

Up2Cast AMP User Manual

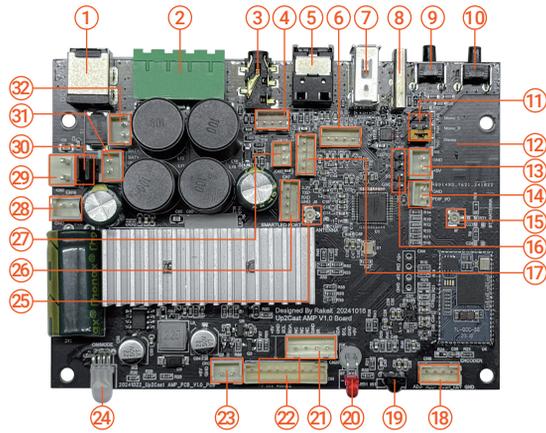
1. Introduction

Up2Cast AMP is a Bluetooth amplifier that supports LE Audio and Auracast broadcast function, which lets you build audio amplifier or active speakers that can broadcast audio or receive broadcast audio to form a series of speakers grouped wirelessly. Up2Cast AMP can provide max 50Wx2 L&R channels with AUX and optical input, USB port for USB flash drive & connection to PC, all these audio inputs can be broadcast to devices that also has Auracast function.

2. What's in the box



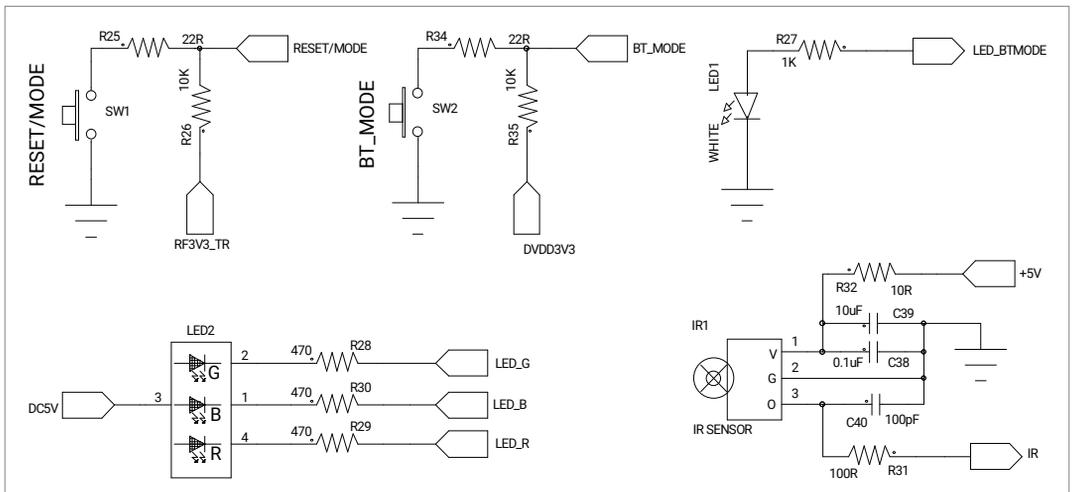
3. Interface



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|-----------------------|---|--|
| 1. DC input (12V-24V) | 6. Microphone in (PH2.0-4P) (current no function) | 11. Jumper Switch for L Mono, R Mono or Stereo |
| 2. Speaker out | 7. USB Type-A Port | 12. Onboard Bluetooth Antenna |
| 3. AUX in port | 8. USB Type-C Port (USB DAC) | 13. 5V output (PH2.0-2P) |
| 4. AUX in (PH2.0-2P) | 9. Auracast button | 14. SPDIF in (current no function) |
| 5. Optical in port | 10. Input Mode/Reset button | 15. External Bluetooth Antenna port |
| | | 16. GPIO (PH2.0-4P, maintenance use) |
| | | 17. AUX out (PH2.0-4P) |
| | | 18. Encoder (PH2.0-4P) |
| | | 19. IR Receiver |
| | | 20. Auracast LED |
| | | 21. OLED (PH2.0-4P) |
| | | 22. OLED+IR (PH2.0-8P) |
| | | 23. 5V output (PH2.0-2P) |
| | | 24. Mode LED |
| | | 25. Bluetooth BLE antenna |
| | | 26. Serial output (PH2.0-4P) (current no function) |
| | | 27. Subwoofer output (PH2.0-2P) |
| | | 28. DC output (PH2.0-2P, control by power switch) |
| | | 29. Power switch (PH2.54-2P) |
| | | 30. Jumper switch for power switch |
| | | 31. DC output (PH2.0-2P) |
| | | 32. DC input (PH2.0-2P) |

