



BDTM1311

Wi-Fi Audio Module Data Sheet

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Revision History

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1. INTRODUCTION

The Wireless Audio Product delivers an hardware (BDTM1311 Wi-Fi module), software and service solution (uPlay/uFind) to device manufacturers who want their customers to play their digital music from their phone, from the cloud and remotely from their homes, to easily stream that content to branded players in the home over any Wi-Fi network, or anywhere in the world.

The Wireless Audio platform offers

- n The turnkey BDTM1311 Module delivers a complete whole-home audio solution for embedded audio devices and adapters.
- n Smartphone SDK for Android and iOS for accessing and controlling connected devices.

uPlay: The engine software agent on device is fully DLNA-compliant and Airplay-compliant. It sets up streams as commanded from the handset controller app, such as QQ music, Baidu Music,

KuGou Music, and other stream audio player. The uPlay engine operates as the primary controller and manages the connection between the source and sink.

uFind: The engine software agent on device manages service providing , and provides the interface of configuration, such as party mode configuration, audio channel configuration, and etc.

uFind Controller. The controller application is most commonly run from a smart phone or tablet, running Android or iOS. It automatically connects the uFind engine on devices.

The BDTM1311 Module is a cost-effective, turnkey hardware and software solution designed to deliver whole home audio features and functionality to the consumer electronics industry. The features:

n Connectivity Hardware:

Based on industry-leading Qualcomm Atheros, Inc. Wi-Fi® technology, the BDTM1311 is a cost-effective, audio module designed to deliver an end-to-end whole-home audio technology package to the consumer electronics industry.

n Single-band Capability:

Two Stream Channels



1.2 Features

- ü UPnP/DLNA
- ü Airplay
- ü Remote control protocol
- ü Audio channel control
- ü Party Mode – Multi-device audio synchronization
Multi Device controls and synchronizes audio (Party Mode) throughout the home across multiple uPlay/uFind-powered speakers and audio devices.
- ü Audio Format Support: MP3 (up to 320KHz sampling), AAC, APE, OGG, WAV, FLAC, ALAC
- ü User-configurable friendly device name
- ü App-controlled firmware updates
- ü Fetch/stream popular Internet audio Channels:
QQ Music, Baidu Music, KuGou Music, and other stream player.
- ü Controller apps for Android 2.2 and later, and iOS 7 and later
- ※ *Some features are optional for customization on demand.*



1.3 Application

- ü Wi-Fi speakers
- ü Home automation
- ü Home audio system
- ü IoT for home smart



