# **8K Dr. HDMI 48Gbps**





# **User Manual 8K Dr. HDMI Rev 1.1**

## FCC-B Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the measures listed below.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

#### Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### Notice 2

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with the emission limits.

VOIR LA NOTICE D'INSTALLATION AVANT DE RACCORDER AU RESEAU.



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.

## **CE** Conformity

Hereby, ICboss Tech CO., LTD. declares that this device is in compliance with the essential safety requirements and other relevant provisions set out in the European Directive.



**Disclaimer:** 3<sup>rd</sup> party and/or custom firmware providing extra features are not covered in this manual.

T F

## **Table of content**

Dr. HDMI 8K Overview
Connecting Cables to Dr. HDMI 8K5
Dr. HDMI 8K Power/Status OLED6
Dr. HDMI 8K Up/Down/Select Button7
Dr. HDMI 8K OLED Info pages
Accessing Dr. HDMI 8K Web Server
Dr. HDMI 8K Web Server Top section
Dr. HDMI 8K Web Server MAIN Section11
List of Custom EDID available
DV Section of the Webserver
Dr. HDMI 8K Web Server CONFIG Section
Updating your Dr. HDMI 8K Firmware via web browser21
Dr.HDMI 8K Config Export23
IP/Telnet Command List25
FAQ26
FAQ ATV4K
FAQ DV
FAQ NVIDIA SHIELD
Main Specifications
Technical Specifications
Certifications
Pro Tips

#### **Dr. HDMI 8K Overview**

#### Team HDfury would like to thank you personally for purchasing the Dr.HDMI 8K!

This unique HDMI2.1 device supports up to Full UHD 8K60/4K120 VRR FRL6 1500MHz 48Gbps bandwidth signals. It will allow you to solve any EDID issue from lowest to highest HDMI revision in existence today and display relevant information on OLED/WebServer. Over 100 EDID banks can be set or an automixed EDID with various forced flags. All controls can be completed rotary switch on the unit, via IP/HTTP (MAC/WIN/Linux/Android/iOS/etc...) or through embedded Webserver available from any web browser based device such as MAC/WIN/Linux computer or Android/iOS phones, tablets and others. Android and iOS APP are also available for direct control on the same network.



**Disclaimer:** 3<sup>rd</sup> party and/or custom firmware providing extra features are not covered in this manual.



**Connecting Cables to Dr. HDMI 8K** 

- Connect USB-C Power connector from Power supply (110-240V 1.2A IN & 5V 2A OUT).
- Connect a source via HDMI input cable to the HDMI input.
- Connect any other HDMI or Ethernet cable that you might need (optional)
- HDMI cable must support 48Gbps if any 58Gbps source/sink is connected.



The Dr.HDMI 8K OLED will turn ON when power supply is applied; Dr.HDMI 8K Logo will be displayed followed by a similar default infopage to the one represented below.



If any active input is connected, Dr.HDMI 8K will report if the active input and the output sink device successfully handshake together.

If any sink is connected at TX output, TX line section of the default OLED infopage will display the current state of the link (ex: connected on above pic). If a FRL signal is active, the FRL rate will be reported as well.

**[OLED OFF]**: Insufficient power or OLED timer expired (default 30s). Use the Dr.HDMI 8K power supply or press any button if OLED timer expired.

[OLED ON]: The Dr.HDMI 8K unit is receiving power and is ready to accept an HDMI signal.

### Dr. HDMI 8K Up/Down/Select Button



The Dr.HDMI 8K offers 2 main navigation functions via its rotary switch.

[UP/DOWN] Navigate Up or Down in OLED menu or cycle info page.

[PRESS/CLICK] Valid a choice or selection while in OLED menu.

### **Dr. HDMI 8K OLED Info pages**



• Display incoming signal FRL rate, RX and TX status type.

## RX EDID mode page

• Display EDID mode with max resolution, frame rate, color depth, color space, chroma, bandwidth in Gbps, VRR and ALLM status.

## TX EDID mode page

• Display sink EDID details with max resolution, frame rate, color depth, color space, chroma, Audio, bandwidth, VRR details, ALLM status.



Unit info page

• Display Serial, Firmware version and IP details.