- * 9. Auracast button: Start Auracast broadcast (except in Auracast receiver mode). In Auracast receiver mode, short press will enter Bluetooth mode and start Auracast broadcast. In Auracast receiver and Bluetooth mode, long press will reset the connection.
- * 11. Jumper Switch for L Mono, R Mono or Stereo: The jumper position will decide which mode Up2Cast AMP is. If set to L Mono/R Mono mode, both speakers output will output L channel audio only or R channel audio only.
- * 14. External Bluetooth Antenna port: In order to use external Bluetooth antenna, remove the resistor on R68 and mount the resistor on R71.
- * 27. Jumper switch for power switch: Remove both jumpers if you want to connect an external power switch.

4. Diagram for external buttons, LED and IR receiver



5. Input Modes

5.1. Bluetooth Mode

Bluetooth input mode, you can connect mobile device through Bluetooth to playback music. When in Bluetooth mode, the blue LED will flash slowly. When in pairing mode, the blue LED will flash quickly. When connection is established, the blue LED will stay on. Long press the Auracast button to disconnect current connection and enter pairing mode.

5.2. Line in Mode

Connect external music source through the AUX in port or the PIN to play music. When switch to Line in mode, the green LED will flash slowly, once it detects an input the LED will stay on.

5.3. USB DAC Mode

Connect PC using a USB Type-C cable and play the audio from the PC, the board will act as an audio output device for the PC. When switch to USB DAC mode, the yellow LED will stay on.

5.4. USB Flash Mode

Plug in a USB flash drive with music files for playback, support formats are MP2, MP3, WMA, APE, FLAC, AAC, MP4, M4A, WAV (IMA-ADPCM&PCM), AIF, AIFC. When switch the USB flash mode, the Red LED will stay on.

The USB flash drive file system needs to be Fat16, Fat32 or exFat.

5.5. Optical Mode

Playback music from the optical input, sample rate is 48K. When switch to optical mode, the purple LED will stay on.

5.6. Auracast Receiver Mode

Receive audio from another device that broadcast audio using Auracast broadcast function. When switch to Auracast receiver mode, the cyan LED will flash slowly, when broadcast audio is received, the cyan LED stay on.

When enter Auracast receiver mode, Bluetooth may reconnect, but it will disconnect immediately. If no broadcast audio is received within 10 seconds, long press the Auracast button (release after hearing the prompt tone) to re-initiate the broadcast receiving request.

6. Auracast Broadcast

In any mode other than Auracast receiver mode, press the Auracast button, the Auracast LED will turn on and the audio from the current audio input will be broadcast out. Press the Auracast button again to turn off the broadcast and the Auracast LED will turn off. When turn on Auracast broadcast in Bluetooth mode, the broadcast device and the receiver device volume will be control in sync. You will need to turn the receiver volume to 100% to have the same volume as the broadcast device. All other mode, the broadcast device and receiver device volume are control separated.

7. APP

Download the free Go Control APP from App Store for iOS devices and Google Play for Android devices.

Go Control APP lets you control playback, volume, EQ, change input mode and more.



8. Specification

Bluetooth	SBC, aptX, aptX HD, aptX LL, aptX AD, LE Audio
Bluetooth Distance	30M
Bluetooth Broadcast	Auracast
Bluetooth Broadcast Distance	10M
Power Input	12V – 24V
Audio Input	AUX in Optical in USB Type-A port (for USB flash drive) USB Type-C port (for PC connection)
Audio Output	Speaker out Analog out (PH2.0-4P)
Speaker Power	30Wx2@8Ω load at 24V THD+N<=10% 25Wx2@8Ω load at 24V THD+N<=1% 35Wx2@4Ω load at 18V THD+N<=10% 28Wx2@4Ω load at 18V THD+N<=1%
Speaker Impedance	4Ω- 8Ω
Frequency Response	20Hz – 20kHz
Size	110*80*22mm

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