Wistron NeWeb

User Manual

Model Name: SWA1
(AV7520 with ceramic antenna module)

Revision: 2.1
Issue Date: 2010/04/14

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Revision History

Edition #		Reason for revision	Issue date	Author
1.0	●	Initial Draft Document	2010/01/13	Amy Tu
2.0	●	Refer Avnera and updated	2010/03/08	Amy Tu
2.1	●	Modify Photo on cover page	2010/4/14	Amy Tu
	●			
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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.

IMPORTANT NOTE:
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.
This device is intended only for OEM integrators under the following conditions:
1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.
3) For all products market in US, OEM has to limit the operation in the frequency 2412MH$_Z$, 2438MHz and 2462MHz for 2.4G band by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.
As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance

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requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions <u>can not be met</u> (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID <u>can not</u> be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains TX FCC ID: NKR-SWA".

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.

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1. General Description

The AVMD7520 module is a complete radio module solution containing all the necessary HW and FW to provide a system-integration ready, multichannel wireless HD audio solution.
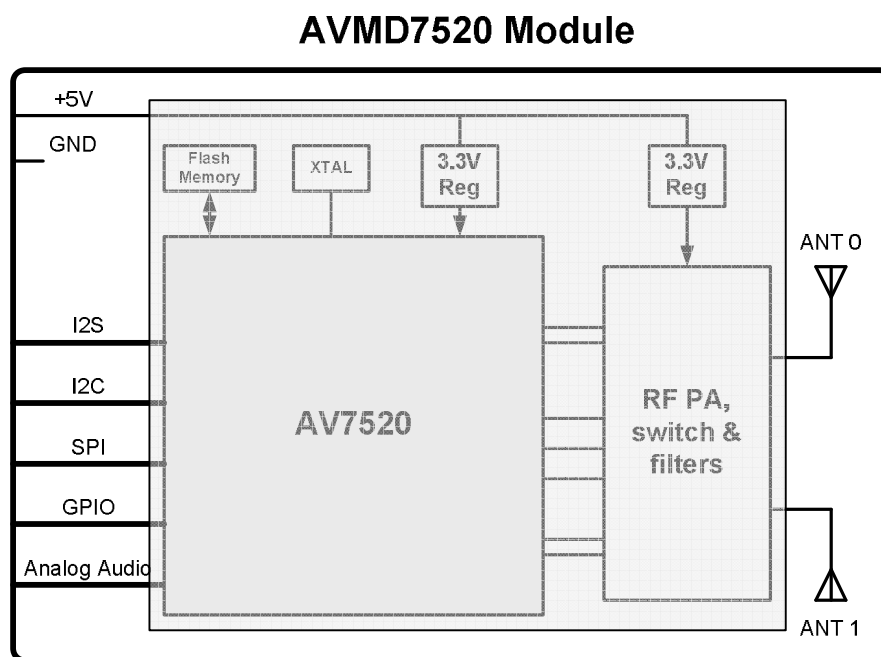
The module is comprised of a AV7540 IC combined with RF front-end circuits (RF PA + balun + filter + RF switch), flash memory, crystal, and passive components. It is FCC certified (modular approval) and ready for operation with U.FL connectors or integrated antennas.
The module provides a convenient set of digital I/O interfaces for digital audio through an I2S port, host MCU control through an SPI or I2C interface and optional GPIO for various control and indicator functions.

The module is a card edge style using the 36 pin PCIe card edge connection method to save space and cost in connecting to the main board.
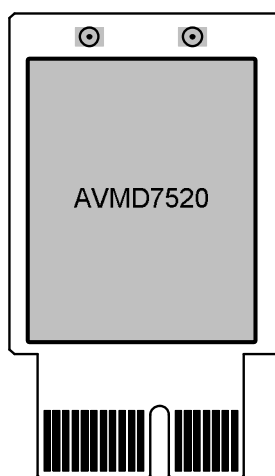
2. Usage

✓ Install SWA1 module to some CE product, like Speaker, TV …etc, then it will support Wireless Audio function for these products.

