Radxa 4K HDMI IN to MIPI CSI-2 Adapter

A High Definition Video Bridging Device

Revision 1.0

2026-09-02

Radxa Computer

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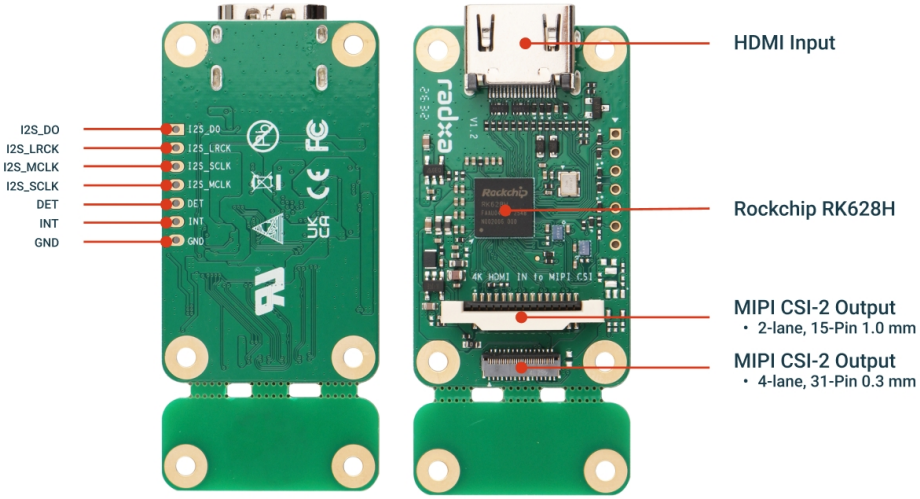
1 Revision Control Table

Version	Date	Changes from previous version
1.0	2026-09-02	First release

2 Introduction

Powered by the Rockchip RK628H, the Radxa 4K HDMI IN to MIPI CSI-2 Adapter is a high-performance video bridge that converts 4K HDMI video signals to MIPI CSI-2 with simultaneous I2S audio output. It enables development boards to quickly integrate high-definition video and audio signals for video capture and embedded vision applications such as video surveillance, video conferencing, and multimedia devices.



Note: The actual board layout or component locations may change over time, but the main connector types and locations will remain the same.

3 Features

3.1 4K HDMI Input

Supports ultra-high-definition HDMI input for high-resolution video capture.

3.2 High-Bandwidth MIPI CSI Output

4-lane MIPI CSI, up to 4K@30fps.

3.3 Stable Video Bridging

Uses the Rockchip RK628H for stable HDMI to MIPI CSI conversion.

3.4 Radxa Z-Form Factor Compatible

Can be directly mounted on Radxa Z-form factor mini boards. For non-Z applications, the extra section can be trimmed for more flexible integration.

3.5 EDID Adaptive

Automatically negotiates output resolution for better compatibility and display performance.

3.6 I2S Audio Output

Enables synchronized audio and video capture.

3.7 Built for Vision Development

Suitable for video capture, image processing, and embedded vision applications.

4 Specifications

Video Processor	Rockchip RK628H
HDMI Input	HDMI Input - Up to 4K@30fps
MIPI CSI-2 Output	1x 2-lane MIPI CSI (15-Pin, 1.0 mm) 1x 4-lane MIPI CSI (31-Pin, 0.3 mm) - 4-lane MIPI CSI, up to 4K@30fps
Audio Output	I2S audio output
EDID	Adaptive EDID for automatic resolution negotiation
Mechanical Dimensions	30 mm × 65 mm

5 Pin Definition

5.1 15-Pin MIPI CSI

Pin Number	Description	Pin Number	Description
1	NC	9	GND
2	I2C_SDA	10	MIPI_CSI0_TX1P
3	I2C_SCL	11	MIPI_CSI0_TX1N
4	NC	12	GND
5	EN	13	MIPI_CSI0_TX0P
6	GND	14	MIPI_CSI0_TX0N
7	MIPI_CSI0_TX_CKP	15	GND
8	MIPI_CSI0_TX_CKN		

