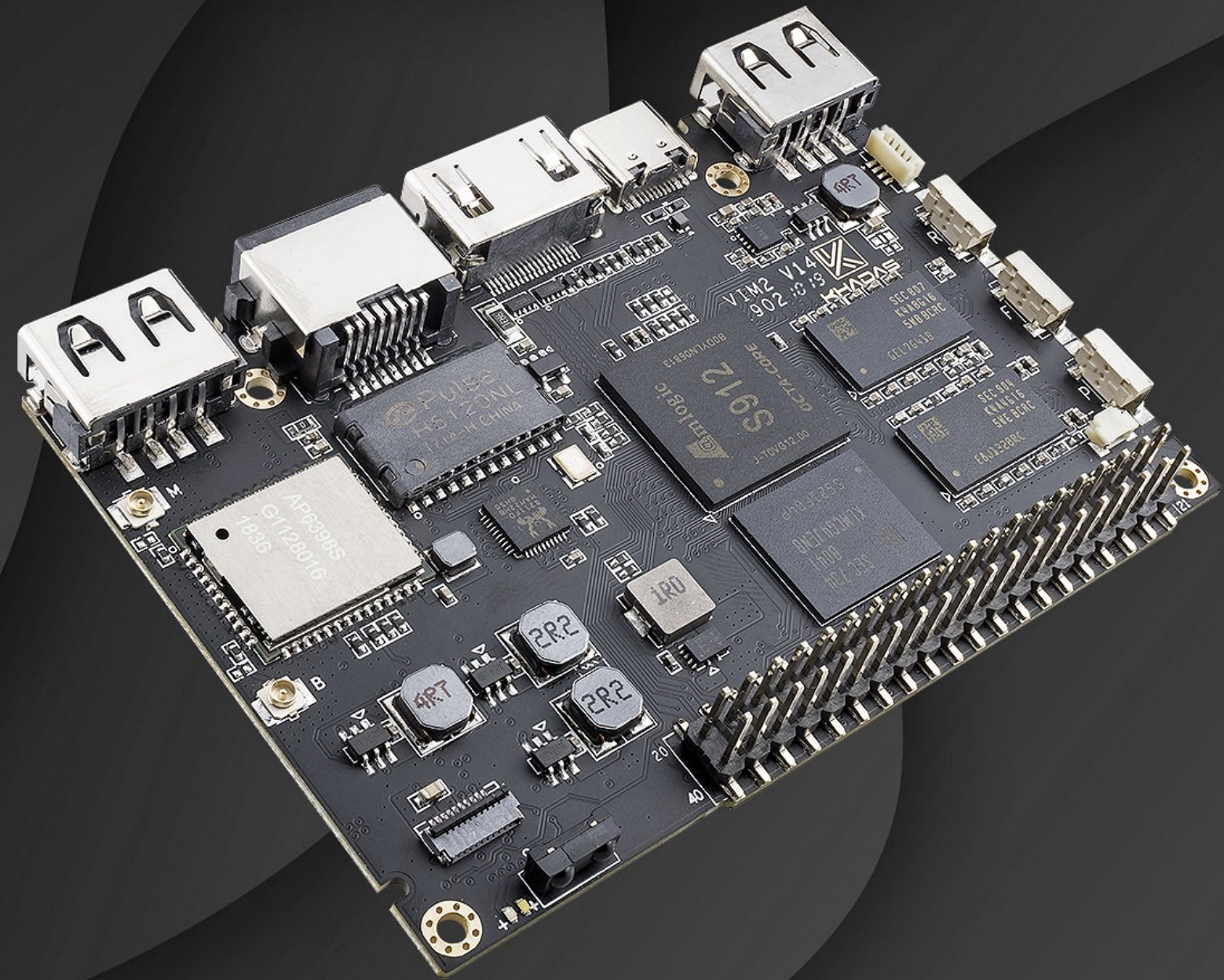Distributor Guide

KHADAS VIM2

Transitioning from v1.2 to v1.4

KHADAS

CONTENTS:

TRANSITIONING FROM V1.2 TO V1.4

- Appearance

- Software

- Accessories

- Design

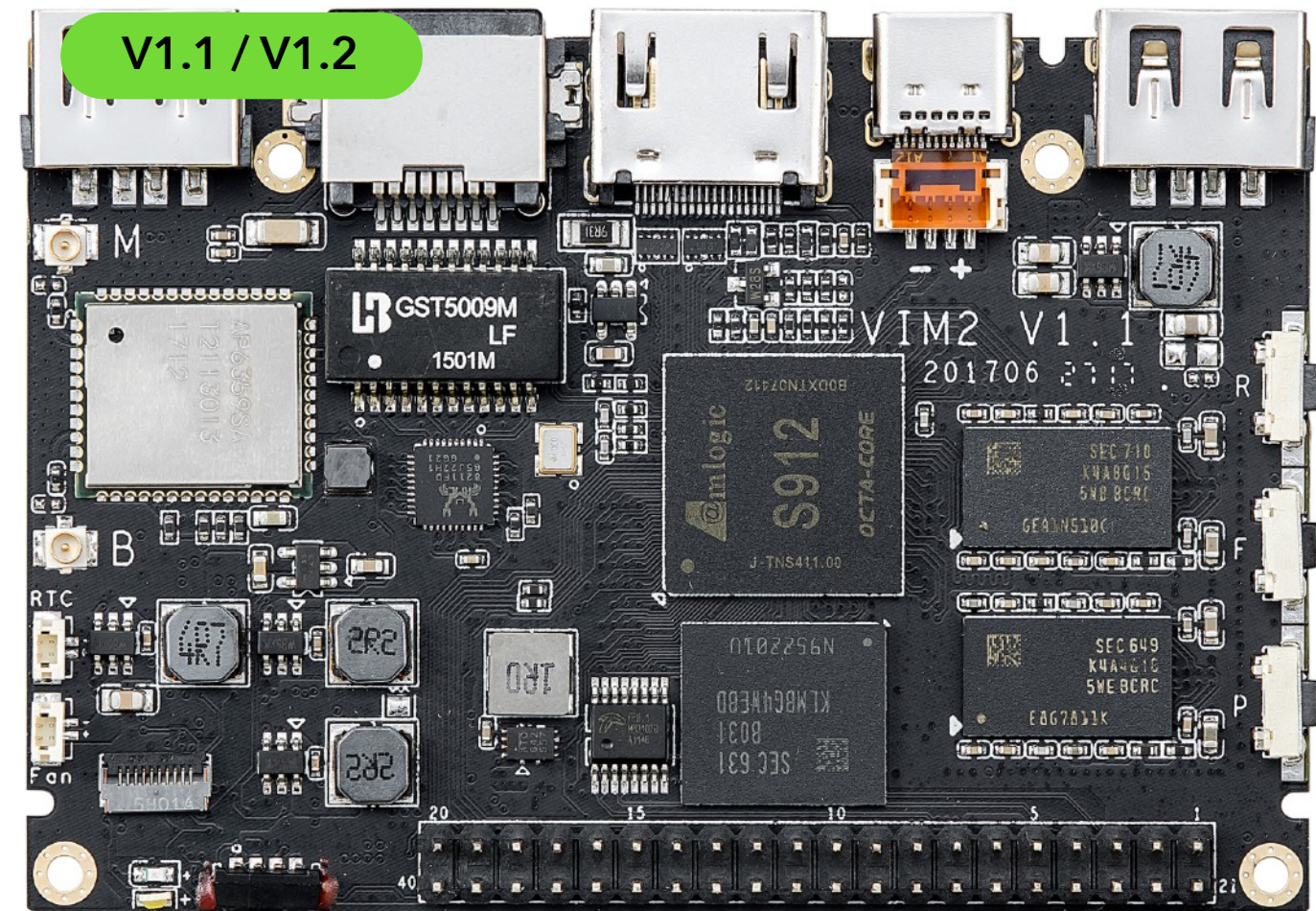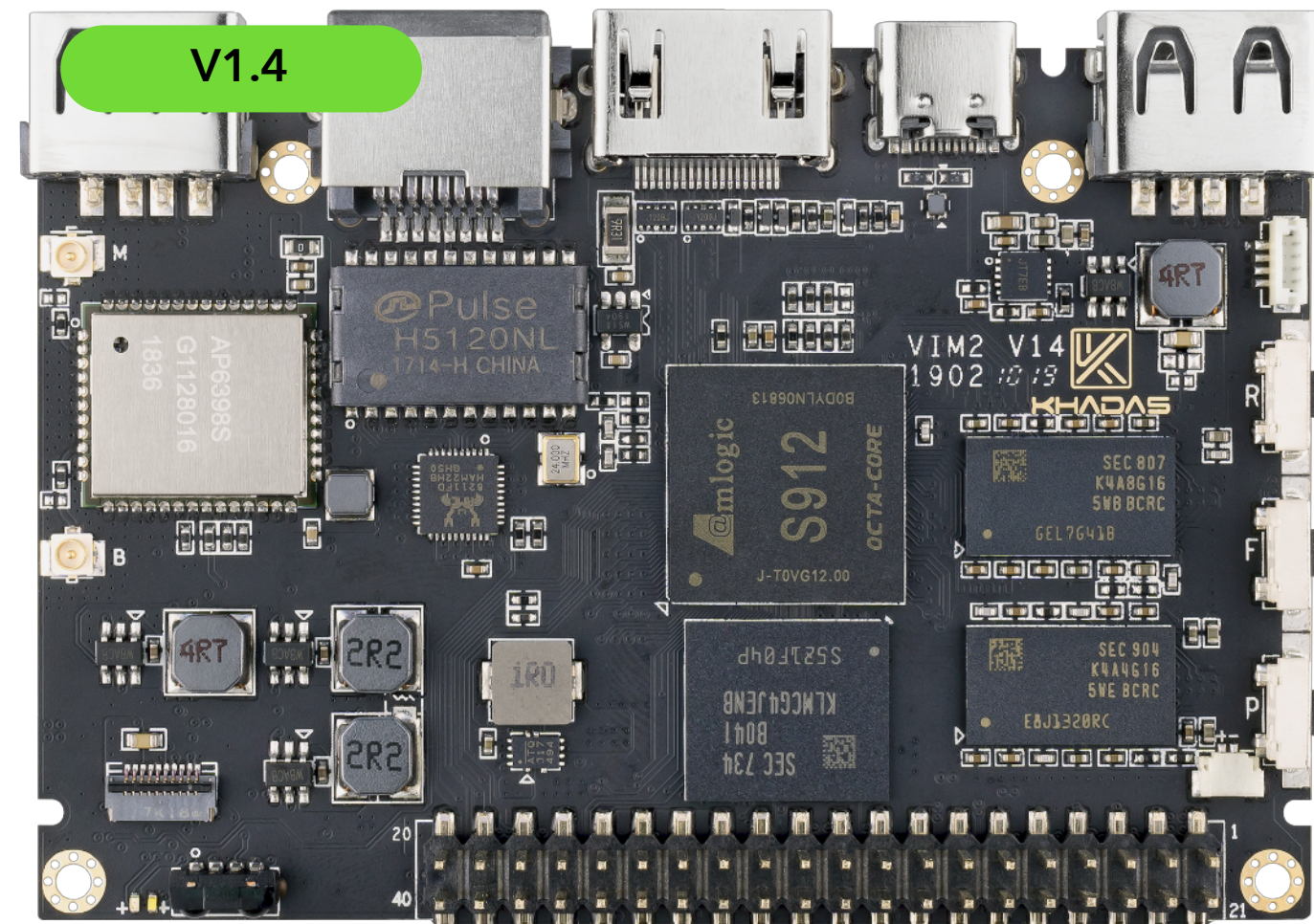- Features

