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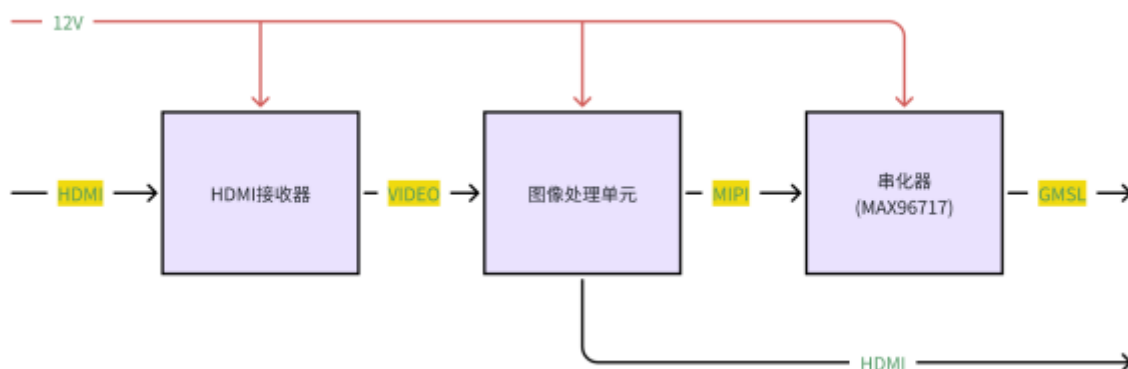
yCamSim-pro: HDMI to GMSL2 (RAW8/10/12/14)

yCamSim-pro is a portable video replay and RAW camera mode device that supports RAW format output, produced by YYTECH. It can be widely used in various testing and experimental systems that require RAW data replay.

yCamSim-pro is compact and easy to use. It converts the input HDMI signal into a GMSL2 signal, which can be directly connected to the ECU.

yCamSim-pro supports previewing the replayed image on an HDMI monitor while replaying (the display resolution may differ from the actual image resolution).

Block Diagram



Appearance



Usage

(Example for simulating 3840×2160 30fps, raw12)

- Connect the HDMI IN to the video source (e.g., PC). Ensure that the video source supports the selected resolution and frame rate.
- Connect the GMSL output to the target controller using a coaxial cable.
- (Optional) If you need to preview the injected image, connect the HDMI output to a monitor. The maximum display resolution is 1080p60Hz.
- Power on the 12V supply.
- Power on the target controller and initialize it.
- Observe the status of the indicator LED.

Precautions

- Do not plug or unplug any connectors while powered on to avoid damaging electronic components.
- Use the included power supply. If using your own power supply, note that the DC jack is 5mm/2.1mm. Mismatched connectors may damage the device.
- The HDMI interface for previewing the injected image supports up to 1080p60Hz. When injecting 4k30fps, the preview image will be displayed in a compressed format.

Description

This module converts the RGB888 image input via HDMI to RAW (RAW8/10/12, RGGB or BGGR) and outputs it after GMSL serialization. Inside the target controller, the RAW image is processed through de-mosaic and other ISP operations to restore it to an RGB/YUV image.

The above operations are widely used in autonomous driving image replay and equipment factory testing. However, there are a few points that need to be clarified:

- Color sampling is irreversible: When converting HDMI RGB or YUV444 images to RAW, some chrominance information is lost.
- No matter what is done in the target controller, it is impossible to restore the complete RGB. Therefore, the RAW image received by the target controller and processed through ISP cannot be the same as the original injected image.
- The sampled RGGB-raw has only 1/4 R, 1/2 G, and 1/4 B real sampling points, with the remaining pixels being interpolated.

If the captured image is RAW and you need to replay the RAW image with 100% fidelity, you should use the [Video Injection - yCamSim-ultra:TrueRaw](#).

Technical Support

contact us: [Technical Support](#)

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