G502RH Quick Start Guide

This quick start guide provides basic instructions for setting up and operating the G502RH in this quick start guide. All the G502RH can be set up via WebUI.

Note:

1. Do not fix the devices to any surface which is a heat source to avoid overheating.
2. Do not cover the surface or ventilation grills of the devices to avoid overheating.

1. Set up G502RH

G502RH has 5 different operating modes and user can switch the mode WebUI:

1. **Encoder**: Operate as an encoder with 2 HDMI inputs and can encode signals up to 4K with two streams for each HDMI input.
2. **Decoder**: Operate as a decoder and can decode up to 8 1080P signals and output signal via HDMI in either a single, 2x2 or 3x3 multiview on the screen.
3. **Encoder** + **Decoder**: Operate as an encoder and decoder at the same time.
4. **Transcoder**: Operate as a transcoder to transcode the first 4 decoded streams. Each transcoded signal can have 1 mainstream and 1 substream.
5. **Video Mixer**: Operate as a video mixer, which mixes up input signals and outputs them as 1 mainstream and 1 substream. G502RH can mix up to 4 decoded streams with 2 HDMI inputs, displaying up to 6 windows in a single stream.

Option 1. Set up G502RH for Encoding

1. Use CAT6 (or higher) to connect G502RH with an IP switch.
2. Connect G502RH with any input, such as media player, to '**HDMI1**/**HDMI2**' on the back panel.
3. Connect control PC to the same IP switch as G502RH is connected to.
4. **Optional:** Plug in a USB stick into the front panel for recording.

Option 2. Set up G502RH for Decoding

1. Use CAT6 (or higher) to connect G502RH with an IP switch with PoE (optional).
2. Connect G502RH with any output, such as a monitor or TV, to '**HDMI**' on the back panel.
3. Connect control PC to the same IP switch as G502RH is connected to.

2. Access G502RH WebUI on the control PC through LAN

The default static IP address of G502RH is **192.168.1.168**. User needs to change the IP address of the control PC to the same network segment as the unit at TCP/IPv4 in '**Ethernet Properties**'.

When logging in for the first time, the default '**Username**' and '**Password**' are both '**admin**'.

- **Status**: In the '**Status**' tab, user can check the general information of G502RH. In '**Preview**', user can have a HTML5 online preview of the input source (HLS enable required). In the '**Encoding**', '**Transcoding**' and '**Mixing**' tab, user can view the video resolution, fps, and address for each encoded stream under the corresponding mode.
- **Network**: User can set up the network configuration of G502RH in this page. **It is recommended to change the DNS to 8.8.8.8 for online streaming purpose.**

- **Operation Mode**: User can choose the operating mode for G502RH in this section.

- **Encoder**: User can choose the encoding protocol and set up parameters of the main and sub stream for each HDMI input, including HTTP, UDP Unicast/Multicast, RTP, RTSP over UDP/TCP, RTMP, SRT, HLS and ONVIF. User can set up the OSD for the encoded stream. User can also set up RTMP online stream in this page. Taking YouTube RTMP as an example, user can fill in the stream URL, followed by the stream key with a symbol '**/**', which can be found on the user homepage of YouTube (**rtmp://a.trmp.youtube.com/live2/xxxxxxx**).

- **Decoder**: Decoding information must be set up when G502RH is under any operating modes except '**Encoding**'. By turning the corresponding number on and entering the address in the '**URL**' section, user can decode up to 4/8 streams depending on the operating mode. **Note that user can also fill in the streams that are encoded by G502RH.**

- **Transcoding**: This function aims to transcode an existing stream to another stream with different parameter and protocol. This function will only be functional **while decoding information is set up in the 'Decoder' section**. G502RH can transcode up to 4 decoded streams (the first 4 streams filled in the '**Decoder**' section), producing 1 mainstream and 1 substream for each. All the settings here are the same as '**Encoder**' section.

- **Video Mixer**: This function mixes up the existing streams with HDMI inputs and encodes them as a single stream. This function will only be functional **while decoding information is set up in the 'Decoder' section**. G502RH can mix up to 4 decoded streams with 2 HDMI inputs, producing 1 mainstream and 1 substream for the mixed stream. The encoding settings are the same as in '**Encoder**' section. User can customise and preview the layout of the mixed stream, such as the position and size of each window. User can also choose where the source of audio comes from, including the 4 decoded streams, 2 HDMI inputs and the extra 3.5mm port.

- **Display**: G502RH can output the signal that set up in the '**Decoder**' page via HDMI. By default, '**One Split screen**' will output the 1st stream, '**Four Split screen**' will output the first 4 streams, and '**Nine Split screen**' will output all the 8 streams with one window blacked out. User can only change the order the streams are displayed by changing the addresses filled in '**Decoder**' page. **Note that user can also output streams that are encoded by G502RH.**

- **Extension**: Additional functions that supported by G502RH.

    - **Audio:** User can change the audio encoding and audio input for HDMI1 and HDMI2.

    - **RTMP-HLS:** User can set up HLS for HDMI1 and HDMI2 for HLS streaming.

    - **Recording Setting:** G502RH supports recording via USB stick. There are two modes supported – '**no-loop**': when there is no space in the USB, G502RH will stop recording and '**loop**': when there is no space in the USB, G50RH will continuing recording by looping back to the start of the USB and replacing the oldest recordings. The length of each recording can be set between 15min and no limit. After turning the function on, user needs to restart the unit and it will start recording. User can check if the recording is on-going by refreshing the page and check if the remaining space is changing.

- **RJ485**: A standard preset operating panel for controlling a PTZ camera via RJ485 port.
- **Systems**: General settings for G502RH including timing reboot, password change, Firmware version check and upgrade.