When you press UP or DOWN on the rotary switch, the unit will cycle through the above info pages.

[UP] Wake up from sleep/fade mode or Cycle OLED infopage: INFO > RX EDID INFO > TX EDID INFO > ...

[DOWN] Wake up from sleep/fade mode or Cycle OLED infopage: INFO > UNIT INFO > TX EDID INFO > ...

#### Accessing Dr. HDMI 8K Web Server

It is mandatory for accessing **Dr. HDMI 8K** web server to have an Ethernet cable connected between LAN RJ45 connector and your local router or switcher.

By default **Dr. HDMI 8K** uses DHCP to retrieve an assigned IP automatically. You can set static IP from the **Dr. HDMI 8K** webserver config page.

In case you have setup a wrong Static IP and unit is not reachable anymore, you can set DHCP ON or simply factory reset to defaults from OLED menu to retrieve access via dynamically assigned IP again (as in default mode).

There is 3 ways of accessing the Dr. HDMI 8K web server:

#### 1. Universal way through IP address:

Simply open up a web browser on any devices located on the same network than the **Dr. HDMI 8K** unit and type in the IP address that appears on the **Dr. HDMI 8K** OLED info page directly in the address bar of your web browser. (ex: 192.168.1.137)

#### 2. Hostname access:

Instead of typing IP address directly, you can use the Hostname listed on Dr. HDMI 8K OLED INFO page (cycle OLED page till you see INFO and Host listed).

Simply open up a web browser from any devices located on the same network than the **Dr**. **HDMI 8K** unit and type in the Hostname that appears on the **Dr**. **HDMI 8K** OLED directly in the address bar of your web browser. (ex: <u>http://DR8K-XX/</u>)

XX represents the 2 last digits of your Dr. HDMI 8K unit unique serial number.

#### 3. mDNS access:

For iOS/MAC devices, you might want to use mDNS access. Retrieve the mDNS address from **Dr**. **HDMI 8K** OLED INFO page (cycle OLED page till you see INFO and host listed). Simply open up a web browser on any MAC/iOS devices located on the same network than the **Dr**. **HDMI 8K** unit and type in the mDNS address that appears on the **Dr**. **HDMI 8K** OLED directly in the address bar of your web browser. (ex: http://DR8K-XX.local/)

XX represents the 2 lasts digits of your **Dr. HDMI 8K** X unit unique serial number.

Please note that only IP address method access is universal and should work across any web browser based devices as long as they are located on the same network. Others methods should work just fine in many cases but we cannot guarantee that they will always do, in case of issue accessing the webserver, please use IP address.

### Dr. HDMI 8K Web Server Top section



Immediately upon accessing the webserver you will end up on the default INFO page with the above top tier section displayed.

From that top tier section you will be able to retrieve the following information (also displayed on **Dr. HDMI 8K** OLED info page and once you cycle oled page till you see the info page).

Hostname: Display Dr. HDMI 8K hostname for URL access

mDNS: Display Dr. HDMI 8K mDNS for URL access

IP Address: Display the current IP Address of the DR. HDMI 8K

FW: Display the current FW running on the DR. HDMI 8K.

