

Item	Qty	Link	Approx. price, USD (Mar 2017)
Raspberry Pi 3B CanaKit (with power supply and heatsinks)	1	Amazon link to kit	42
HiFiBerry DAC+ Pro card	1	Amazon link to DAC	48
HighPi Raspberry Pi Case for Raspberry Pi2 and HiFiBerry	1	Amazon link to case	16
SanDisk Ultra 64GB microSDXC UHS-I Card	1	Amazon link to SD card	22
USB WiFi adapter with Antenna – Detroit DIY Electronics 6465800	1 ^a	Amazon link to WiFi	13

(a) The last item is needed only if the streamer will be using WiFi.

Basic Assembly Instructions

- 1) From the [Volumio site](#), download the software for Raspberry Pi, and flash the SD card in your computer. **Notes:** (a) You can use [Win32 Disk Imager](#) as software to flash the SD card. (b) If your computer doesn't have a micro-SD slot, you'll need something like the [IOGear SD/microSD/MMC reader writer](#).
- 2) Insert the flashed microSD card into the RPi3. The SD slot is on the bottom side of the board.
- 3) Assemble the DAC to the main board: First, attach the 4 supplied nylon standoffs to holes in the RPi3 board by threading the nylon screws from beneath, through the board, into the standoffs. Then, push the DAC onto the GPIO connector, with the male threaded part of the standoffs going through holes in the DAC. Secure with the supplied nylon nuts. (If the standoffs are mounted the other way up, the assembled boards won't fit into the case.)
- 4) Put unit into case: First, snap off the case knockout for the RCA jacks. Insert the unit into the case, noting the molded directions about sliding and snapping. When it's done right, all connectors will line up with holes in the case.
- 5) Connect the jacks on the DAC board to your audio system with a suitable RCA-style cable.
- 6) Attach the WiFi adapter (dongle) and/or an Ethernet cable.
- 7) Attach the supplied power supply and plug in to a power outlet. **There is no need for keyboard or monitor.**
- 8) Shortly, the device will play Volumio's "ready" tones. It may take a few minutes longer for networking to stabilize.
- 9) For Ethernet, find the IP address of the streamer and open in your web browser by typing in the IP address. (Your router's web interface should show the addresses of attached devices.) For Wifi, connect to the device's own hotspot (SSID Volumio, password volumio2) the first time.
- 10) Click the gear symbol to configure your streamer, and enjoy!

Notes:

- The streamer can find music on local drives, USB drives, network drives, or online radio, using MPD protocol. If you use a DLNA app (e.g., BubbleUPnP on Android), Volumio will act as a DLNA renderer.
- For WiFi use, it's easiest to connect the first time by Ethernet and configure networking. If you need to use Wifi for the first connect, use the streamer's own hotspot (see above), then click the gear to configure your network.
- The RPi3 has built-in WiFi, but the USB WiFi dongle specified has much better range, due to the larger antenna. Volumio disables the built-in WiFi automatically when it detects the dongle.
- If you want a streamer with digital out, the RPi3 with Volumio outputs digital audio via USB, so you won't need the DAC card. For SPDIF output more carefully designed for audio, HiFiBerry makes the Digi+ Pro card.
- Volumio maintains an online forum where users can seek help.
- The RPi3 and DAC+Pro were reviewed and tested [\[here\]](#) and [\[here\]](#).