

Dell Wyse 3040 - Volumio notes



Test setup with Dell Wyse 3040, Pro-Ject Pre-Box S2 Digital and Khadas Tone 2 Pro

Intro

Apart from the relatively slow boot (common to all Intel Atom X5-Z8350 platforms I'm afraid) I have not found anything the Dell Wyse 3040 can't do with Volumio. It has been pre-installed with **Volumio-3.224-2022-02-07-x86_amd64**.

Note: the Installation wizard was interrupted in order to allow a proper shutdown. Please restart the Wizard when you start your installation.

Support

Ask in the "X86 Hardware issues /WiFi, DAC..." thread (so others may profit) or if it really has to be: PM or email me directly (email gkkpch@volumio.org).

Power up

Plug in power, you'll see the power button's light appear and then after a few seconds switch off. This is normal behaviour for everytime you connect power to the unit.

BIOS

The unit has been reset to factory settings, note that the bios password is needed to make modifications. The default password is **Fireport**.
A DP → HDMI adapter may be needed. I used a cheap 5€ HDMI1.1 version from Amazon, it worked fine. Not sure an adapter will work with HDMI Audio out (untested).

To be able to boot from a USB stick, the boot order needs to be set accordingly. This has been done for the initial setup, but you can't make it stick.
In case you wish to update the BIOS or need to modify the boot order, connect a monitor and keyboard (wireless fine).
Plug in power, press the power button and start hitting the F12 key until you see the Dell Logo appearing with a blue line underneath. Follow the menu.

Audio/ Headphone Out

Intel Atoms with Baytrail/ Cherrytrail SoCs are a bit different from other x86 configurations, especially regarding sound. It is still a little WIP from Volumio's point of view, but most configurations I have seen and worked on to day are fine (including this Dell).

Background: the sound card comes with an RT5672 codec, but it's configuration depends on the maker and can either have speakers (lineout), headphones or both.
2 Known configurations have headphones and speaker. Switching is done by catching a "jack" event when headphones are plugged in or out.
This works, but switching the mixer at the same time has not been implemented yet.
With the Dell there is no jack event, so the mixer should default to headphones.

Audio/ USB

Onboard audio on x86 devices is no different from arm boards and therefore never the greatest. In this case it is reasonable, but I recommend using USB Audio for this one.

It has been tested with three USB Audio devices, a Khadas Tone board, a Khadas Tone 2 Pro and a Pro-Ject Pre Box S2 Digital, all working without glitches or stutter. USB seems to be fine in this case.

WiFi/ Bluetooth

Note the DELL Wyse 3040 has no WiFi (as stated on the forum), but I can recommend to use a TP-LINK Archer T3U AC1300 mini or plus USB dongle. The driver was added as of version 3.197.
Note the TP-Link does not support Bluetooth, for that you would need to find your own combo dongle. Don't hesitate to ask for driver support.
I'll integrate it in the x86 kernel when not done yet.
But of course, only when available as a DKMS package on the internet.

Wireless dongles with RTL8812BU/ RTL8822BU/ RTL8811CU/ RTL8812AU chipsets will work out-of-the-box.

Other sources of information

<https://www.parkytowers.me.uk/thin/wyse/3040/>

Parkytowers is a site with specific information on re-purposing Thin Clients, Dell Wyse 3040 being one of them.

Alternatives to Dell Wyse 3040

You will find many of these sort of devices on auction sites like eBay, 3-6 year old "low spec" thin clients with more than enough power to run Volumio 3.
Other examples you will find from HP, Igel, Fujitsu etc.
Try them or encourage friends to use them!

(Re-)Installation (the pre-install way)

For installation (other than OTA) you will need:

- a DP capable monitor and a DP → DP cable or
- an HDMI capable monitor, a DP → HDMI adapter and an HDMI → HDMI cable
- a keyboard and a mouse

Preparation

- Start with downloading the latest (or known working) Volumio 3 image for x86_amd64.
- Flash it to a USB stick, my preferred windows tool: **Rufus**
- Linux/Mac users know how to use “dd”

Boot from USB

- Insert the USB stick in one of the USB ports.
- Apply power, the power button's led will light up shortly, wait till it goes off a few seconds later.
- Now press the power button.
- After 1 or 2 seconds, start hitting your keyboard's F12 key in a 1 second rhythm.
- Do this until the DELL logo shows with a blue bar underneath.
- If it doesn't and continues to boot, repeat the above and hit F12 in a higher rhythm.
- When the blue bar appears, you are entering the boot menu.
- Choose the USB UEFI to boot from and go.

Install to eMMC

The above boots Volumio from the USB stick, also good for testing a new version before installing. In case you want it to boot from the internal disk, boot from USB and then go to the System menu. Select “Install to Disk” and choose the 8GB eMMC flash. Follow the instructions when finished.

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