Dr. HDMI 8K Web Server MAIN Section

N	IAIN	DV INFO	CONFIG					
SIGNAL:	active							
TMDS:	FRL 5 / 10Gbps	- 4 Lanes / 40Gbps						
RX:	connected							
TX:	connected							
- <del>1</del> .								
EDID TX:	LG TV SSCR							
Video Forn	nats: 8K60 42	0 / 4K120 444 / 4k120 420						
Video Cap	s: FRL6 AL	LM DV HDR10 HLG BT2020						
Audio Dolt	oy: MAT[Atr	nos] DD+[Atmos] DD						
Audio Dts:								
Audio Pcm	EPCM 2.	0						
EDID RX:	LG TV SSCR							
Video Forn	nats: 8K30 44	4 / 4K120 444 / 4k120 420						
Video Cap	s: FRL6 VF	R ALLM HDR10+ HLG BT2020						
Audio Dolb	by: MAT[Atr	nos] DD+[Atmos]						
Audio Dts:	DTS:X I	MAX DTS:X						
Audio Pcm	: LPCM7.							
ACTIVE EDID M	10DE:							
O COPY TX SIN Replicates the TX	COPY TX SINK EDID     Replicates the TX-connected EDID to the RX side							
C CUSTOM EDID Select from the canned custom EDID tables EDID: 9 - Custom Default (PanaG2960E DV HDR10+1								
COPY TX SIN     Replicates the TX	IK EDID and MO	DIFY e RX side and modifies with selections						
VIDEO FLAGS:								
FRL RATE	FRL-6 / 48Gbps 🗸							
VRR I	ENABLE V							
	ENABLE V							
AUDIO FLAGS:								
L-PCM	7.1 👻	up to 192kHz 🗸 up to 24bit	~					
TRUEHD	MAT ATMOS 🗸	up to 192kHz 🗸						
☑ DD+	ATMOS 🗸	COPY SINK 🗸						
DD DTG UDIN		un la 102kHz						
DIS-HDMA		up to 192kHz						
ONE BIT	ENABLE V	5.1						
DOWN COD	CUNE BII ENABLE V 5.1 V							
DOWNLOAD ACTIVE EDID TABLES: RX EDID TX0 EDID								
SAVE ACTIVE EDID TO CUSTOM EDID #: EDID 8 EDID 9 EDID 10								
UPLOAD EDID	TABLES:							
Choose File No file	Choose File No file chosen TABLE #: 1 - Custom #1    SEND EDID							
READY			Refresh					

**Disclaimer:** 3<sup>rd</sup> party and/or custom firmware providing extra features are not covered in this manual.

**SIGNAL:** When source is ON and video signal is going through, it will report "active". **TMDS:** TMDS and FRL rate, number of lanes and each lane bandwidth in Gbps will be reported here when a signal is active.

**RX**: When a source at input is connected, it will be reported here as "connected". **TX**: When a sink is present at output, it will be reported here as "connected".

**EDID TX:** Report the SINK EDID name of the connected sink at output. **Video Formats:** Report the max supported signals of the connected sink at output.

Video Caps: Report the signal modes supported by the connected sink at output.

Audio Dolby: Report the Dolby audio formats supported by the connected sink at output.

Audio DTS: Report the DTS audio formats supported by the connected sink at output.

Audio PCM: Report the PCM audio formats supported by the connected sink at output.

EDID RX: Report the EDID name that the source connected at input will read. Video Formats: Report the max supported signals that the source connected at input will read. Video Caps: Report the signal modes supported that the source connected at input will read. Audio Dolby: Report the Dolby audio formats that the source connected at input will read. Audio DTS: Report the DTS audio formats that the source connected at input will read. Audio PCM: Report the PCM audio formats that the source connected at input will read.

#### ACTIVE EDID MODE:

[COPY TX SINK]: Use EDID from the device connected at TX output.

[CUSTOM EDID]: Define individual EDID for input from a list of 10 custom and 90 predefined EDID.

[COPY TX SINK EDID and MODIFY]: Customize capabilities of the connected TX sink EDID table.

#### [VIDEO FLAGS]

[FRL RATE]: Disable or set the max FRL rate you want to apply. (FRL1, 2, 3, 4 or 5)
[VRR]: Enable or Disable VRR support.
[ALLM]: Enable or Disable ALLM support.
[HDR]: Remove or set the HDR mode (HDR10, HDR10/HLG, HDR10+ or HDR10+/HLG)
[DV]: Remove or set preloaded or custom DV mode.

#### [AUDIO FLAGS]

[L-PCM]: Set the preferred L-PCM mode, sample rate and bit width.
[TRUE HD]: Disable or set the preferred True HD mode and the sample rate.
[DD+]: Disable or set the DD+ mode and the sample rate.
[DD]: Disable or set the DD mode.
[DTS-HDMA]: Disable or set the DTS-HDMA mode and the sample rate.

**[DTS]:** Disable or set the DTS mode. **[ONE BIT]:** Disable or set the ONE BIT mode and the sample rate.

[DOWNLOAD ACTIVE EDID TABLES]: Download any EDID from input or output.

