

Title:

Wireless 11bg MiniPCI Adapter
SX-10WG

Drawing Type : Specification Sheet

Drawing No. : JW10690XD

Product No. : ZXE01535

Date : October 11, 2007

Proprietary and Confidential
Confidential

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| Rev. check |
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| Approved | Checked | Prepared |
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1. Application

This document is applied to "Wireless 11bg MiniPCI Adapter SX-10WG".

2. Overview

This hardware is MiniPCI TypeIII-B/IEEE802.11bg wireless LAN module that implements the Atheros chipset 'AR2413A' and that is compliant to the RoHS Directive.

4. General specifications

| Item | Specification | Unit | Note |
|-----------------------|-------------------------------|------|------------------|
| Storage temperature | -10 ~ +70 | °C | |
| Storage humidity | 5 ~ 90 | %RH | Non condensation |
| Operating temperature | 0 ~ +60 | °C | |
| Operating humidity | 20 ~ 90 | %RH | Non condensation |
| Power supply voltage | 3.3±0.3 | V | |
| Current consumption | 500 | mA | Max. |
| Device Interface | MiniPCI TypeIII | — | |
| Antenna connector | 20279-001E-01 (I-PEX) ×2 | — | |
| Approved I/F and std. | MiniPCI Specifications Ver1.0 | — | |
| | IEEE802.11a/b/g | — | |
| Weight | 9 | g | |
| MTBF | 90,000 | h | |
| Origin | Japan | — | |

5. Wireless part specifications

| Item | Specification | | Unit | Note | |
|--------------------|--|-----------|------|------------|------|
| Chipset | Atheros AR2413A (Atheros) | | — | | |
| Country code | EEPROM MAP | | — | | |
| Radio wave form | Spread spectrum | | — | | |
| Center frequency | 11b | 2412—2484 | MHz | Ch.1—Ch.14 | |
| | 11g | 2412—2472 | MHz | Ch.1—Ch.13 | |
| Channel interval | 11b/11g | 5 | MHz | | |
| Communication rate | 11g : 6, 9, 12, 18, 24, 36, 48, 54 11b : 1, 2, 5.5, 11 | | Mbps | | |
| Modulation type | 11g : OFDM-CCK(64QAM,16QAM,QPSK,BPSK) 11b : DSSS(CCK,DQPSK,DBPSK) | | — | | |
| TX power | 11g | Ch1 | 12 | dBm | Max. |
| | | Ch2 | 16 | dBm | Max. |
| | | Ch3~Ch4 | 15.5 | dBm | Max. |
| | | Ch5~Ch7 | 15 | dBm | Max. |
| | | Ch8~Ch10 | 14.5 | dBm | Max. |
| | | Ch11~Ch13 | 14 | dBm | Max. |
| | 11b | Ch1~Ch14 | 16 | dBm | Max. |

8. Approved standards

- Approved standard :
- RCR STD-33
 - ARIB STD-T66
 - FCC Part15 Subpart C
 - IC RSS210
 - EU Directive R&TTE (EN300 328, EN301 893, EN60950)
 - EU Directive RoHS
 - SRRC

- Scheduled countries for sales:
- Japan

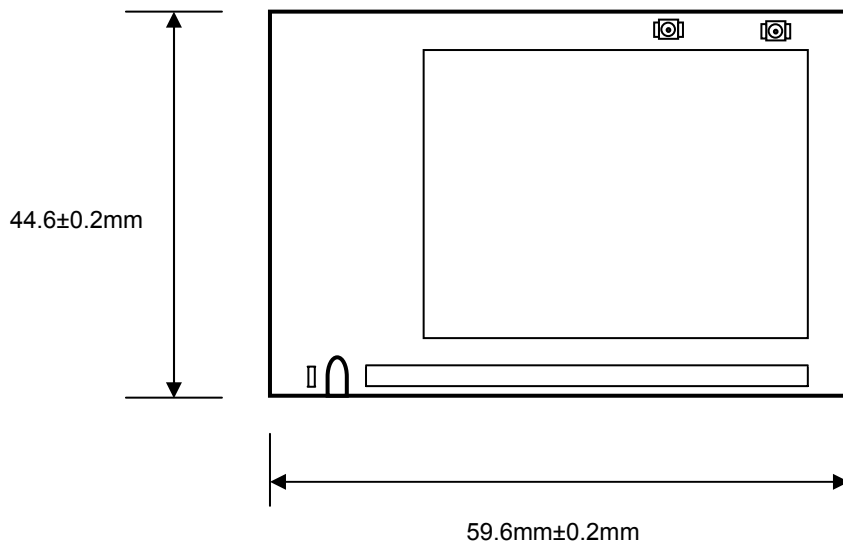
 - North America
 - US
 - Canada

 - EUROPE
 - Germany
 - Britain
 - France
 - Italy
 - Belgium
 - The Netherlands
 - Greece
 - Ireland
 - Spain
 - Portugal
 - Luxembourg
 - Austria
 - Denmark
 - Sweden
 - Finland
 - Estonia
 - Norway
 - Switzerland
 - Liechtenstein
 - Iceland
 - Czech Republic
 - Hungary
 - Poland
 - Slovakia
 - Slovene

