

Model Name : RS3_2.4GHz_NAM-SS01 module

Product Description.

The Module is an OEM module (35x35mm) based on the IA3S4. It is a compressed wireless digital audio transceiver operating in the 2.4GHz bands. The wireless audio link supports 1 stereo audio stream and comes together with additional features such as: pairing functionality, seamless and bi-direction transmission of high quality audio, I2S sampling frequency detection, support Sleep mode, Programmable end-to-end audio latency, Control Channel ability, support no audio detection, Robust packet error correction.

- SYNIC IA3S4 Integrated Wireless Audio Processor
- GFSK digital modulation.
- Audio format 16bit, 32/44.1/48KHz sampling rate
- Digital audio interfaces (I²S and/or S/PDIF)
- I²C, SPI control interface
- 26 pins interface connector (FFC).
- Support no audio detection function.
- Robust packet error correction.
- Low power consumption.
- Low audio delay time < 20ms

RF Frequency Bandwidth.

2.4GHz: 2400 – 2485MHz

RF Performance.

For 2.4GHz application (VCC=3.3V, 25°C)

Parameter	Min	Typ.	Max	Units
RF Frequency Range	2400		2485	MHz
Available channel		39		
Transmission Power	5	7	9	dBm
RF Bandwidth		1		MHz
Rx Sensitivity		-80		dBm
Antena Diversity		ON		

Audio Performance.

Item	Min	Typ	Max	Unit	Note
SNR @ 1Khz		-88		dBr	
THD+N @ 1KHz		-70		dB	
Dynamic Range @ 1KHz		-85		dBr	
Crosstalk @ 1KHz		-100		dB	
Frequency Response @ 20Hz to 20KHz	-3	0	+3	dB	

POWER

- Supply Voltage : 3.1V(Min), 3.3V(Typ), 3.5V(Max)
- Peak to Peak Ripple: 100mV(Max)
- Operating Current: 50mA(Typ)
- Operating Temperature : 0°C (Min) , 25°C (Typ) , 55°C (Max)

26Pin Interface

No.	Pin Name	I/O	Descriptions
1	VCCIO	PWR	VCC supply
2	GND	GND	Ground
3	I2S_MCLK	I/O	System clock pin of I2S signal
4	BLUE_LED	I/O	GPIO
5	RED_LED	I/O	GPIO
6	NC	I/O	Not connected
7	NC	I/O	Not connected
8	I2S_DATA	I/O	Data pin of I2S signal
9	NC	I/O	Not connected
10	I2C_CLK	I/O	Clock pin of I2C control signal
11	I2C_DATA	I/O	Data pin of I2C control signal
12	SPI_DI	I/O	Data input pin of SPI interface
13	SPI_DO	I/O	Data out pin of SPI interface
14	SPI_CLK	I/O	Clock pin of SPI interface
15	SPI_CS	I/O	Chip select pin of SPI interface
16	SPI_WP	I/O	Write protect pin of SPI interface, low active
17	RESET	I	Reset pin of IA3, low active
18	P_SENSE	I/O	GPIO
19	P_CTL	I/O	GPIO
20	PWM_RST	I/O	GPIO
21	AMP_PDN	I/O	GPIO
22	AMP_SD	I/O	GPIO
23	Wireless_Ready	I/O	GPIO
24	I2S_BCK	I/O	BCK pin of I2S signal
25	GND	GND	Ground
26	I2S_LRCK	I/O	LRCK pin of I2S

FCC Information

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.

Note: This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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 correct the interference by one or more of the following measures:

- 1.1. Reorient or relocate the receiving antenna.
- 1.2. Increase the separation between the equipment and receiver.
- 1.3. Connect the equipment into an outlet on a circuit different from that to which receiver is connected.
- 1.4. Consult the dealer or experienced radio/TV technician for help.

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

"CAUTION : Exposure to Radio Frequency Radiation.

Antenna shall be mounted in such a manner to minimize the potential for human contact during normal operation. The antenna should not be contacted during operation to avoid the possibility of exceeding the FCC radio frequency exposure limit.

IC Information

This device complies with Industry Canada license-exempt RSS standard(s). 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 est conforme avec Industrie Canada RSS standard exempts de licence (s). Son utilisation est soumise à Les deux conditions suivantes: (1) cet appareil ne peut pas provoquer d'interférences et (2) cet appareil doit accepter Toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.