[SAVE ACTIVE EDID TO CUSTOM EDID #]: One click button to store the current EDID in Custom EDID slot number 8, 9 or 10.

**[UPLOAD EDID TABLES]:** Select an EDID file and a Custom EDID Table #number and click SEND EDID to upload it.

[**REFRESH**]: Refresh the current page.

#### List of Custom EDID available.

#### [CUSTOM EDID]

Pick and use EDID from a selection of preloaded EDID tables or load any EDID bank of your choice. By default the selected EDID table is 8K60-420 FRL-5 VRR HDR with Full Audio capabilities. When you select an EDID bank from the dropdown list of 100 different EDID tables available, there is nothing else to do, once you click one, the EDID of your choice will be loaded and HPD events will reset the signal to present your selected EDID automatically. Some source need to be restarted after EDID changes, it is safe to always restart your source after changing EDID.

- 1 Custom Default [SONY A85J 7.1]
- 2 Custom Default [Q70J HDR10+ 7.1]
- 3 Custom Default [DENON S960H 8K]
- 4 Custom Default [Q9FN ALLM VRR HDR10+]
- 5 Custom Default [SONY A1 LLDV DCI-P3]
- 6 Custom Default [LG NANO 8K 7.1]
- 7 Custom Default [LG C9 7.1]
- 8 Custom Default [LG C1 7.1]
- 9 Custom Default [PanaGZ960E DV HDR10+]
- 10 Custom Default [SONY A1 LLDV BT2020]
- 11 8K60-420 FRL-5 VRR HDR 7.1
- 12 8K60-420 FRL-5 VRR HDR 5.1
- 13 8K60-420 FRL-5 VRR HDR 2.0
- 14 8K60-420 FRL-5 HDR 7.1
- 15 8K60-420 FRL-5 HDR 5.1
- 16 8K60-420 FRL-5 HDR 2.0
- 17 4K120-444 FRL-5 10b VRR HDR 7.1
- 18 4K120-444 FRL-5 10b VRR HDR 5.1
- 19 4K120-444 FRL-5 10b VRR HDR 2.0
- 20 4K120-444 FRL-5 10b HDR 7.1
- 21 4K120-444 FRL-5 10b HDR 5.1
- 22 4K120-444 FRL-5 10b HDR 2.0
- 23 4K120-420 VRR HDR 7.1
- 24 4K120-420 VRR HDR 5.1
- 25 4K120-420 VRR HDR 2.0
- 26 4K120-420 HDR 7.1
- 27 4K120-420 HDR 5.1
- 28 4K120-420 HDR 2.0
- 29 4K60-444 600MHz HDR BT2020 7.1
- 30 4K60-444 600MHz HDR BT2020 5.1
- 31 4K60-444 600MHz HDR BT2020 2.0
- 32 4K60-444 600MHz BT2020 7.1
- 33 4K60-444 600MHz BT2020 5.1
- 34 4K60-444 600MHz BT2020 2.0