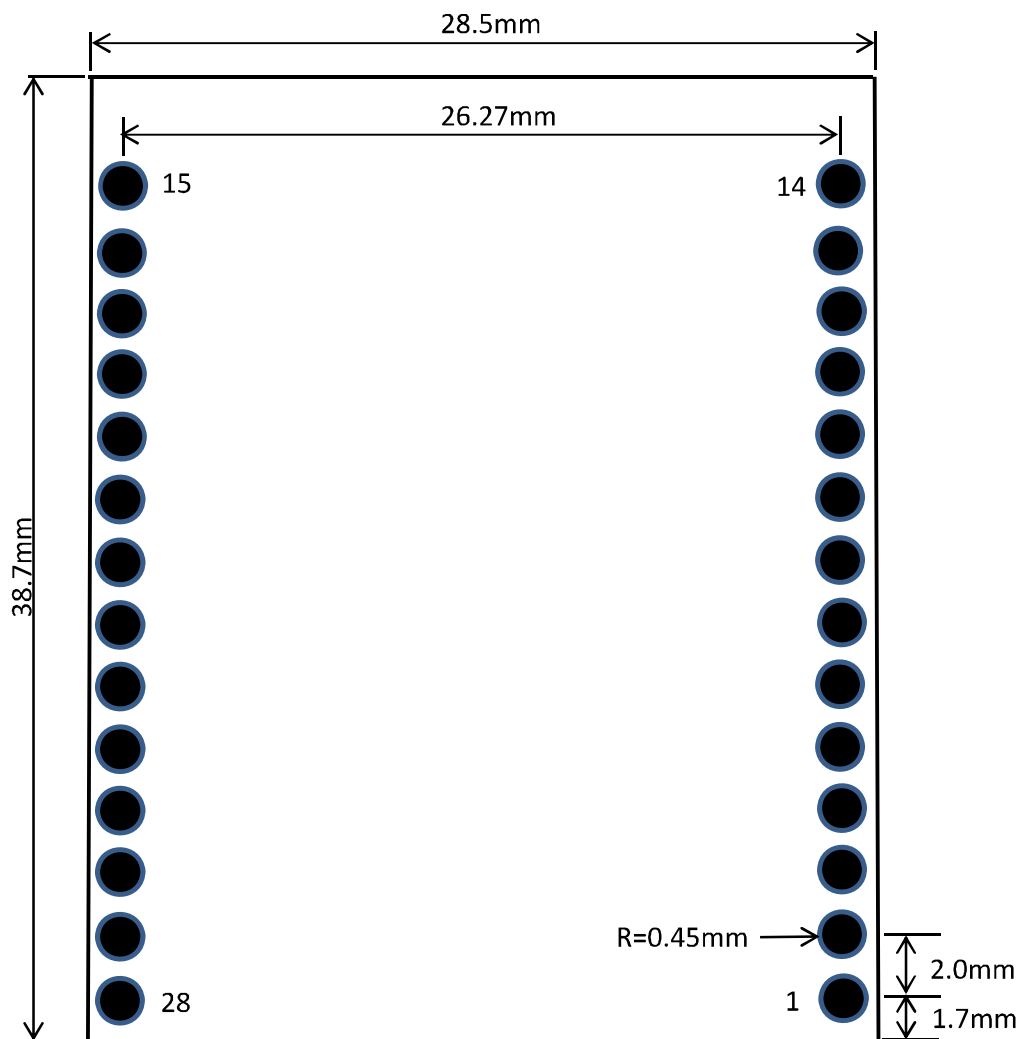
2. GENERAL SPECIFICATION

Bluetooth Specification	
Standard	IEEE 802.11b/g/n
Frequency band	2.4GHz
CPU	MIPS 24Kc core, 400MHz
RAM	16-bit SDRAM (128Mbit)
Flash memory	SPI NOR Flash (64Mbit)
Interface	I2S/I2C/UART/SPI/SPDIF
OS	Linux
RF Input Impedance	50 ohms
Operating Voltage	5.0V
Environment	Operating temperature: -20℃ ~ 70℃
	Storage temperature: -55℃ ~ 125℃



3. PHYSICAL CHARACTERISTIC

Module size





PIN Information

		IPEX1	IPEX0
15	● I2C_CLK		14 ● USB_DP
16	● I2C_SDA		13 ● USB_DM
17	● CPU_RST		12 ● ETH_RXN
18	● NRELOAD		11 ● ETH_RXP
19	● WPS		10 ● ETH_TXN
20	● NC		9 ● ETH_TXP
21	● GND		8 ● I2S_MICIN
22	● GPIO8		7 ● I2S_MCK
23	● GPIO6		6 ● I2S_CLK
24	● UART_RXD		5 ● I2S_WS
25	● UART_TXD		4 ● I2S_SD
26	● GPIO7		3 ● GND
27	● LED0		2 ● 5VIN
28	● GND		1 ● 5VIN



3.1 PIN DEFINITION

Pin#	Pin Name	Pad Type	Description
1	5VIN	I	Power supply: +5.0V
2	5VIN	I	Power supply: +5.0V
3	GND	-	Ground
4	I2S_SD	I/O	Serial data input/output
5	I2S_WS	O	Word select for stereo
6	I2S_CLK	O	Stereo clock
7	I2S_MCK	O	Must clock
8	I2S_MICIN	I	Data input
9	ETH_TXP	O	Ethernet port0 transmit pair
10	ETH_TXN	O	Ethernet port0 transmit pair
11	ETH_RXP	I	Ethernet port0 receive pair
12	ETH_RXN	I	Ethernet port0 receive pair
13	USB_DM	I/O	USB D- signal;carries USB data to and from the USB2.0 PHY
14	USB_DP	I/O	USB D+ signal;carries USB data to and from the USB2.0 PHY
15	I2C_CLK	I/O	I2C_Clock
16	I2C_SDA	I/O	I2C_Data
17	CPU_RST	I	CPU Reset
18	NRELOAD	I	Reset for facory
19	WPS	I	One key connect network
20	NC	-	Not connect
21	GND	-	Ground
22	GPIO8	I	Serial data connector to volume-



23	GPIO6	I	Serial data connector to volume+
24	UART_RXD	I	Serial data in
25	UART_TXD	O	Serial data out
26	GPIO7	I/O	GPIO multiplexed pin
27	LED0	I	WLAN LED
28	GND	-	Ground



4.ELECTRICAL AND THERMAL CHARACTERISTIC

4.1 Absolute Maximum Ratings

Parameter	Min	Typ	Max	Unit
+5.0V	4.75	5.0	5.25	V
Storage Temperature	-55		+125	°C
Operating Temperature	-40		+85	°C

4.2 Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit
+5.0V	4.75	5.0	5.25	V
Operating Temperature	-20		+70	°C

4.3 DC Characteristic

Rating	Min	Typ	Max	Unit
VCC	3.13	3.30	3.46	V
+5.V Rating Current TX		220	350	mA
+5.0V Rating Current RX		208	150	mA



5. PACKAGING INFORMATION

Wi-Fi Audio Module: BDTM1311

Size: 38.7mm * 28.5mm * 9mm