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3. Block Diagram

AVMD7520 Module

4. Module Outline

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5. Pin Configuration

Top View
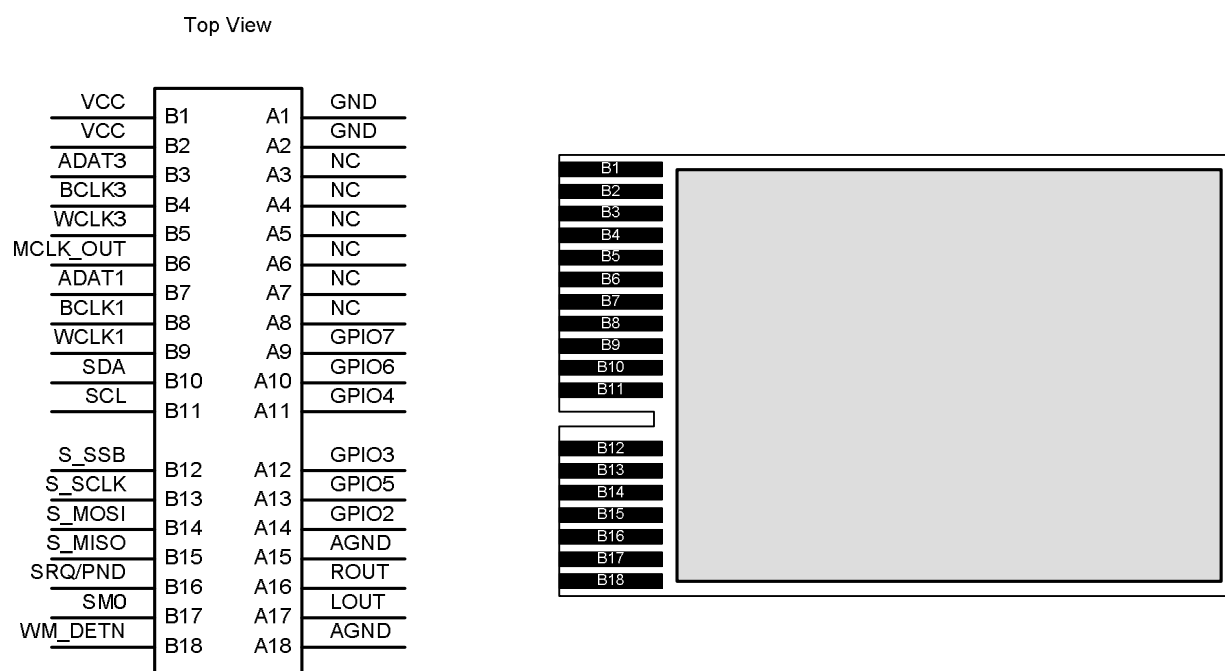
Figure 1-1 – AVMD7520 module pin configuration

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Table 0-1 AVMD7520 pin description