35 - 4K50-444 600MHz HDR BT2020 7.1 36 - 4K50-444 600MHz HDR BT2020 5.1 37 - 4K50-444 600MHz HDR BT2020 2.0 38 - 4K50-444 600MHz BT2020 7.1 39 - 4K50-444 600MHz BT2020 5.1 40 - 4K50-444 600MHz BT2020 2.0 41 - 4K60-420 12bit HDR BT2020 7.1 42 - 4K60-420 12bit HDR BT2020 5.1 43 - 4K60-420 12bit HDR BT2020 2.0 44 - 4K60-420 12bit BT2020 7.1 45 - 4K60-420 12bit BT2020 5.1 46 - 4K60-420 12bit BT2020 2.0 47 - 4K60-420 8-bit 300MHz HDR BT2020 7.1 48 - 4K60-420 8-bit 300MHz HDR BT2020 5.1 49 - 4K60-420 8-bit 300MHz HDR BT2020 2.0 50 - 4K60-420 8-bit 300MHz BT2020 7.1 51 - 4K60-420 8-bit 300MHz BT2020 5.1 52 - 4K60-420 8-bit 300MHz BT2020 2.0 53 - 4K30-444 300MHz HDR BT2020 7.1 54 - 4K30-444 300MHz HDR BT2020 5.1 55 - 4K30-444 300MHz HDR BT2020 2.0 56 - 4K30-444 300MHz BT2020 7.1 57 - 4K30-444 300MHz BT2020 5.1 58 - 4K30-444 300MHz BT2020 2.0 59 - 4K30-RGB 300MHz HDR BT2020 7.1 60 - 4K30-RGB 300MHz HDR BT2020 5.1 61 - 4K30-RGB 300MHz HDR BT2020 2.0 62 - 4K30-RGB 300MHz BT2020 7.1 63 - 4K30-RGB 300MHz BT2020 5.1 64 - 4K30-RGB 300MHz BT2020 2.0 65 - 4K24-422 12-bit HDR BT2020 7.1 66 - 4K24-422 12-bit HDR BT2020 5.1 67 - 4K24-422 12-bit HDR BT2020 2.0 68 - 4K24-422 12-bit BT2020 7.1 69 - 4K24-422 12-bit BT2020 5.1 70 - 4K24-422 12-bit BT2020 2.0 71 - 4K24-422 12-bit 7.1 72 - 4K24-422 12-bit 5.1 73 - 4K24-422 12-bit 2.0 74 - 1080p60-444 12-bit HDR BT2020 7.1 75 - 1080p60-444 12-bit HDR BT2020 5.1 76 - 1080p60-444 12-bit HDR BT2020 2.0

```
15
```

77 - 1080p60-444 12-bit BT2020 7.1 78 - 1080p60-444 12-bit BT2020 5.1 79 - 1080p60-444 12-bit BT2020 2.0 80 - 1080p60-444 12-bit 7.1 81 - 1080p60-444 12-bit 5.1 82 - 1080p60-444 12-bit 2.0 83 - 1080p24-444 12-bit HDR BT2020 7.1 84 - 1080p24-444 12-bit HDR BT2020 5.1 85 - 1080p24-444 12-bit HDR BT2020 2.0 86 - 1080p24-444 12-bit BT2020 7.1 87 - 1080p24-444 12-bit BT2020 5.1 88 - 1080p24-444 12-bit BT2020 2.0 89 - 1080p24-444 8-bit 7.1 90 - 1080p24-444 8-bit 5.1 91 - 1080p24-444 8-bit 2.0 92 - 1080i60-444 8-bit 7.1 93 - 1080i60-444 8-bit 5.1 94 - 1080i60-444 8-bit 2.0 95 - 720p60-444 8-bit 7.1 96 - 720p60-444 8-bit 5.1 97 - 720p60-444 8-bit 2.0 98 - 480p60-444 8-bit 7.1

99 - 480p60-444 8-bit 5.1

100 - 480p60-444 8-bit 2.0

#### **DV Section of the Webserver**

MAIN		DV INFO	CONFIG					
CONNECTED DOLBY VISION EDID DATABLOCK:								
EB:01:46:D0:00:2A:74:19:B5:87:4D:9A								
EB:01:46:D0:00:2A:74:19:B5:87:4D:9A DV Version: 1 [short 12-byte version] DV DM Version: reserved DV Interface: standard and low latency 422 12bit 2160p60: supported YUV422 12bit: not supported Global Dimming: not supported Backlight Control: not supported RED Primary: 0.699, 0.293 GREEN Primary: 0.262, 0.648 BLUE Primary: 0.145, 0.051 MAX/MIN Luminance: 3000 / 0.009 nits								
Generates a 12-byte DV Version 2 Data Block. Select AUTOMIX with CUSTOM STRING -flag to activate.								
DV Interface:	Low latency 12Bit YCbCr 422	×						
Primaries: C	DCI P3 👻 YU	V422 12bit: supported V	Global Dimming: not supported 🗸					
Backlight Ctrl:	not supported 👻 Bac	klight Minlum: 100 nits 🗸	Support 10/12b: 10/12b disabled 🗸					
RED Primary X: RED primary Y: GREEN primary X BLUE primary X: BLUE primary Y: MAX luminance [ MIN luminance [ EB:01:46:AA:00:48:03	X: Y: [nits]: nits]: :76:8A:66:72:66 Default Send DV	0.680 0.320 0.265 0.690 0.150 0.060 1000 Range 100 - 10000 nits 0 Range 0 - 1 nits						
DV STATUS OK			Refresh					