KHADAS
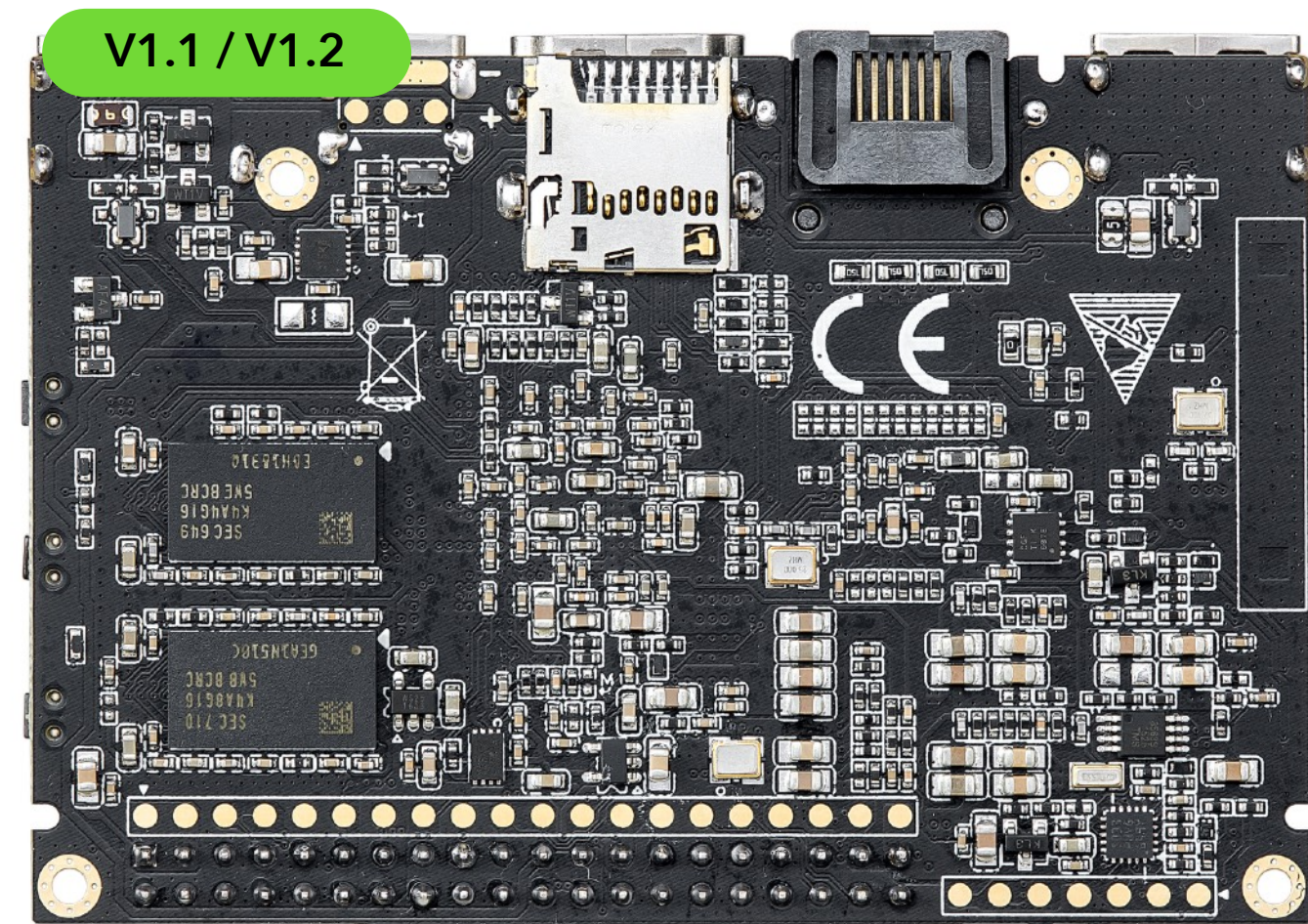
SUB-CONTENTS:

APPEARANCE

- Front

- Back

KHADAS

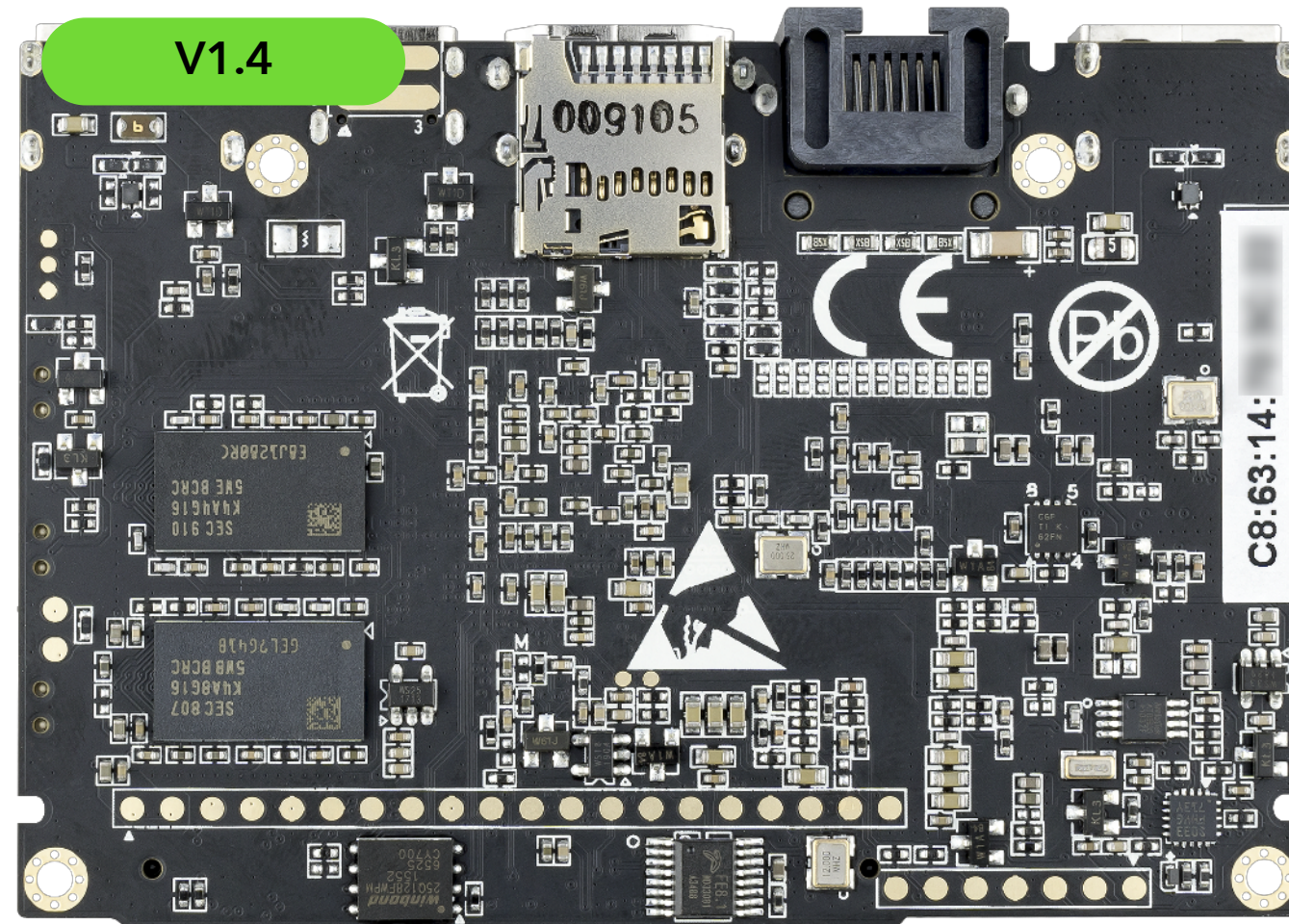# FRONT

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.

