Model Name: SA9800-C1

802.11b/g/n Wireless Module

User Manual

Savitech Corp, 2015

Contents

Chapter 1: Introduction

SA9800 is a wireless module. It is a hostless design and no extra host MCU required for wireless speaker. The internal high speed processor can handle all of network and audio functions. Auto group function let user easily set multiple wireless devices into a group to make multi-room broadcasting.

Chapter 2: Features

2.1 Features

Built-in IEEE 802.11n 150 Mbps.
• USB 2.0 interface to connect hi-end USB audio SoC
•• UART for advance host command interface
• APP or web browser for easily configure
• Wakeup from WiFi
• OTA firmware upgrade

2.2 Wireless Spec

Wireless Specification	
Feature	Detailed Description
Standard	IEEE 802.11 b/g/n One Path 2.4 GHz
Data Rate	Up to 150 Mbps
Security	WEP, WPA-PSK, WPA2-PSK
Antenna	I-PEX connector
Range	Up to 50 meter LOS
Storage	Temperature -40°C to +85°C
Operating	Temperature 0°C to +70°C
DC Input Voltage	3.3V +/- 10%
DC input Current	Max. 800mA @ 5V (Power Board)
Dimension	
PCB	Board 60x40x1.6 mm
RF	Board (Shielding Case) 60x40x7.6 mm

2.3 Pin Definition

Pin No.	Type	Description	Pin No.	Type	Description
1	P	VDD3.3V	16	I	RXIN
2	G	GND	17	O	TXON
3	I/O	USB_DM	18	G	GND
4	G	GND	19	I/O	I2S_WS
5	O	LED	20	I	I2S_SDI
6	O	FUNCTION LED	21	G	GND
7	G	GND	22	I	UART_RX
8	O	UART_TX	23	G	GND
9	G	GND	24	O	I2C_CLK
10	O	I2S_MCLK	25	I/O	I2C_DATA
11	O	I2S_SCK	26	I/O	Tack-SW
12	O	I2S_SDO	27	O	WLAN LED
13	G	GND	28	I/O	USB_DP
14	O	TXOP	29	G	GND
15	I	RXIP	30	P	VDD3.3V

2.3 The Status Lights

The LEDs is located in front panel, it can indicate some device information

LEDs	Status	Definition
LED 1	Off	unplugged
	On	Power on
LED 2	Off	No connection. SA9800 is not set up or cannot establish a connection to the network or the Internet
	on	Network Ready
	Flash	WAC mode
LED 3	Off	No definition
	Flash	Show the status of client mode connecting to network. If connection is sucessful, the LED will turn off, otherwise LED will keep flashing
	on	Playing Music
LED 4	Flash	Wireless enable

Chapter 3: Setting up SA9800

Use SAVI9800 Utility on your computer or Wi-Fi settings on an iOS device to do one of the following:
Set up your SAVI9800 Express to create a new network that wireless computers and devices can use to connect to the Internet.

Set up your SAVI9800 Express to join an existing network. If the network is connected to the Internet, all the computers and wireless devices on the SAVI9800 network can use the Internet connection. If the network is set up to be extended, SAVI9800 can extend the range of that network.

You can do all of your basic network setup and configuration with the setup assistant in SAVI9800 Utility on a Mac or Windows computer, or with Wi-Fi settings on an iOS device. To manage your network and configure advanced options, see "Setting Advanced Options"

System Requirements
To set up SAVI9800 Express using a Mac, you need: Mac computer with an WLAN card installed.

Mac OS X v10.5.7 or later

Use Software Update to get the latest version of SAVI9800 Utility.
To set up SAVI9800 Express using a Windows PC, you need:

Windows computer with a 300 MHz or higher processor and Wi-Fi certified wireless capability (to set it up wirelessly), or a Windows computer connected to the SAVI9800 with a WLAN network.

Setting up your SA9800

To set up SAVI9800 Express using a computer:

1. Connect to SAVI9800 through WLAN connection.
2. Open web browser(Safari, Internet explore or Google chrome)
3. Key in "192.168.6.1" to enter web setup
4. Follow the onscreen instructions for creating a new network or joining an existing one.

Regulatory Compliance Information

CE Mark Warning:

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC 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 communication. 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 or more 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.

IMPORTANT NOTICE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Alert Statement:

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.
Manual information to the End User
The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF
module in the user's manual of the end product which integrates this module.
The end user manual shall include all required regulatory information/warning as show in this manual and the final end product
must be labeled in a visible area with the following: " Contains FCC ID : 2ABTG-SA9800-A1.
The product is used dipole antenna and antenna Gain is 3.14 dBi.