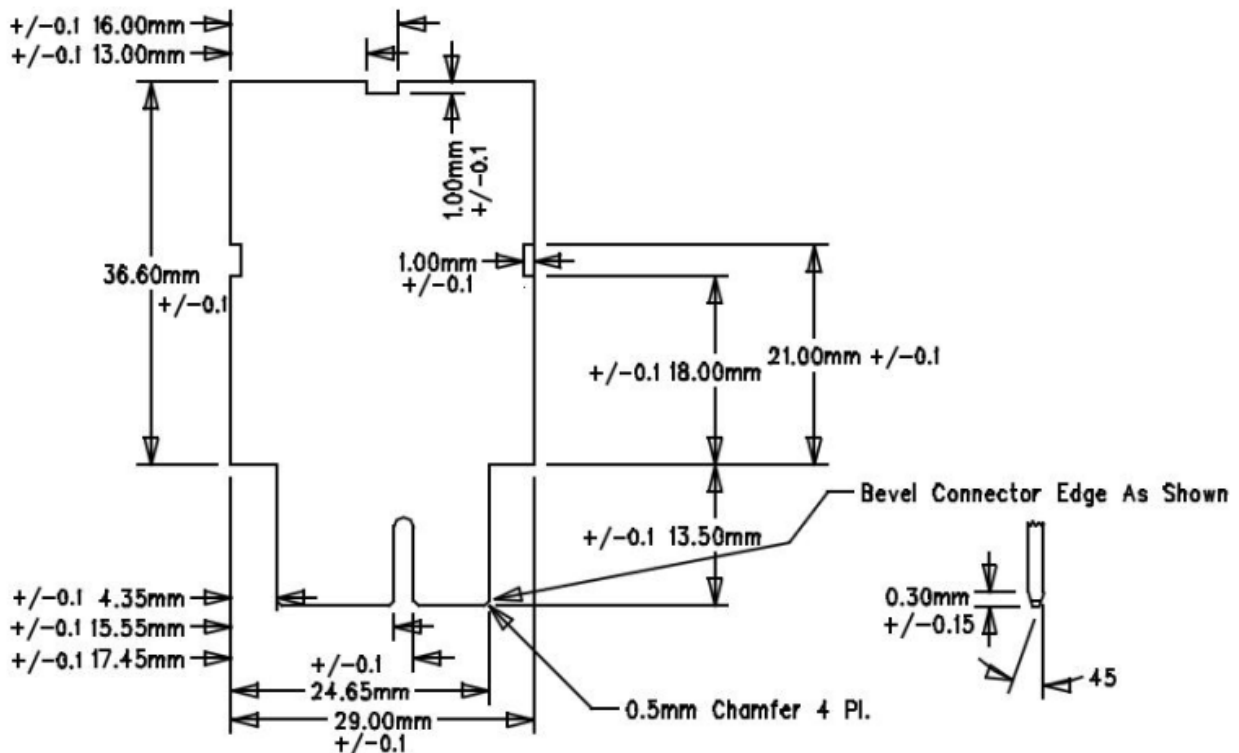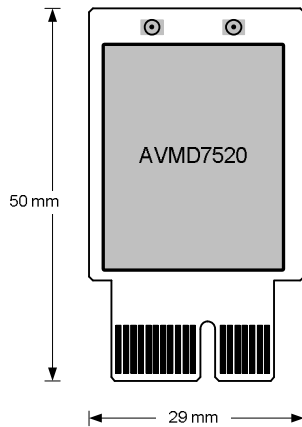| #	Pin Name	Pin Type	Description
A1	GND	Analog	Module ground
A2	GND	Analog	Module ground
A3	NC	-	no connection
A4	NC	-	no connection
A5	NC	-	no connection
A6	NC	-	no connection
A7	NC	-	no connection
A8	NC	-	no connection
A9	GPIO7	Digital I/O	GPIO #7
A10	GPIO6	Digital I/O	GPIO #6
A11	GPIO4	Digital I/O	GPIO #4
A12	GPIO3	Digital I/O	GPIO #4
A13	GPIO5	Digital I/O	GPIO #5
A14	GPIO2	Digital I/O	GPIO #2
A15	AGND	Analog	Audio ground
A16	ROUT	Analog	Audio DAC right channel output
A17	LOUT	Analog	Audio DAC left channel output
A18	AGND	Analog	Audio ground
B1	VCC	Analog	+5V supply voltage input
B2	VCC	Analog	+5V supply voltage input
B3	ADAT3	Digital I/O	I2S audio data, AV75xx I2S physical I/O # 3 – input/output
B4	BCLK3	Digital I/O	I2S Bit clock, AV75xx I2S physical I/O # 3 – input/output
B5	WCLK3	Digital I/O	I2S Word clock, AV75xx I2S physical I/O # 3 – input/output
B6	MCLK_OUT	Digital Output	MCLK for I2S audio data
B7	ADAT1	Digital I/O	I2S audio data, AV75xx I2S physical I/O # 1 – input/output
B8	BCLK1	Digital I/O	I2S Bit clock, AV75xx I2S physical I/O # 1 – input/output
B9	WCLK1	Digital I/O	I2S Word clock, AV75xx I2S physical I/O # 1 – input/output
B10	SDA	Digital I/O	I2C compatible serial data I/O
B11	SCL	Digital I/O	I2C compatible serial clock I/O
B12	S_SSB	Digital I/O	SPI Slave – slave select (active low)
B13	S_SCLK	Digital I/O	SPI Slave – serial clock
B14	S_MOSI	Digital I/O	SPI Slave – master out slave in
B15	S_MISO	Digital I/O	SPI Slave – master in slave out
B16	SRQ/PND	Digital Output	Notification signal to host (pending notification)
B17	SM0	Digital Input	Serial Mux control (for flash programming) and module reset (active low)
B18	WM_DETN	Digital output	Wireless module detect (low signal to indicate module is inserted in