V1.4

V1.1 / V1.2

BACK

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.

V1.4

V1.1 / V1.2

SUB-CONTENTS:

SOFTWARE

- ROM Images

- Cooling Fan

- SPI-Flash

- Version ID

KHADAS

SOFTWARE

All eMMC / SD-Card ROM Images downloaded from 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:

	v1.4	v1.2
ROM Images	Fully Compatible	Fully Compatible
Cooling Fan	PWM	IO
SPI Flash	16MB	2MB
Version ID	Refer to Schematic	Refer to Schematic

VIM1 VIM2 Edge ToneBoard Firmware FAQ

▼ Getting Started

  Beginners Guide

  VIM2 Interfaces

  Enter Upgrade Mode

  Upgrade Using USB-C Cable

  Upgrade Android Using SD-Card

  Install LibreELEC

  Boot From External Media

  Extra Power Input

  GPIO Pin-Outs

▶ Development

▶ U-Boot

▶ Android

▶ Linux

▶ Fuchsia

▶ MCU

▶ Hardware

▶ Firmware

Upgrade Via a USB-C

Upgrade On Windows

Preparation

- Download the USB Upgrade Tool and extra
- Run `setup_v2.x.x.exe` to install the too
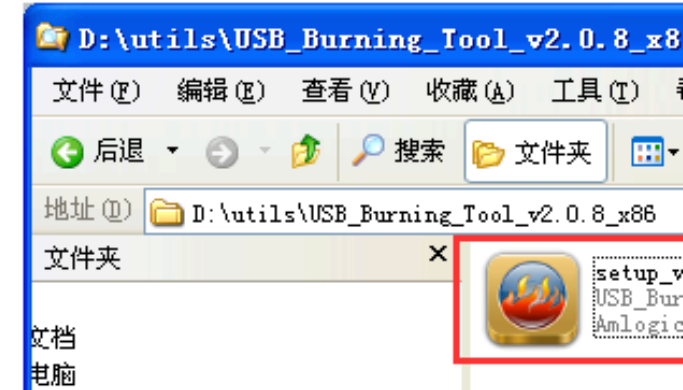
Upgrading Steps

Make sure that you have installed the correct

1. Open `USB_Burning_Tool_v2.x.x.exe`,
   / VIM2
2. Connect your VIMs to your PC with a USB-
3. Place your VIMs into "Upgrade Mode":
   - Long press the `Power` key without rele
   - Short press the `Reset` key and release
   - Count to 10 seconds and then release th
4. If you have performed steps 2 and 3 correc
   Now all you need to do is to click the `Star`

https://docs.khadas.com/vim2/

SUB-CONTENTS:

ACCESSORIES

- **New VIM Heatsink**

- **3705 Cooling Fan**

- **A Better Cooling Solution**

KHADAS

ACCESSORIES

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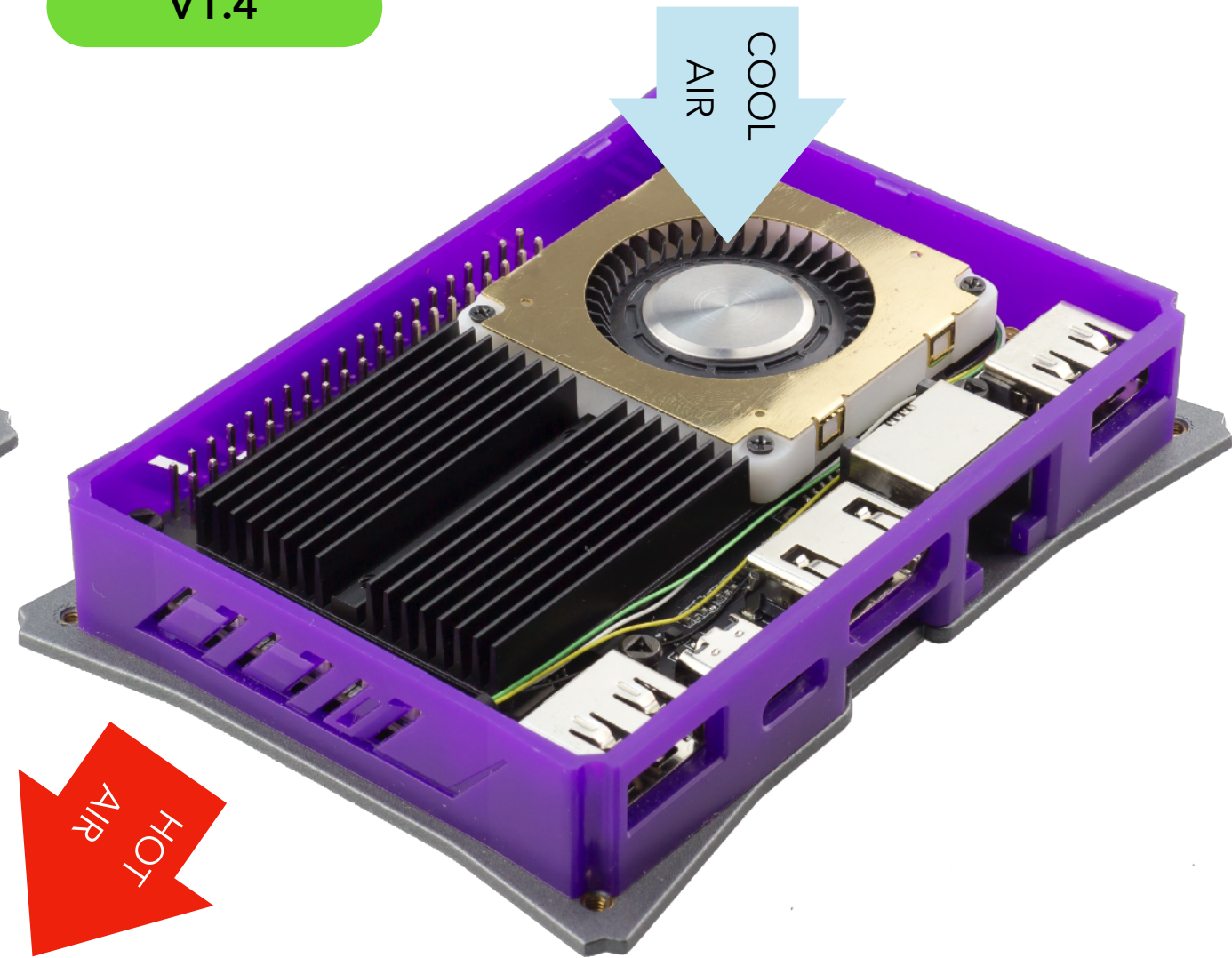
- New VIM Heatsink
- 3705 Cooling Fan

V1.1 / V1.2

COOL AIR

HOT AIR

V1.4

COOL AIR

HOT AIR

Side by side comparison showing the fan and heatsink positioning, and resultant airflow, between VIM2 v1.2 and v1.4.