 - ASIA
 - China

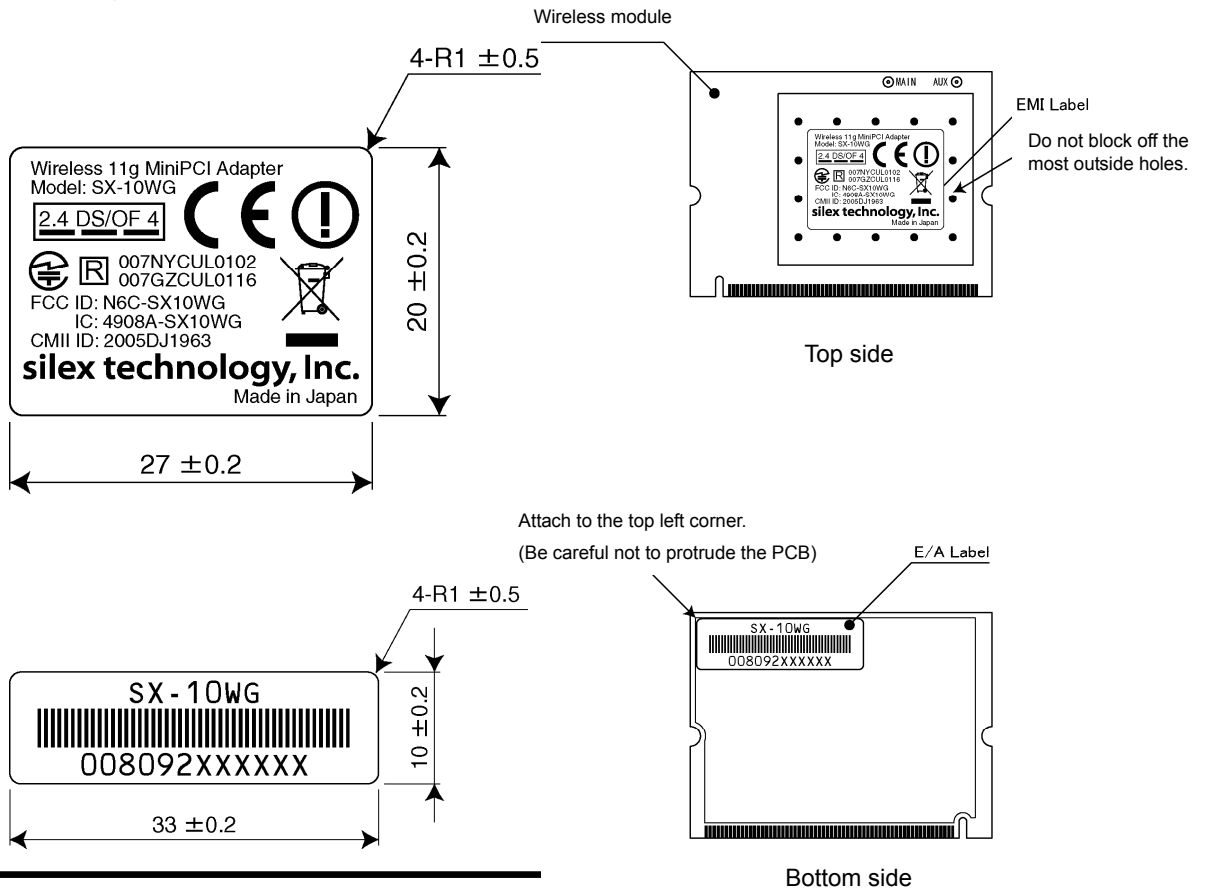
- ※ It's required EMC certification of each country at the final product form.
- ※ The above certifications are only effective with the antenna silex has specified. But the re-certification may be required depending on the specification of final product form regardless of using the antenna silex has specified.
- ※ In China, the above certifications are effective only when this module is used at enhancing usage by end user. It's required the certifications at final product form if this module is used as embedded purpose.

9. Dimension



- Dimension ● 44.6 × 59.6 × 4 [mm] (MiniPCI TypeIII-B)
- PCB Thickness ● t=1.0[mm]

10. Label diagram



11. Components composition list

| Division | Item | Qty. | Note |
|----------|-------------------------------------|------|-------------------------------|
| Board | The main board | 1 | The Board number is "PW05270" |
| Label | The label of corresponded standards | 1 | |
| | The label of Ethernet Address | 1 | |

12. Directions

- This (SX-10WG) is the wireless module that utilizes 2.4GHz band.
- SX-10WG is designed to be embedded into the general electric devices, and not designed for aircraft instruments, atom control, artificial life support and any other devices requiring extremely high reliability and quality.
- As SX-10WG communicates via radio wave, it is strongly recommended to perform configuration regarding security to prevent the information leakage to the third person.
- SX-10WG is the wireless module for embedded purpose. Please understand the function and feature of this module and test the final product which has this module implemented. Also, as EMC measurement of this module has not been performed, EMC test and application must be performed with the final product which has this module implemented.
- As SX-10WG utilizes 2.4Ghz (ISM band) , may effect or be affected by the surrounding devices utilizing the same bandwidth. Please investigate the environment to install this module before installing it.
- Disassembling or modifying SX-10WG may lead to punishment based on radio law.
- SX-10WG is the embedded module that has the connectors and parts exposed. Please be careful for electro static, water drop, and other power dust.