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#	Pin Name	Pin Type	Description
			product)

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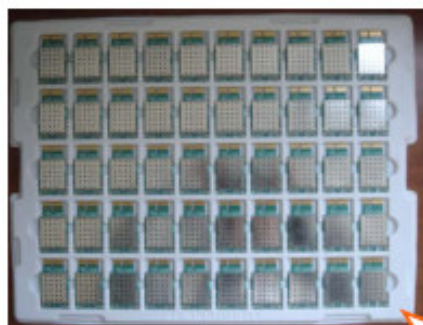Website: www.wneweb.com

6. Mechanical Dimension

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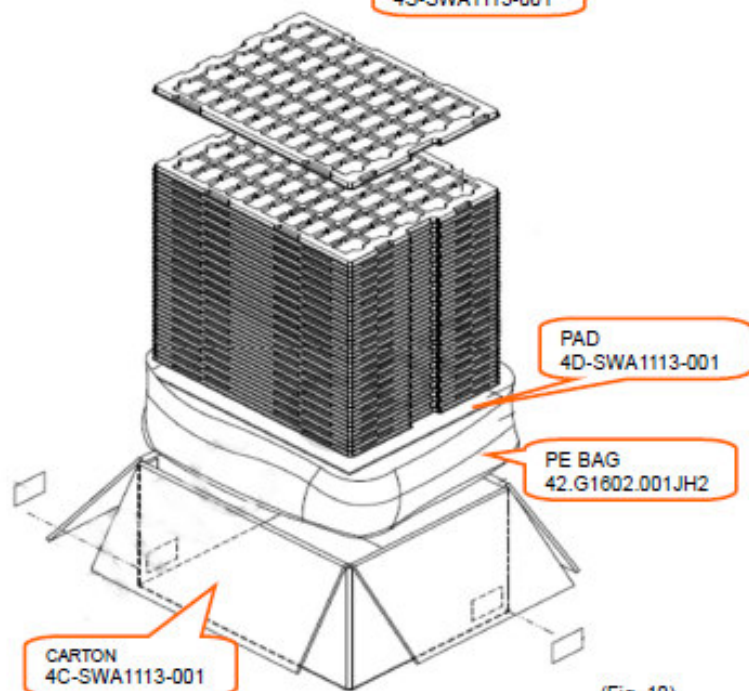
8. Package Information

50pcs / Tray-Plate
40 Tray-Plate / Carton -> 2000pcs / Carton

(Fig. 8)

(Fig. 9)

TRAY
4S-SWA1113-001

PAD
4D-SWA1113-001

PE BAG
42.G1602.001JH2

CARTON
4C-SWA1113-001

(Fig. 10)