

Datasheet and User Manual for TX-AUDIO-2.4

Features

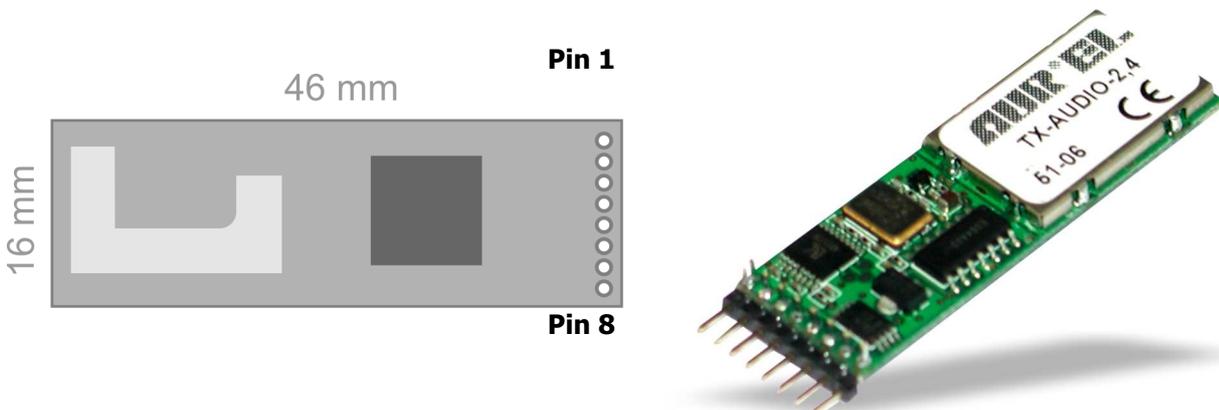
1. Non-compression for high sound quality with delay time 0.5 ms.
2. Digital audio with 44.1 KHz sampling rate and 16-bit resolution.
3. FSK digital modulation
4. Embedded antenna for cost-effect and fast development
5. 8 selectable channels
6. Low power consumption for mobile application
7. 10dBm RF Output Power
8. Application distance of more than 30 meters when used with RX-AUDIO-2.4 650201005G
9. See **650201062 TX-AUDIO-2.4/AE** for incremented features module

Specification

Model	TX-AUDIO-2.4
Supply voltage	3.6 ÷ 5 Vdc
Current consumption	93 mA (typ)
Operating temperature	-10 ÷ +60 C
Frequency range	2400 ÷ 2483.5 MHz
Modulation	FSK
Channel number	8
Channel spacing	9 MHz
Frequency stability	± 100 KHz
TX power	+10 dBm ERP
Input impedante	> 10 Kohm
Input level	4 Vpp (max)
* Response	20 Hz ÷ 20 KHz
* Dynamic range	92 dB (typ)
* Separation	80 dB (typ)
* SN ratio	87 dB (typ)

* When used with RX-AUDIO-2.4 650201005G

Board dimensions: 46 x 16 x 7 mm



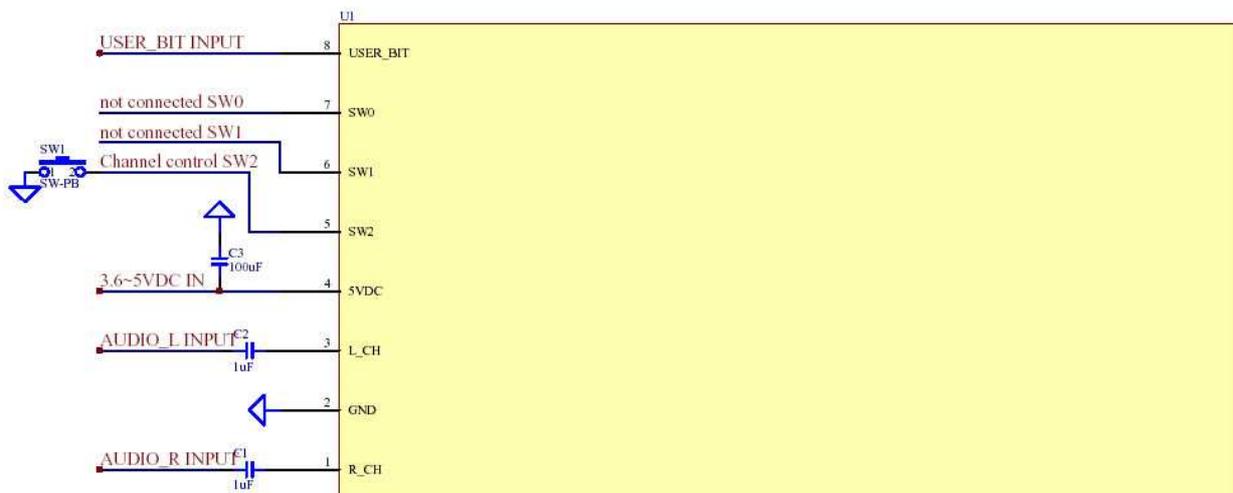
Le caratteristiche tecniche possono subire variazioni senza preavviso. La AUREL S.p.A non si assume la responsabilità di danni causati dall'uso improprio del dispositivo.
 Technical features are subject to change without notice. AUREL S.p.A. does not assume responsibilities for any damages caused by the device's misuse.

Pin description

Pin #	Pin name	Pin description
1	R_CH	Audio R channel input pin (>10Kohm, max. 4Vpp)
2	GND	Ground
3	L-CH	Audio L channel input pin (>10Kohm, max. 4Vpp)
4	5Vdc	3.6 ÷ 5 Vdc
5	SW	Switch (Channel Change Line)
6	N.C.	Not connected
7	N.C.	Not connected
8	USER_BIT	Maximum data 5Kbps (input)

Application circuit

Application circuit for TX module



1. C1 and C2 are both DC blocking capacitors for audio R and L inputs respectively. 1 uF capacitors for C1 and C2 will be sufficient for general applications because the input impedance of the A/D converter is greater than 10K ohm. If further audio low frequency response is wanted, C1 and C2 can be increased to get more extension.
2. C3 is the DC power supply decoupling capacitor. In general a 100 uF capacitor can work well.
3. Momentary push-button switch at SW pin is used to select the channel
4. At USER_BIT pin, serialized data steam (max. 5Kbps) can be delivered to corresponding USER_BIT pin at Receiver(s), with no interference on digitalized audio.
Data examples:
a) remote control encoded command,
b) title of musical composition being transmitted, etc...

Application information

When you design the transmitter module in wireless speakers and headphones, pay attention to the following considerations:

1. Do not bend down or up the antenna.
2. Do not let any metal objects too close to antenna.
3. Transmitter module must be kept away from speaker over 3 cm to avoid magnetic interference.
4. Power supply to transmitter module must be independent, different from the power of amplifier.
5. Avoid to put any cable or circuit nearby antenna (1-2 cm).

