Title:

Wireless 11abg MiniPCI Adapter
SX-10WAG

Drawing Type :	Specification Sheet
Drawing №. :	JW12280XD
Product №. :	ZXE01701
Date :	October 11, 2007

Rev. check

Approved	Checked	Prepared

1. Application

This document is applied to “Wireless 11abg MiniPCI Adapter SX-10WAG”.

2. Overview

This hardware is mini-PCI TypeIII wireless LAN module compliant to Dual Band IEEE802.11abg std. and EU RoHS Directive.

This module implements the AR5414A that supports SuperAG made by Atheros and two antenna connectors for corresponding to the diversity function.

4. General specifications

Item	Specification	Unit	Note
Storage temperature	–10 ～＋80	℃	
Storage humidity	5 ～ 90	%RH	Non condensation
Operating temperature	0 ～ ＋70	℃	
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	－	

BPF : Band Pass Filter
Balun : Balance Filter
PA : Power Amplifier
DPX : Diplexer
LPF : Low Pass Filter
LNA : Low Noise Amp
SW : Switch for diversity
ANT : I-PEX small connector

5. Wireless part specifications

Item	Specification		Unit	Note
Chipset	Atheros AR5414（Atheros）		－	
Country code	EEPROM MAP		－	
Radio wave form	Spread spectrum		－	
Center frequency	11b/11g	2412－2484	MHz	Ch.1—Ch.13/Ch.14
	11a	5170－5835	MHz	UNII-1/2/3 ETSI J52
Channel interval	11b/11g	5	MHz	
	11a	20		
Communication rate	11g : 6, 9, 12, 18, 24, 36, 48, 54 11b : 1, 2, 5.5, 11 11a : 6, 9, 12, 18, 24, 36, 48, 54		Mbps	
Modulation type	11g : OFDM-CCK(64QAM,16QAM,QPSK,BPSK) 11b : DSSS(CCK,DQPSK,DBPSK) 11a : OFDM(64QAM,16QAM,QPSK,BPSK)		－	
Current consumption	11g Tx	350(Typ.)	mA	Throughput test mode
	11g Rx	280(Typ.)	mA	Throughput test mode
	11b Tx	350(Typ.)	mA	Throughput test mode
	11b Rx	270(Typ.)	mA	Throughput test mode
	11a Tx	350(Typ.)	mA	Throughput test mode
	11a Rx	300(Typ.)	mA	Throughput test mode
	Sleep mode	20(Typ.)	mA	Sleep mode

8. Approved standards

Approved standard:

- ARIB STD-T66
- RCR STD-33
- ARIB STD-T71
- FCC Part15 Subpart C
- IC RSS210
- EU Directive R&TTE（EN300 328, EN301 893, EN60950）
- EU Directive RoHS

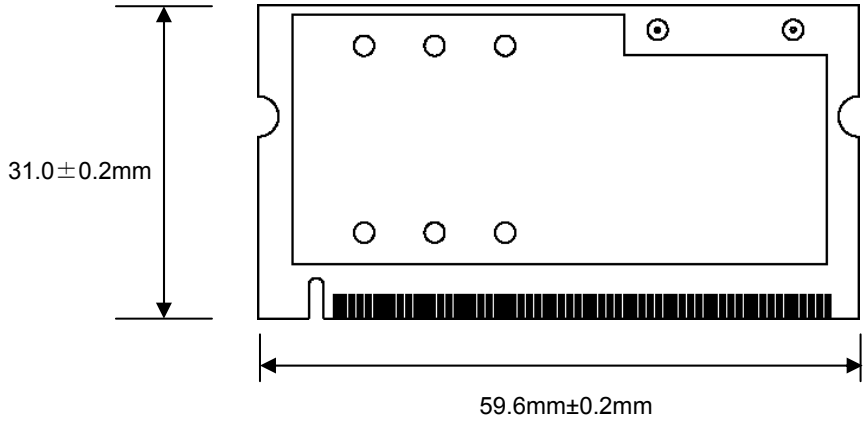
Scheduled countries for sales:

- Japan
- North America
  - US
  - Canada
- EUROPE
  - Germany
  - Britain
  - France
  - Italy
  - Belgium
  - The Netherlands
  - Greece
  - Ireland
  - Spain
  - Portugal
  - Austria
  - Denmark
  - Sweden
  - Finland
  - Norway
  - Switzerland
  - Liechtenstein
  - Iceland

※ It's required EMC certification of each country at the final product form.

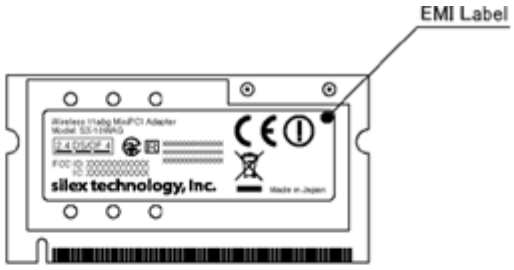
※ The above certification is only effective with the antenna silex has specified. But the re-certification may be required depending on the specification of final product form regardless of using the antenna silex has specified.

9. Dimension

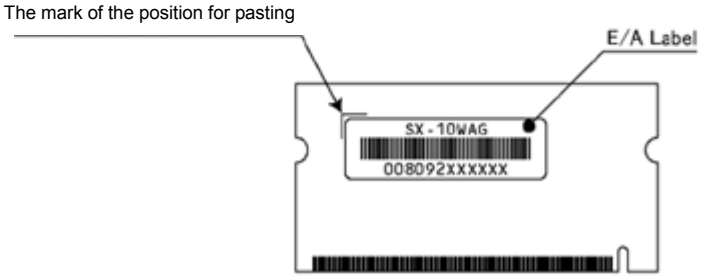


Dimention	● 31 × 59.6 × 4 [mm]	(MiniPCI TypeIII-B)
PCB Thickness	● t=1.0[mm]	

10. Label diagram



Top side



Bottom side

11. Components composition list

Division	Item	Qty.	Note
Board	The main board	1	The Board number is “PW05472”
Label	The label of corresponded standards	1	
	The label of Ethernet Address	1	

12. Directions

- This（SX-10WAG）is the wireless module that utilizes 2.4GHz band and 5GHz band.
  Please stop 5GHz band beforehand when you use this module in outdoor in Japan because using 5GHz band in outdoor is banned by the law in Japan.

- SX-10WAG 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-10WAG communicates via radio wave, it is strongly recommended to perform configuration regarding security to prevent the information leakage to the third person.

- SX-10WAG 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.

- SX-10WAG 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-10WAG may lead to punishment based on radio law.

- SX-10WAG is the embedded module that has the connectors and parts exposed. Please be careful for electro static, water drop, and other power dust.