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.
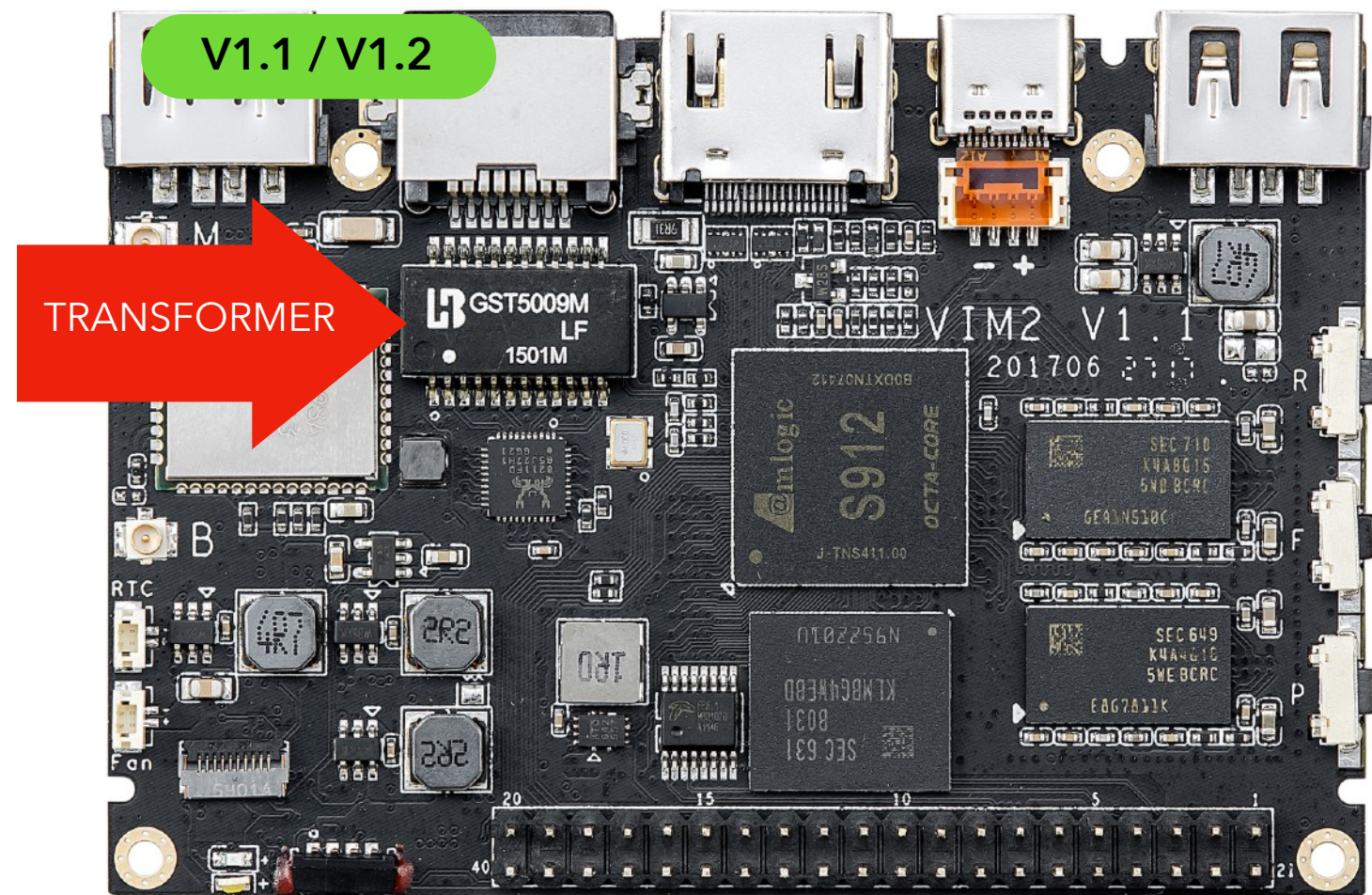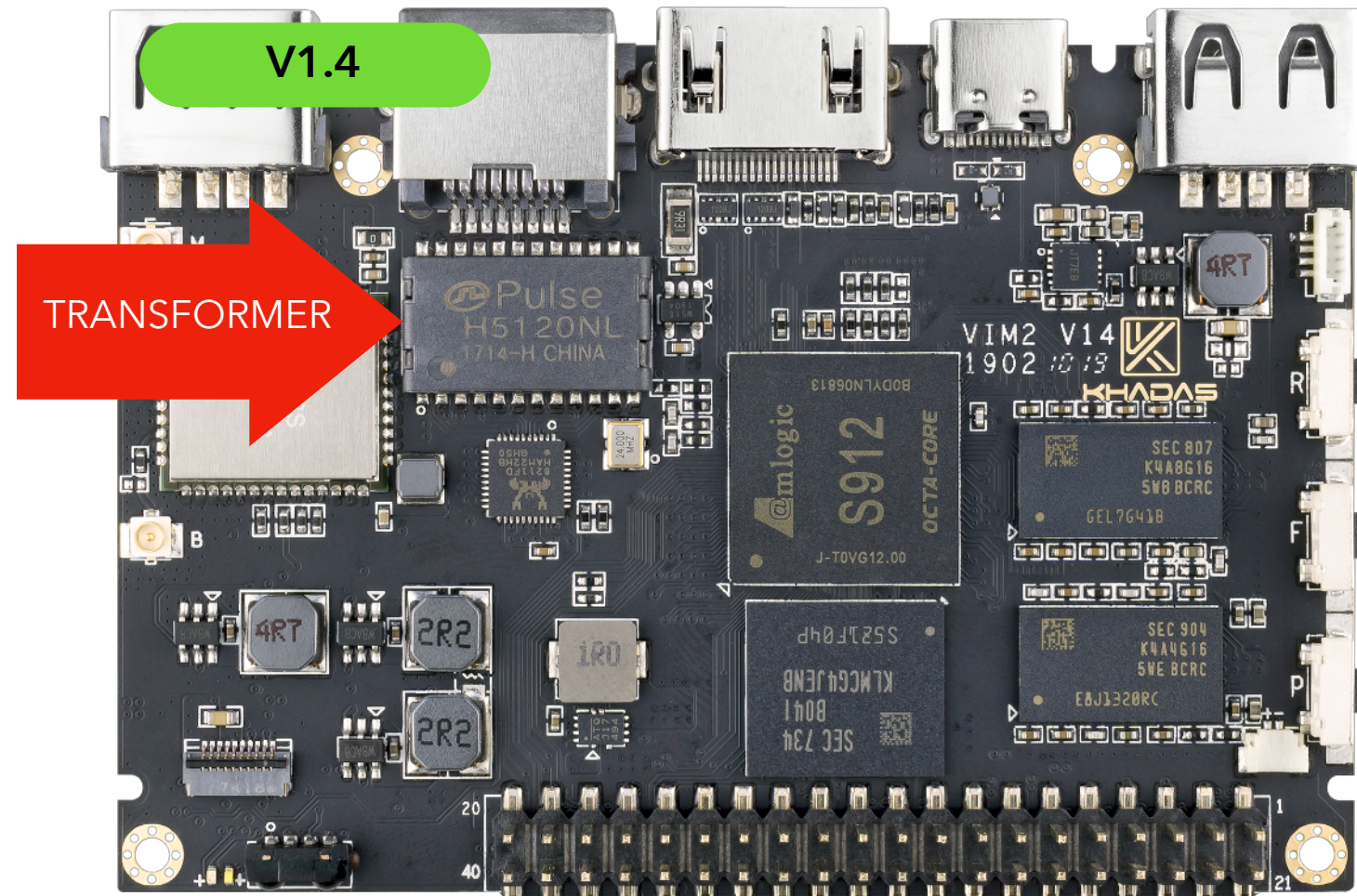
SUB-CONTENTS:

DESIGN

- **Transformer**

- **Fan Header**

- **RTC Header**
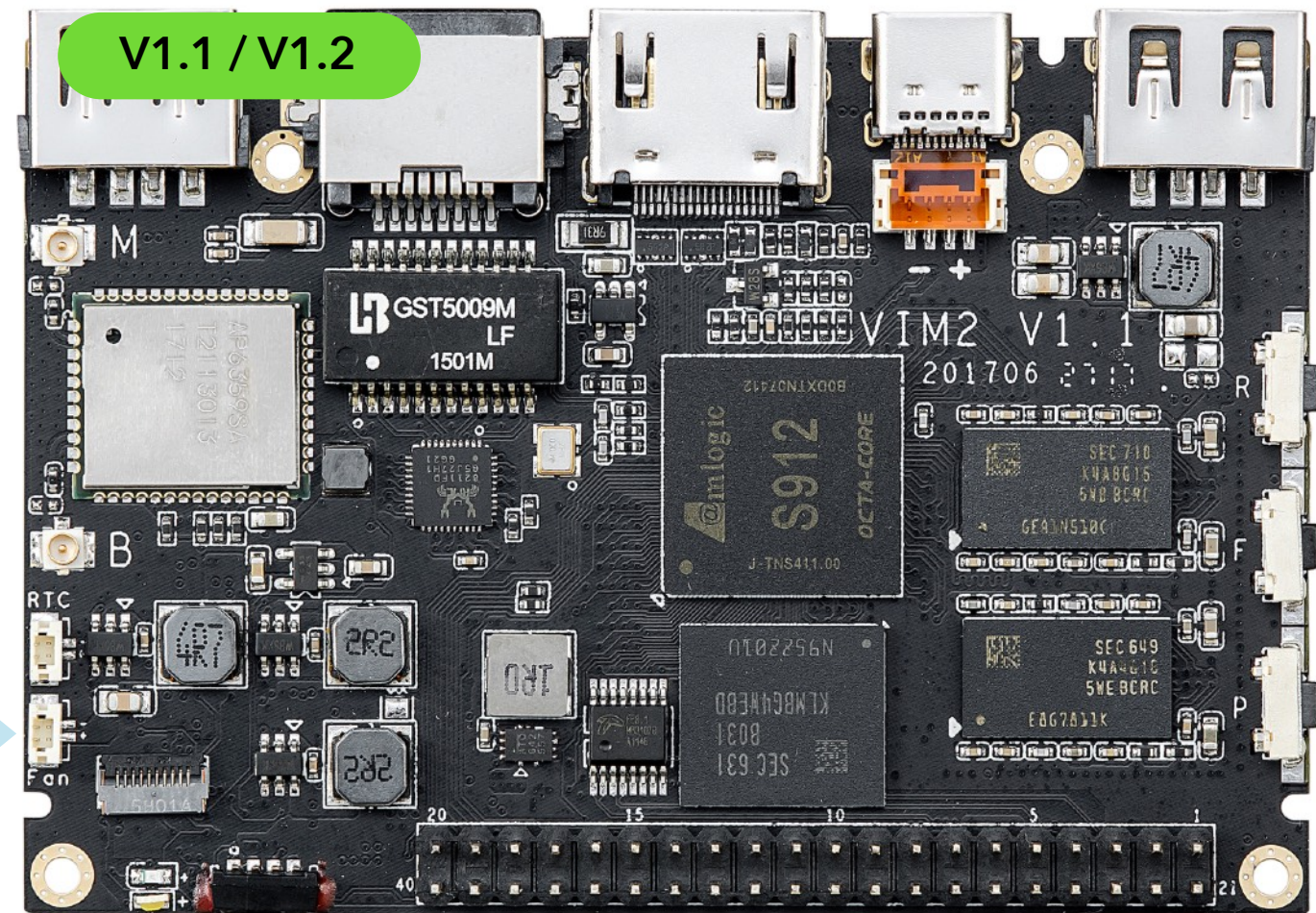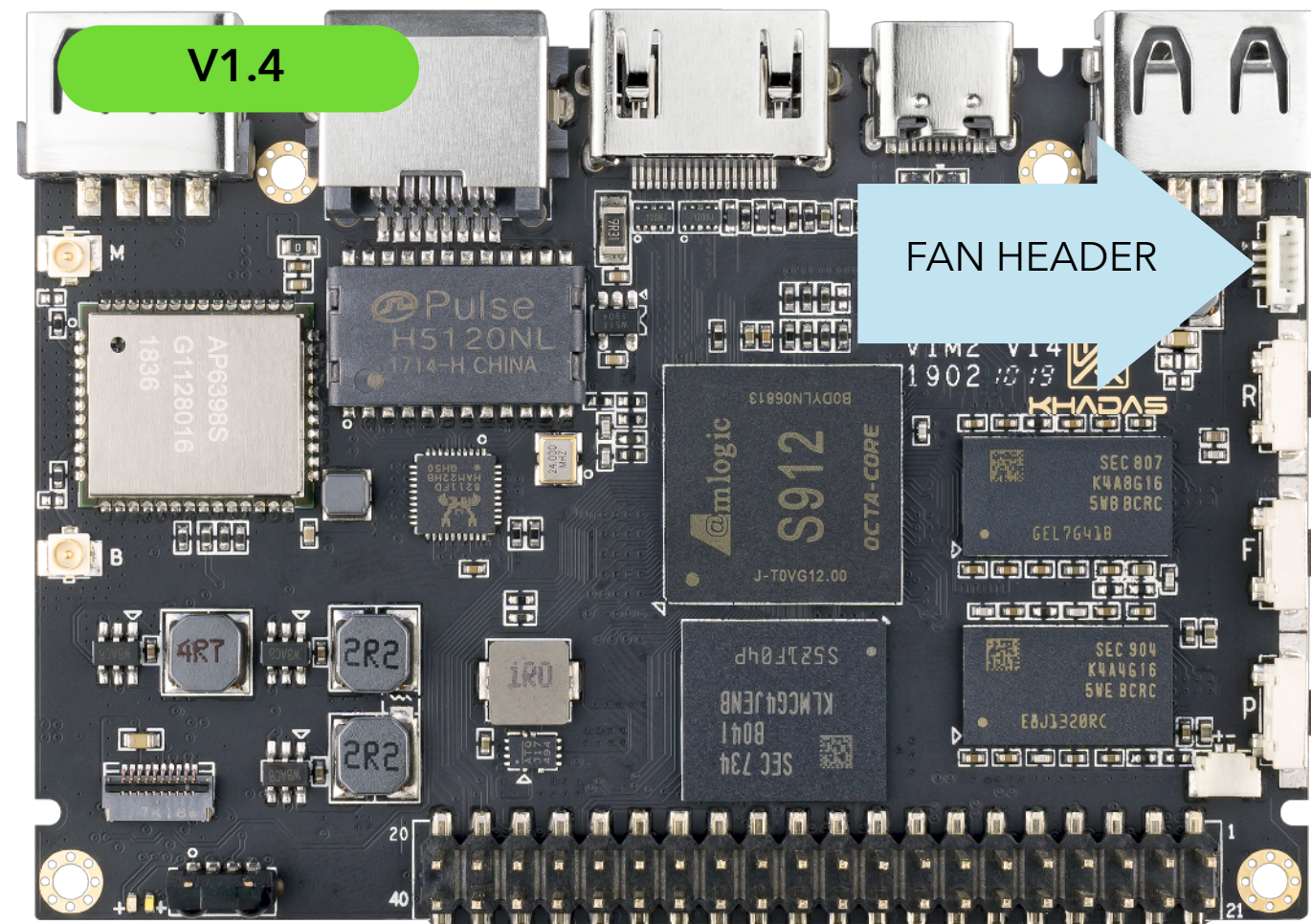
- **XPWR Pads**