**[CONNECTED DOLBY VISION EDID DATABLOCK]**: Dr. HDMI 8K will automatically sniff, display and save any Dolby Vision mandatory string from a connected sink at TX output. Once stored, this mandatory string can be used in Automix to ensure that the DV stream from the source is compatible with the sink. Once the DV string of a display is saved, you can insert other equipment like an AVR in between in the chain and still have the right DV signal passthru to the sink. Additionally, the datablock value is fully deciphered in human readable format.

**[CONSTRUCT CUSTOM DOLBY VISION DATA BLOCK]**: If DV flag in EDID page is set to CUSTOM, the DV string created and saved on this form will be used. Please note that only the resulting DV string is saved

in the unit memory, each different value in the form will be reset to default once the CUSTOM DV STRING is created and saved.

[DV Interface]: Select the type of DV interface you want to use in your DV datablock
[Primaries]: Select Primaries you want to use in your DV datablock
[YUV422 12bit]: Enable or disable the support for YUV422 12bit
[Global Dimming]: Enable or disable the support of Global Dimming
[Backlight Ctrl]: Enable or disable the support for backlight control
[Backlight Minlum]: Set the Min Lum value for Backlight (25, 50, 75 or 100 nits)
[Support 10/12b]: Disable or enable support for 444/RGB 10b or 444/RGB 12b

If [Primaries] is set to CUSTOM, the following values can be tweaked individually:

[RED Primary X]: Set the value of your choice for RED Primary X
[RED Primary X]: Set the value of your choice for RED Primary X
[GREEN Primary X]: Set the value of your choice for GREEN Primary X
[GREEN Primary Y]: Set the value of your choice for GREEN Primary Y
[BLUE Primary X]: Set the value of your choice for BLUE Primary X
[BLUE Primary Y]: Set the value of your choice for BLUE Primary Y
[MAX Luminance]: Set the value of your choice from 0 – 1 nits

[Create IF]: Use the previous defined values to create the Custom DV datablock.

[Default IF]: Load the default Custom DV datablock values.

**[Send DV]:** Send the DV custom string created to be stored in unit memory and in use if DV flag in EDID page is set to CUSTOM, the DV string once created and sent from this form will be used. Some source need to be restarted after EDID changes, it is safe to always restart your source after change in EDID.

[REFRESH]: Refresh the current page.

Dr. HDMI 8K Web Server CONFIG Section

MAIN	DV INFO		CONFIG				
DR8K SETUP:							
OLED DISPLAY:	ON OF	F					
OLED FADE:	60 SEND						
OLED PAGE: IP INFO V							
TX +5V:	ON OF	F					
IP CONFIG: Reboot required for any changes in	IP CONFIG: Reboot coulded for any changes in DMCD / STATIC ID						
·····, ·····, ·····							
DHCP:	ON OF	F					
mDNS:	ON OF	F					
Current IP Configuration:							
IP ADDR:	192.168.1.254						
IP MASK:	255.255.255.0						
IP GW:	192.168.1.1						
MAC:	18:9B:A5:D5:00:02						
Configure Static IP:							
This address is used when DHCP is	off						
IP ADDR:	192.168.1.251						
IP MASK:	255.255.255.0						
IP GW:	192.168.1.1						
SET IP							
Configure TCP port: [requires rebo	ot to apply]						
DR8K will listen to this port for IP	Telnet commands						
IP INTERRUPTS:	O ON OF	F					
IP PORT:	2201						
SET PORT							
DR8K CONTROL:							
ISSUE HOTPLUG	HOTPLUG						
REBOOT UNIT	REBOOT						
EXPORT CONFIG EXPORT							
RESET TO FACTORY DEFAULTS:							
CLEAR ALL SETTINGS TO FACTORY DEFAULTS:							
EDID FACTORY SETTINGS:							
Type RESET here RESET							
FW UPDATE: Chois	ir un fichier Aucun fichier choisi		SEND				
CONFLG STATUS OK		_	Befreeh				
con id Status ok			(veiles))				

**[HTPC MODE]:** Set HTPC mode ON/OFF. Useful if you have trouble with Windows and icons when turning your secondary display off or resuming from stand-by mode. Please note that HTPC mode is not compatible with HDCP signal.

