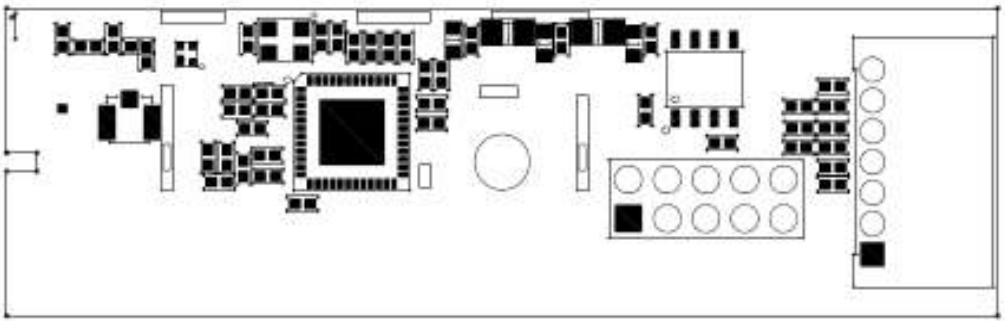
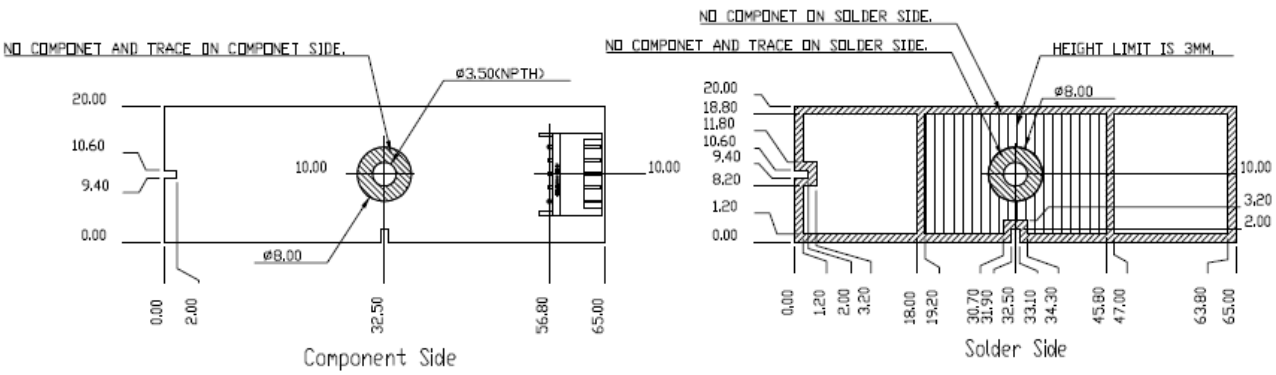
3. Module Outline





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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