KHADAS

TRANSFORMER

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).

FAN HEADER

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.

V1.4

FAN HEADER

V1.1 / V1.2

FAN HEADER

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.

V1.4
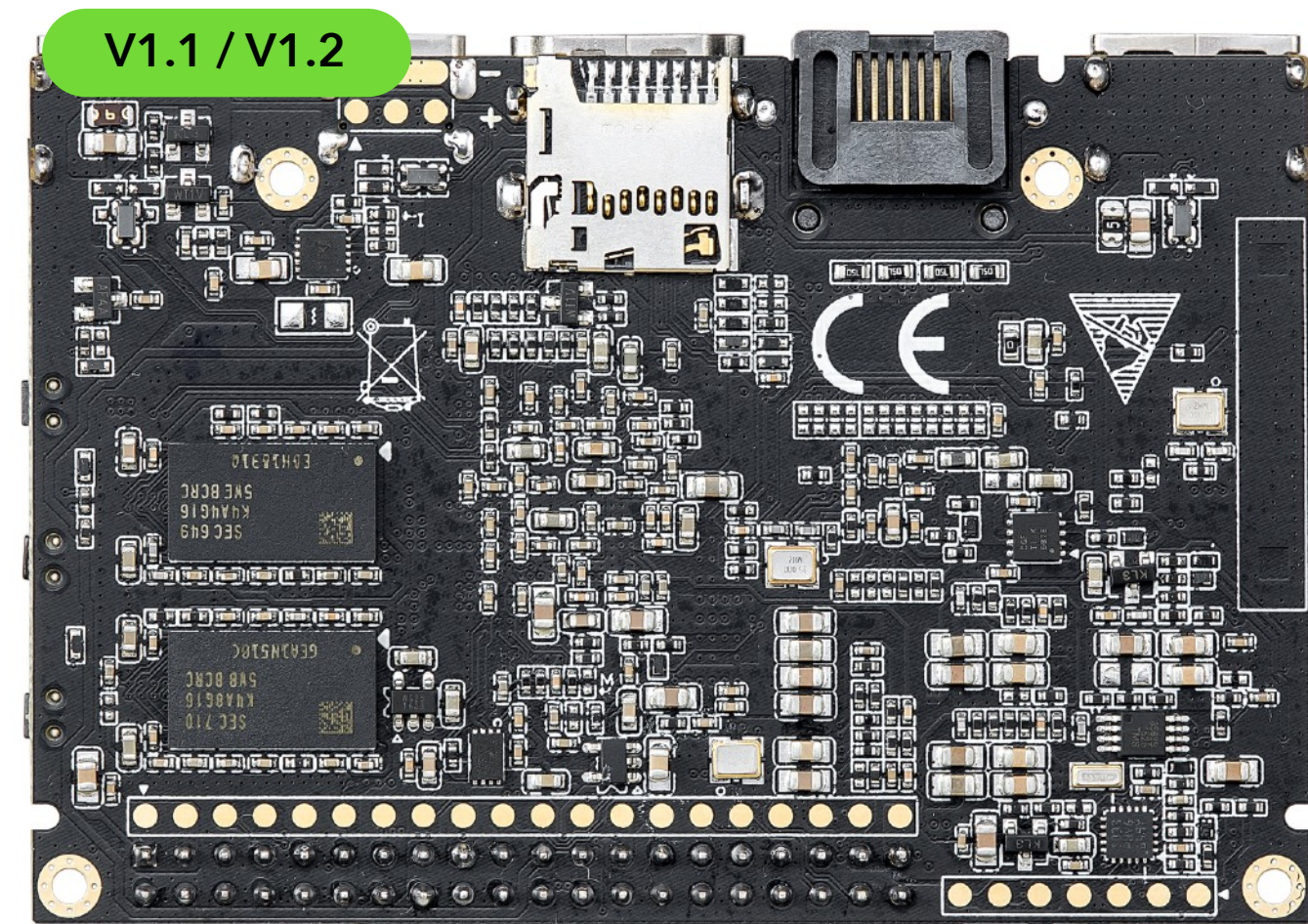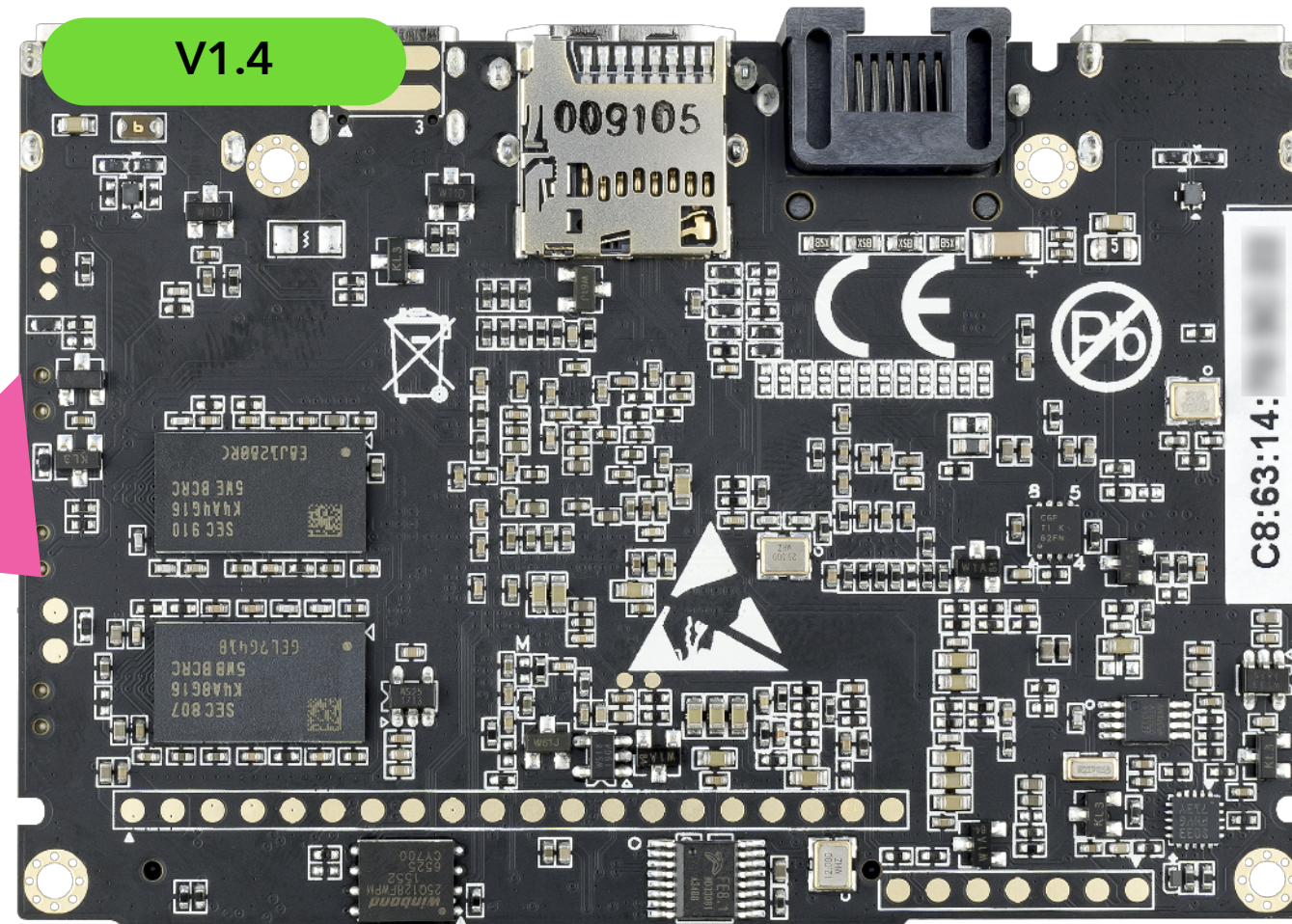
RTC HEADER

