

This document is designed to provide general information for use of the Audio Wireless Transceiver Module WTX1010/WRX1011.

EMI/EMC Compliance Guidelines

FCC Compliance

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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

IC Compliance

This Class B digital apparatus complies with Canadian RSS-210.

When integrating the WTX1010/WRX1011 module into your own product, you must:

1. Use only the provided chip antenna.
2. Operate the module according to the specifications listed in this data sheet.
3. Include a label clearly visible on the exterior of the product which states: **“Contains FCC ID: WUO-WTX1010/WRX1011 / IC: 7985A-WTX1010/WRX1011”**.
4. It is mandatory that you consult all FCC and IC documentation for use of a modular approved product, and comply with all listed guidelines and additional testing that may be required.

Specifications

WTX1010/WRX1011 functional block diagrams

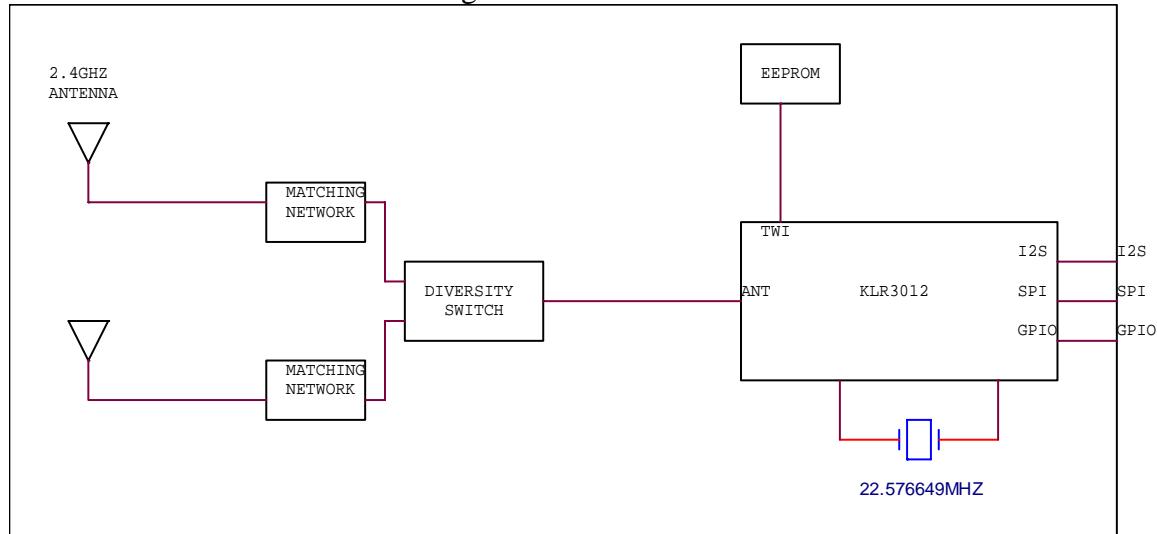


Figure 1

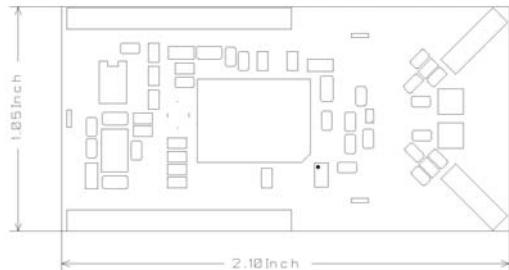
RF Performance:

Outdoor range (LOS) 15m.

Maximum Transmitting RF Power - 0 dBm.

Frequency ISM 2.400 - 2.480 GHz.

Physical Dimensions



Electrical Parameters

Absolute maximum Supply Voltage Range 2.0 - 3.3 VDC

Nominal Supply voltage – 2.1VDC

Current Requirements – 10-15mA

Operating Temperature Range - 0 to 70 °C / 32 to 158 °F

PCB Material and layout considerations

The PCB material for the base PCB should be FR4 glass epoxy.

All supply pins should have decoupling electrolytic capacitors and ferrite beads positioned as close to the supply pins as possible.

No components or traces should be located close to the antenna. Recommended minimum distance is 10mm.

Firmware

Sonavox provides the firmware on the module for our customers.

Other features

The module is RoHS compliant.

The module is FCC approved (documentation available on request).

The module is IC approved (documentation available on request).

Module Pin-out

Pin Number	Pin Name	Pin Description
CONNECTOR J1		
1	GND	DIGITAL GROUND
2	GND	DIGITAL GROUND
3	GND	DIGITAL GROUND
4	GND	DIGITAL GROUND
5	GND	DIGITAL GROUND
6	GND	DIGITAL GROUND
7	GND	DIGITAL GROUND
8	TEST	CONNECT TO GROUND
9	SS0	SPI INTERFACE SLAVE SELECT 0
10	GND	DIGITAL GROUND
11	AUDIO_DETECT	AUDIO SIGNAL DETECT FOR ADC
12	IO_15	GPIO
13	GND	DIGITAL GROUND
14	IO_16	IO_16
15	IO_17	IO_17
16	GND	DIGITAL GROUND
17	TWI_CLK	I2C CLOCK
18	TWI_DAT	I2C DATA
19	GND	DIGITAL GROUND
20	5V	POWER SUPPLY 5V
CONNECTOR J2		
1	GND	DIGITAL GROUND
2	RESET_N	ACTIVE LOW RESET
3	RES2	UART0 RX
4	RES1	UART0 TX
5	MCLK	MASTER AUDIO CLOCK
6	DAI_BCLK	DIGITAL AUDIO INTERFACE BIT CLOCK
7	DAI_FS	DIGITAL AUDIO INTERFACE FRAME SYNC
8	DAI_DATA	DIGITAL AUDIO INTERFACE DATA
9	UART1_OUT	UART1 OUTPUT
10	UART1_IN	UART1 INPUT
11	GND	DIGITAL GROUND
12	SS2	GPIO 9
13	ASSOC	GPIO 10
14	MOSI	SPI MASTER OUT/SLAVE IN
15	DIV_CTL_MISO	ANTENNA DIV CONTROL/SPI MASTER IN / SLAVE OUT
16	IO_8	GPIO 8
17	SCLK	SPI CLOCK
18	GND	DIGITAL GROUND
19	GND	DIGITAL GROUND
20	GND	DIGITAL GROUND