**[OLED DISPLAY]:** Enabled by default, **Dr. HDMI 8K** OLED display can be turned ON/OFF at will. Some users might find the **Dr. HDMI 8K** OLED display visually disturbing in their HT setup. You have the possibility to turn it off.

**[OLED FADE]:** Allow you to define a custom timing in seconds before OLED FADE, set it to 0 for OLED to always stay active. Default is 30sec.

**[ROTATE 180 DEG]:** OFF by default, based on your setup, you might prefer to flip the OLED display, once activated, this option will flip the **Dr. HDMI 8K** OLED.

[OLED PAGE]: Select the OLED page that will be displayed at startup.

**[TX +5V FORCE]:** ON by default, when set to OFF, the display at TX output will not be detected or seen by **Dr. HDMI 8K** similarly as it would be if the HDMI cable was physically disconnected.

**[IP CONFIG]:** This section allows you to edit the way **Dr. HDMI 8K** will retrieve its IP address. Any changes will only be applied after reboot (power cycle)

[DHCP]: When set to ON, Dr. HDMI 8K will retrieve a dynamic IP automatically.

[mDNS]: When set to ON, Dr. HDMI 8K will offer a simple URL shortcut to always be reachable from a browser. Ex: http://DR8K-xx.local

**[CURRENT IP CONFIGURATION]:** Display the current value of IP address, IP mask and IP gateway and MAC.

**[CONFIGURE STATIC IP]:** Enter the IP address, IP mask and IP gateway of your choice for a static IP setup, DHCP needs to be OFF for using static IP values

**[SET IP]:** After any changes in IP configuration, click SET IP to validate.

[IP INTERRUPTS]: Some control system might need IP INTERRUPTS set to ON, Default is OFF.

[IP PORT]: Set the IP/telnet port of your choice here (default value is 2201).

[SET PORT]: Click here to apply the IP/telnet port of your choice (Reboot or Power cycle required)

**[ISSUE HOTPLUG]:** Click Send button to perform a soft-reset in your setup.

[REBOOT UNIT]: Click REBOOT button to restart Dr. HDMI 8K completely.

**[EXPORT CONFIG]:** Allow you to export a txt file that includes the full list of **Dr. HDMI 8K** settings and some setup information that can be useful for support.

**[RESET TO FACTORY DEFAULTS]:** Type **RESET** in the factory def text field and click the available RESET button to clear all settings to factory defaults. **Dr. HDMI 8K** power cycle needed.

**[EDID FACTORY SETTINGS]:** Click the available check box to clear all EDID settings to factory defaults and type **RESET** in the text field. Finally click the **RESET** button and unit EDID will be reset to factory defaults.

**[FW UPDATE]:** Select the **Dr. HDMI 8K** firmware file and click SEND to upload it. Wait for **Dr. HDMI 8K** to reboot automatically, once **Dr. HDMI 8K** is rebooted, refresh the webserver page.

[REFRESH]: Refresh the current page.

#### Updating your Dr. HDMI 8K Firmware via web browser

#### The Dr. HDMI 8K Firmware can be updated from any web browser based device.

If you meet any issue while updating your **Dr. HDMI 8K** firmware, please try using another device on same network or another Internet browser on your device.

You can download the latest Firmware version for your **Dr. HDMI 8K** device from the **Download Tab** on the **Dr. HDMI 8K** Product page: <u>here</u>. If you are unsure about your Firmware version currently in use, simply refer to OLED display on your unit. Alternatively, FW version is reported on any header of any page when accessing the embedded web server.

Once downloaded and extracted, you should have a directory on your computer with the following files



You will have to load and flash the Dr. HDMI 8K Update file to successfully upgrade your unit. Note: Version number could be different depending on the FW revision you downloaded.

After updating the **Dr. HDMI 8K** firmware, simply refresh the web server page from your browser once unit have rebooted, Please note that there will be no OLED logo or info for about 15 seconds as the unit is restarting and reconfiguring itself. Once ready, the OLED logo and infopage will come back on.