V1.1 / V1.2

RTC HEADER
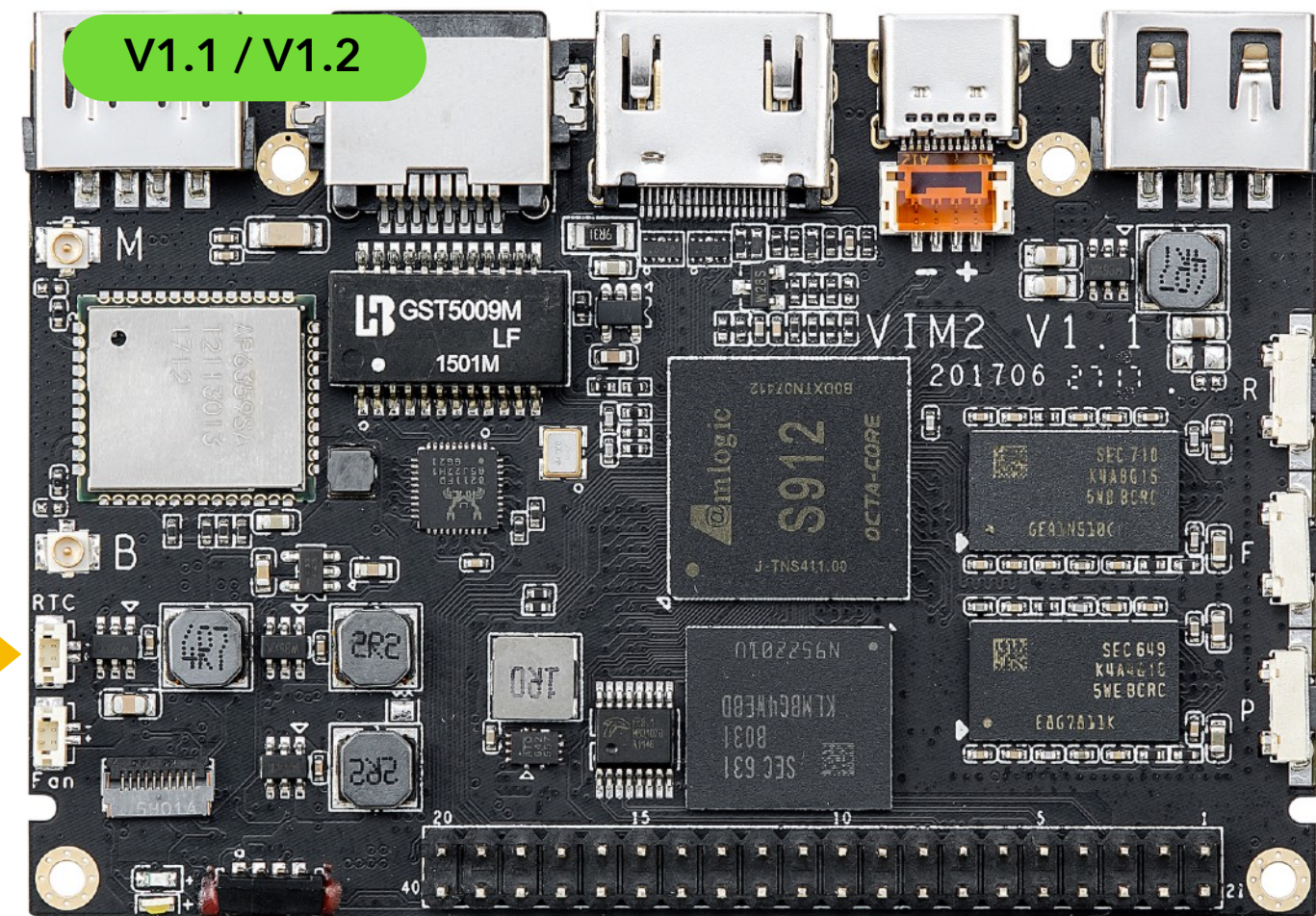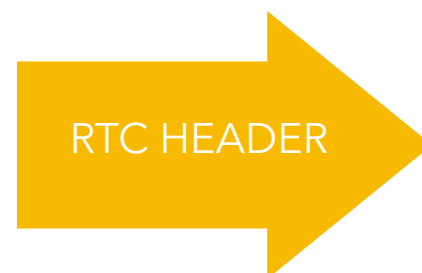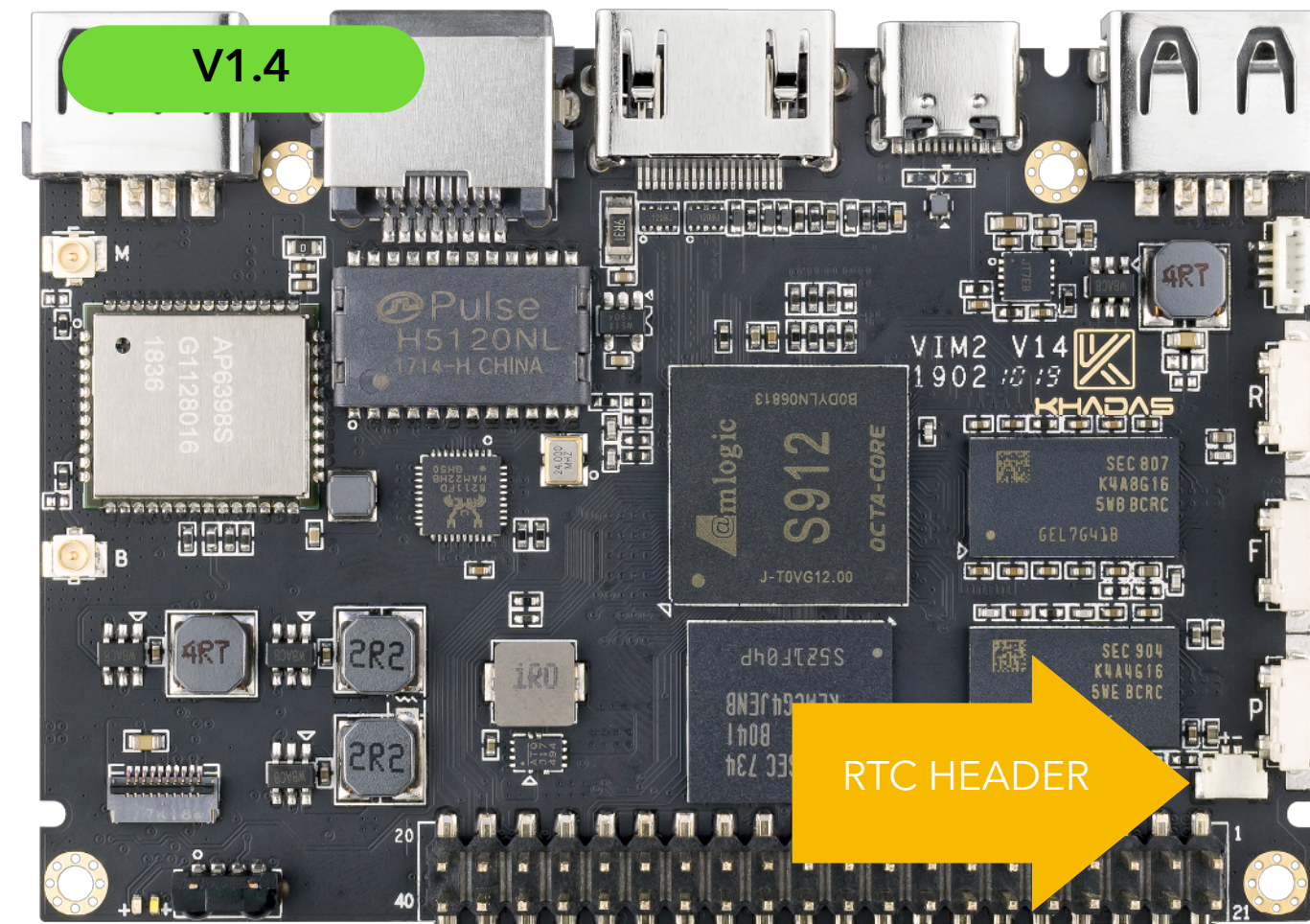
XPWR PADS

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.

