Distributor Guide

KHADAS VIM2

Transitioning from v1.2 to v1.4
CONTENTS:

TRANSITIONING FROM V1.2 TO V1.4

• Appearance
• Software
• Accessories
• Design
• Features
SUB-CONTENTS:

APPEARANCE

- Front
- Back
These 2 images show you the differences in appearance between the VIM2 v1.2 and v1.4, as seen from the “front” or “top” view.
These 2 images show you the differences in appearance between the VIM2 v1.2 and v1.4, as seen from the “back” or “bottom” view.
SUB-CONTENTS:

SOFTWARE

- ROM Images
- Cooling Fan
- SPI-Flash
- Version ID
SOFTWARE

All eMMC / SD-Card ROM Images downloaded from [https://dl.khadas.com/Firmware/VIM2/](https://dl.khadas.com/Firmware/VIM2/) will be compatible with both Khadas VIM2 v1.4 and v1.2 boards.

This is possible, as our ROM will automatically detect the “Version ID” of the VIM2 it is installed into.

Other notable software differences:

<table>
<thead>
<tr>
<th></th>
<th>v1.4</th>
<th>v1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROM Images</td>
<td>Fully Compatible</td>
<td>Fully Compatible</td>
</tr>
<tr>
<td>Cooling Fan</td>
<td>PWM</td>
<td>IO</td>
</tr>
<tr>
<td>SPI Flash</td>
<td>16MB</td>
<td>2MB</td>
</tr>
<tr>
<td>Version ID</td>
<td>Refer to Schematic</td>
<td>Refer to Schematic</td>
</tr>
</tbody>
</table>

Upgrade Via a USB-C

Upgrade On Windows

Preparation

- Download the [USB Upgrade Tool](https://docs.khadas.com/vim2/) and extract to a Windows executable.
- Run setup_v2.x.x.exe to install the tool.

Upgrading Steps

1. Open `USB_Burning_Tool_v2.x.x.exe`, `/ VIM2`
2. Connect your VIMs to your PC with a USB-C cable.
3. Place your VIMs into “Upgrade Mode”:
   - Long press the Power key without releasing it
   - Short press the Reset key and release it
   - Count to 10 seconds and then release the Power key
4. If you have performed steps 2 and 3 correctly, now all you need to do is to click the `Start` button.

[https://docs.khadas.com/vim2/](https://docs.khadas.com/vim2/)
SUB-CONTENTS:

ACCESSORIES

- New VIM Heatsink
- 3705 Cooling Fan
- A Better Cooling Solution
VIM2 v1.4 has 2 new accessories:

- New VIM Heatsink
- 3705 Cooling Fan
Users complained that VIM2 v1.2 had a noisy fan (3004 model) and poor heat dissipation. Due to the design and airflow direction, hot air bounced-off the side wall of the DIY Case, and recirculated, instead of exiting into the atmosphere. This caused increased heat levels, and the fan had to run quicker, resulting in more noise.

VIM2 v1.4 has a larger, and almost silent cooling fan (3705 model), as well as a heatsink (New VIM Heatsink) with thinner and more numerous fins. The direction of airflow is oriented such that hot air may exit the DIY Case through the button holes. In our tests, this resulted in significantly improved noise and heat levels.

*Side by side comparison showing the fan and heatsink positioning, and resultant airflow, between VIM2 v1.2 and v1.4.*
SUB-CONTENTS:

DESIGN

- Transformer
- Fan Header
- RTC Header
- XPWR Pads
To make room for the “New VIM Heatsink” and “3705 Cooling Fan” on v1.4, we had to replace the old transformer on v1.2 (GST5009M), with a much thinner one on v1.4 (Pulse H5120NL).
In addition, the cooling fan header on v1.4 is on the upper-right-hand-side. Whereas on v1.2, it is on the lower-left-hand side of the SBC.
RTC HEADER

The RTC header on v1.4 is on the lower-right-hand side, whereas on v1.2 it is on the lower-left-hand side.

RTC headers are useful for digital signage applications, wherein the SBC can be powered-on and off according to the real-time clock.
In response to customer requests for the ability to connect an external power switch, we’ve added XPWR pads to the bottom side of v1.4. These pads can be used to attach a soldered external power switch to VIM2 v1.4.

VIM v1.2 does not have this feature.
FEATURES

- VIN Port
- Khadas TST
- WiFi-Module
VIN PORT

VIM2 v1.4 no longer features the VIN port that was present on v1.2 next to the USB-C port.
VIM2 v1.4 is equipped with a new feature that enables developers to enter upgrade mode easily. Called “Terry’s Smart Tweezers” (TST), it can be activated simply by pressing the function key 3 times within 2 seconds, after power-on.

Once this is done, a VIM2 v1.4 will enter upgrade mode even if the boot loader is damaged. This feature will save a lot of time for many developers.
VIM2 v1.4 has the AP6398S (Pro / Max Versions) Wi-Fi module, whilst v1.2 has the AP6359SA.

The upgraded Wi-Fi module gives VIM2 v1.4 bluetooth 5.0, whereas v1.2 uses bluetooth 4.2.

VIM2 v1.4 Basic still has the original AP6356S module.
FINISHED READING:

MORE INFORMATION

- Email: hello@khadas.com
- Website: https://khadas.com
- ROM Images: https://dl.khadas.com
- Documentation: https://docs.khadas.com
- Technical Support: https://forum.khadas.com