5.2 31-Pin MIPI CSI

Pin Number	Description	Pin Number	Description
1	GND	17	MIPI_CSI0_TX_CKN
2	MIPI_CSI0_TX3N	18	MIPI_CSI0_TX_CKP
3	MIPI_CSI0_TX3P	19	GND
4	GND	20	NC
5	MIPI_CSI0_TX2N	21	GND
6	MIPI_CSI0_TX2P	22	NC
7	GND	23	EN
8	NC	24	I2C3_SCL_M0_MIPI
9	NC	25	I2C3_SCL_M0_MIPI
10	GND	26	EN
11	MIPI_CSI0_TX1N	27	CM_RST_L
12	MIPI_CSI0_TX1P	28	NC

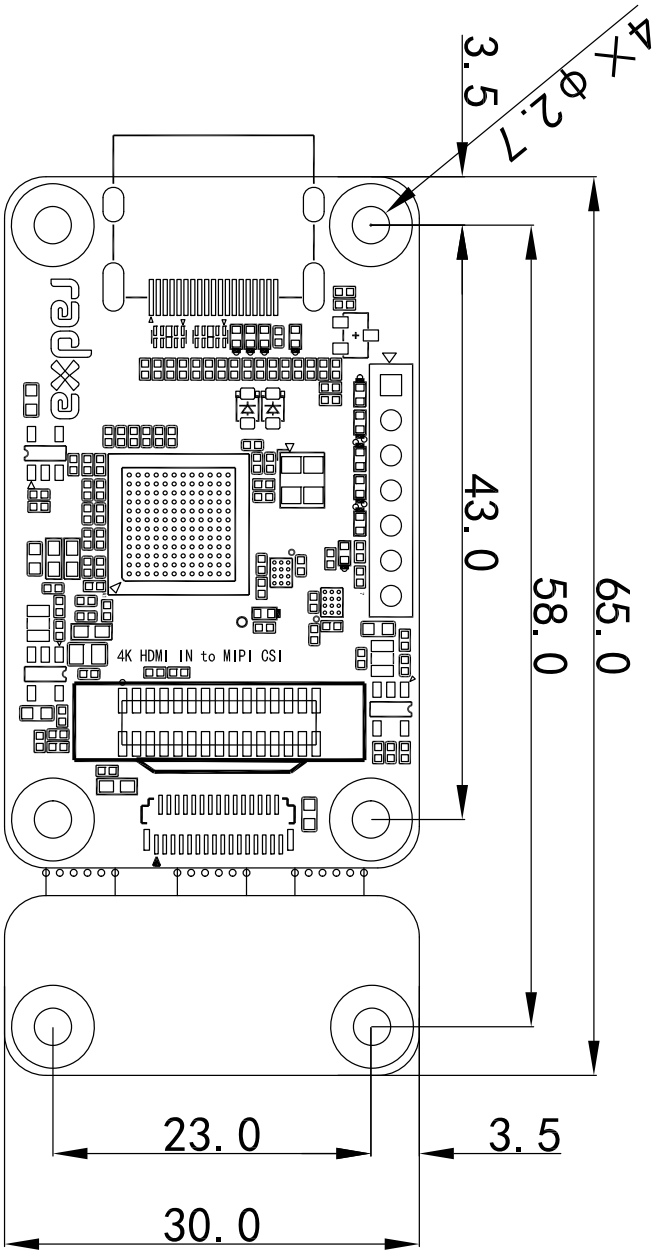
Pin Number	Description	Pin Number	Description
13	GND	29	NC
14	MIPI_CSI0_TX0N	30	5V
15	MIPI_CSI0_TX0P	31	5V
16	GND		

6 Package List

- 1x Radxa 4K HDMI IN to MIPI CSI-2 Adapter
- 1x FPC AC014 (15P 1.0 mm to 15P 1.0 mm, Opposite Side FPC Cable)
- 1x FPC AC006 (31P 0.3 mm to 31P 0.3 mm, Opposite Side FPC Cable)

7 Mechanical Specification

Unit: mm



8 Availability

Radxa guarantees availability of the Radxa 4K HDMI IN to MIPI CSI-2 Adapter until at least September 2031.

9 Support

For support, please see the support documentation section of the Radxa Website website and post questions on the Radxa Forum.