V1.4

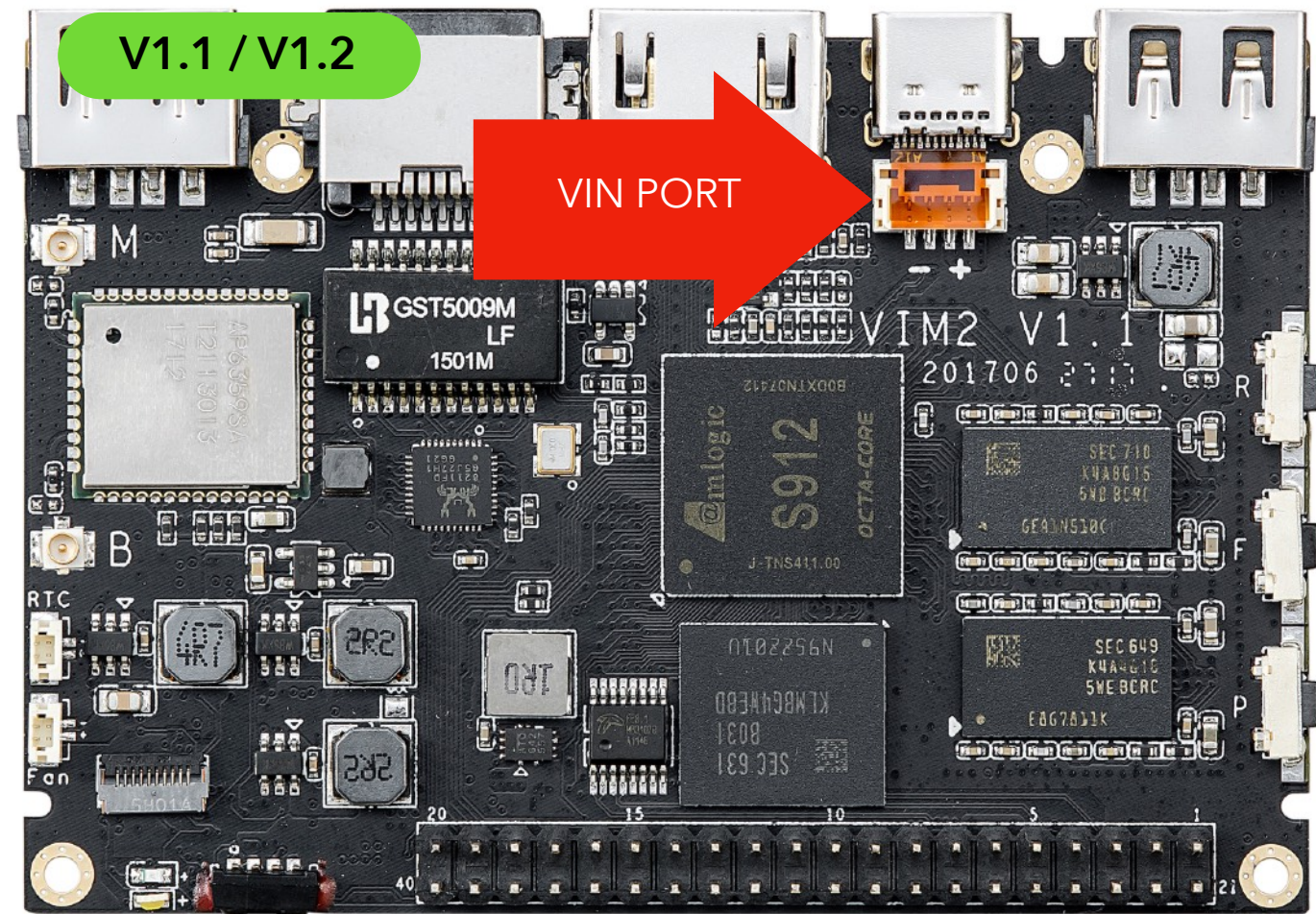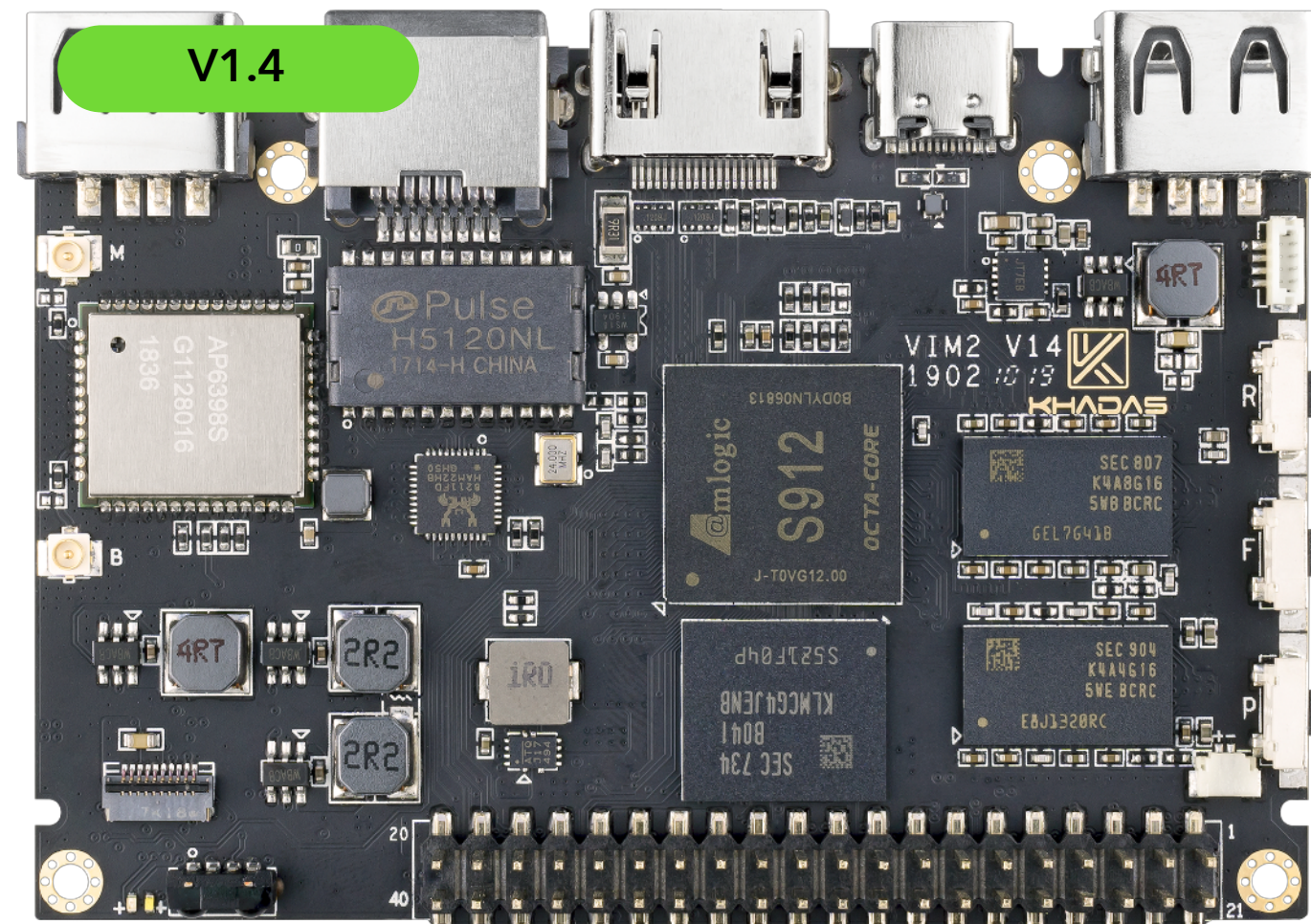XPWR PADS

V1.1 / V1.2

SUB-CONTENTS:

FEATURES

- VIN Port

- Khadas TST

- WiFi-Module

KHADAS

VIN PORT

VIM2 v1.4 no longer features the VIN port that was present on v1.2 next to the USB-C port.

V1.4

V1.1 / V1.2

VIN PORT

KHADAS TST

V1.4
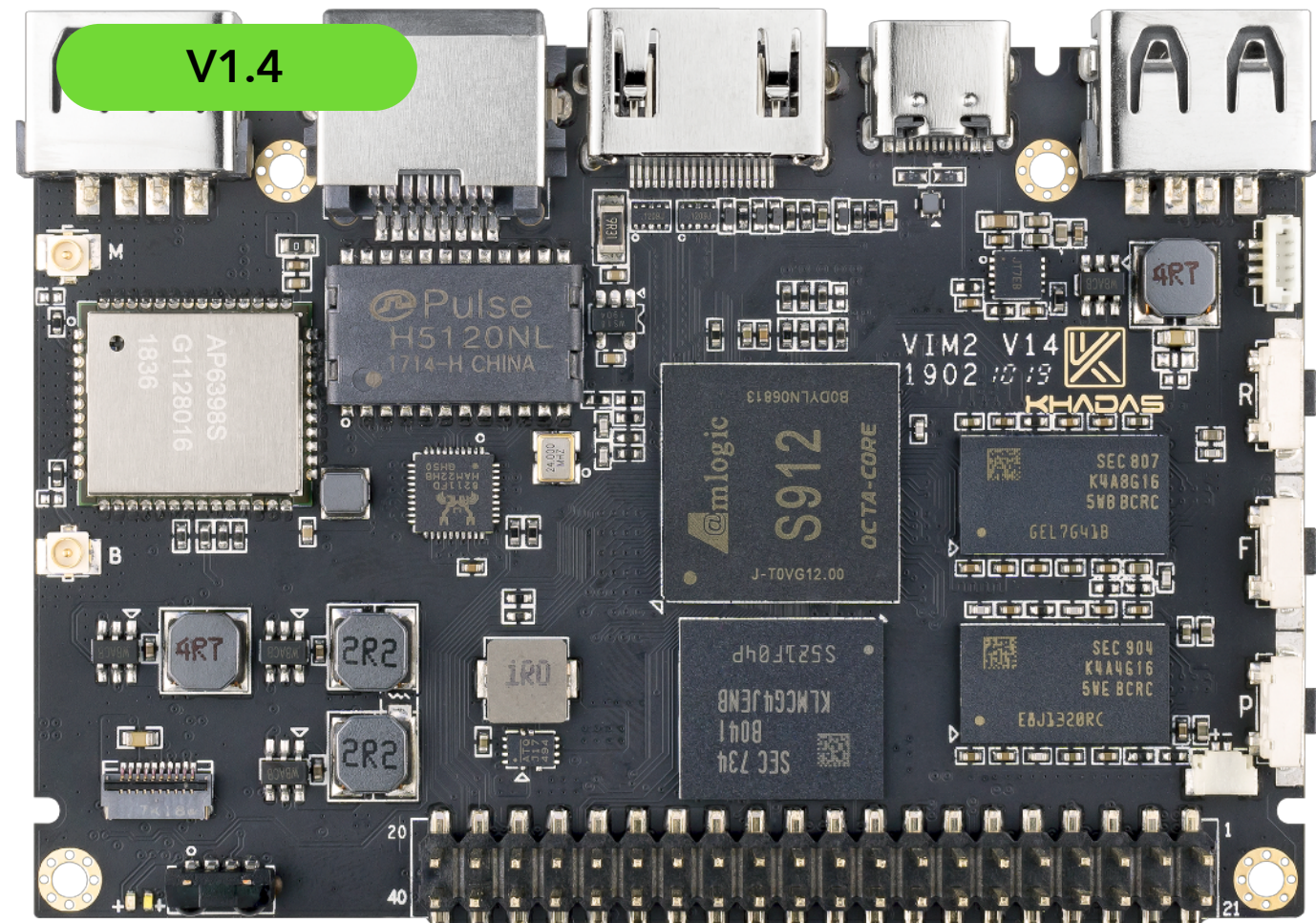
VIM2 v1.4 is equipped with a new feature that enables developers to enter upgrade mode easily.

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.
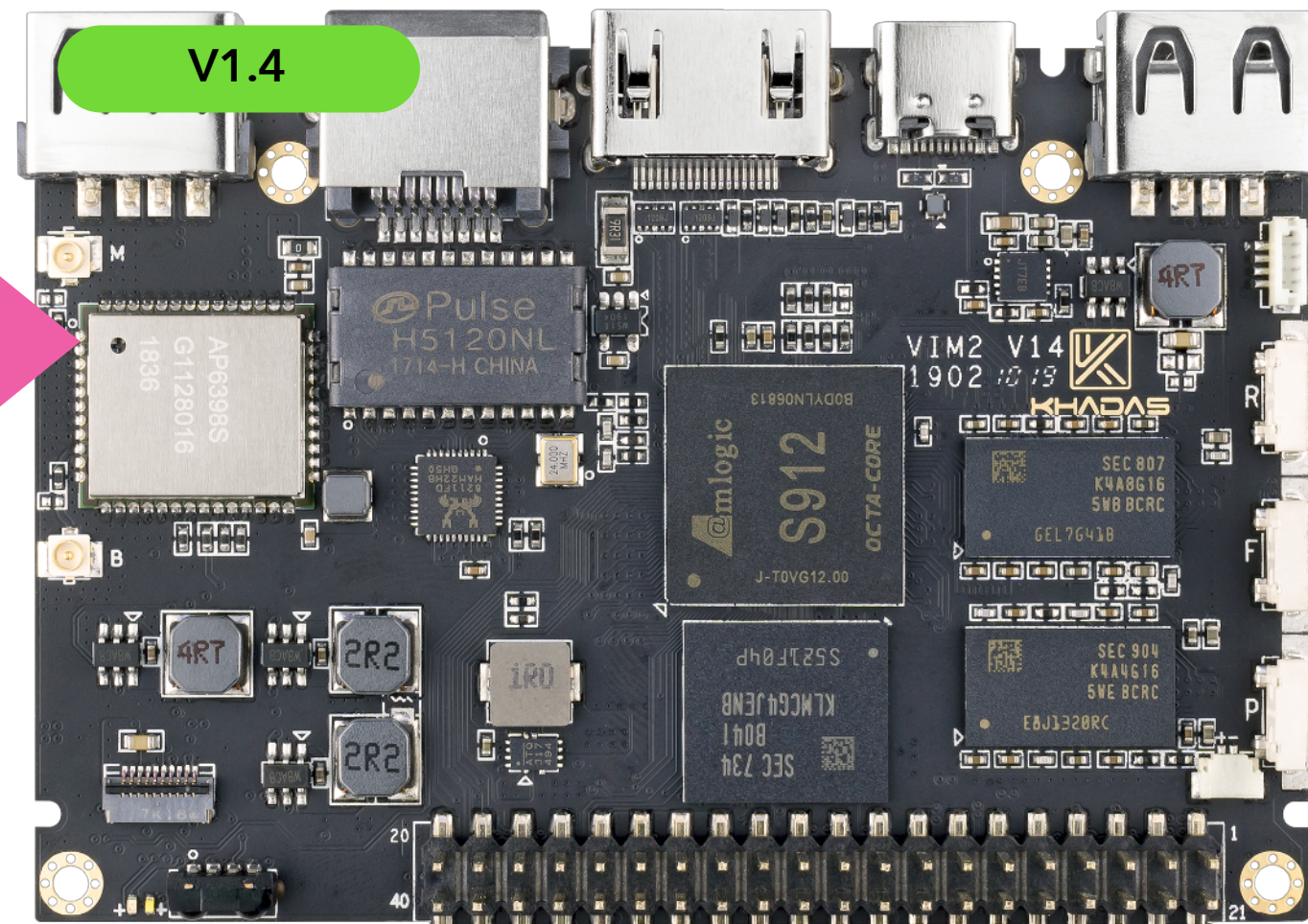
This feature will save a lot of time for many developers.

WI-FI MODULE

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.
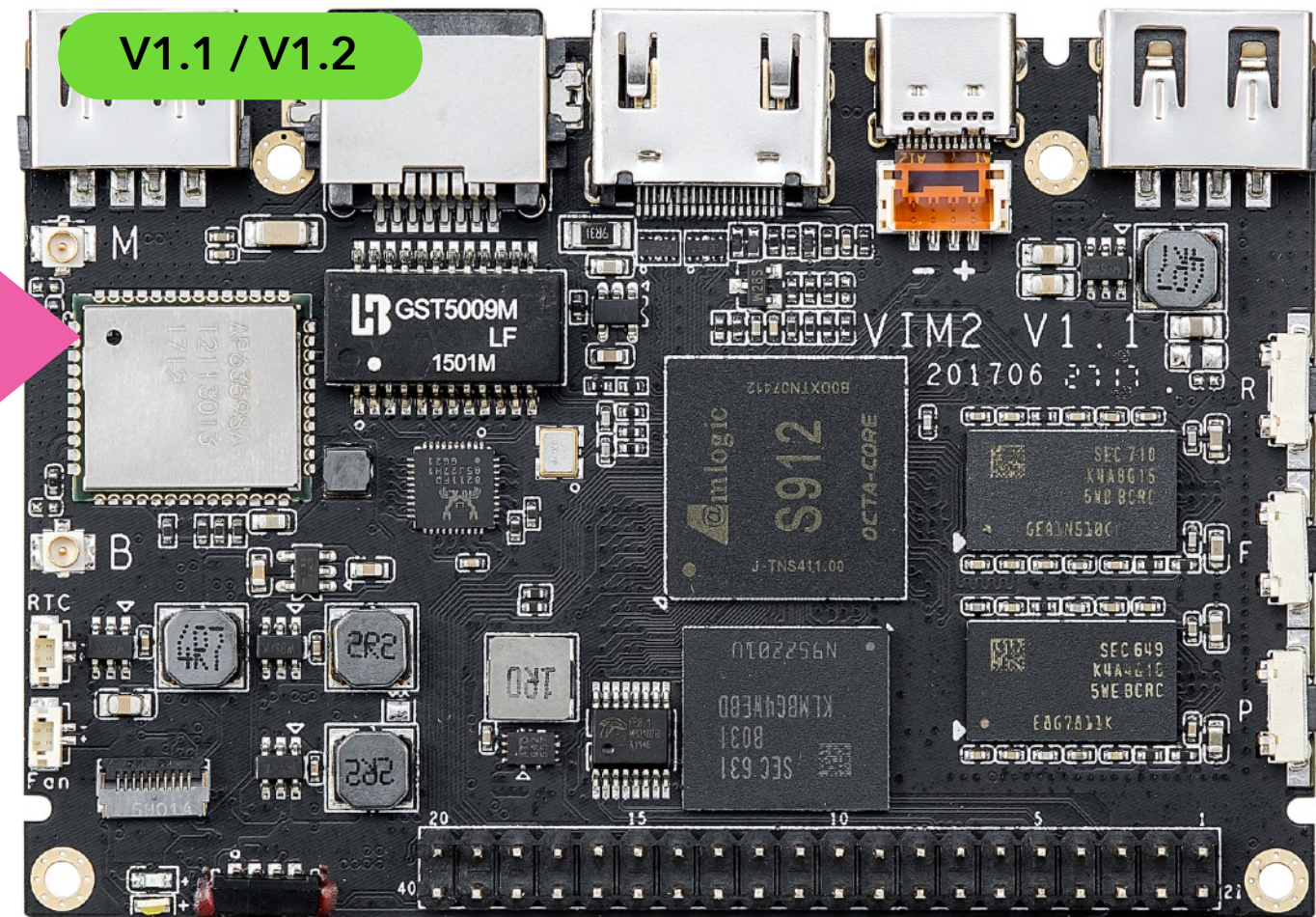
FINISHED READING:

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