1) Visit Dr. HDMI 8K webserver and browse to the bottom on the CONFIG section.



2) Click Choose File as shown on the above picture and select Dr. HDMI 8K firmware file.



3) Once the correct Firmware file is selected, its name will appear on the **CONFIG** page. Simply click **SEND** button to start flashing the firmware to your unit.

FW UPLOAD STARTED - WAIT UNTIL COMPLETED

During this process you will see the above message on the footer page of the **CONFIG** section. Please wait a few seconds and do not disconnect your device while the upgrade process is running.

FW UPLOAD OK - WAIT FOR REBOOT AND THEN REFRESH BROWSER	Refresh
---	---------

Refresh

Once completed, you will see the above notification.

Simply wait for **Dr. HDMI 8K** OLED to come back on and click **REFRESH**. The top section of the web server and **Dr. HDMI 8K** OLED should now indicate the new firmware version.

Congratulations, you have successfully updated your **Dr. HDMI 8K** firmware update and your unit is now ready to operate with the benefits from the latest software additions.

**IP/TELNET/HTTP: Dr. HDMI 8K** can be fully controlled via IP, Telnet or HTTP commands. Complete list of IP commands are included as a text file for convenience on all Firmware update package.

#### **Dr.HDMI 8K Config Export**

By using the **[EXPORT CONFIG]** option on the config page of the webserver, you will be able to save the current Dr.HDMI 8K configuration and settings in a text file.

The "DR8K-CONFIG-DATE.txt" file can then be shared with the community or for support reason.

Exported config file will present the active information, the EDID and options set on your unit as well as the below list of parameters.

```
{
    "product": "DR8K",
    "time": "07/03/2022, 14:35:19",
    "hostname": "DR8K-02",
    "ipaddress": "192.168.1.254",
    "serial": "0006001021000002",
    "version": "FW: 1.1",
    "txhpd": "off",
    "rxhpd": "off",
    "rx5v": "off",
    "frlrate": "0"
    "txedidname": "",
    "txedidvideoformat": "",
    "txedidvideocaps": "",
    "txedidaudiodolby": "",
    "txedidaudiodts": "",
    "txedidaudiopcm": "",
    "rxedidname": "INTEGRAL",
    "rxedidvideoformat": "4K60 444",
    "rxedidvideocaps": "HDR10 BT2020 ",
    "rxedidaudiodolby": "TrueHd, DD+, DD",
    "rxedidaudiodts": "DTS:X, DTSHD, DTS",
    "rxedidaudiopcm": "PCM 7.1 192kHz 24b",
    "tmdsclk": "0",
    "tmdsclkf": "0"
    "tmdsratio": "0",
    "scramble": "0",
    "edidmode": "automix",
    "edidcustomtable": "11",
    "edidoverflow": "none",
    "staticip": "staticip 192.168.1.251/255.255.255.0/192.168.1.1",
    "activeip": "activeip 192.168.1.254/255.255.255.0/192.168.1.1",
    "dhcp": "1",
    "tcpport": "2201",
    "macaddr": "18:9B:A5:D5:00:02",
    "mdns": "1",
    "ipinterrupt": "0",
    "txplus5": "1",
    "oled": "1",
    "oledpage": "2"
    "oledfade": "60",
    "EDIDRXO": "00 ff ff ff ff ff ff 00 25 d4 01 00 01 00 00 00 2d 19 01 03
80 00 00 78 0a e6 95 a3 54 4a 99 26 0f 50 54 a1 08 00 31 40 45 40 61 40 71 40
81 80 01 00 01 00 01 01 08 e8 00 30 f2 70 5a 80 b0 58 8a 00 50 1d 74 00 00 1e
02 3a 80 18 71 38 2d 40 58 2c 45 00 50 1d 74 00 00 1e 00 00 00 fd 00 0f 90 1e
```



55 1e 00 00 00 00 00 00 00 00 00 00 fc 00 49 4e 54 45 47 52 41 4c 0a 20 20 20 20 01 f2 02 03 58 71 57 61 10 1f 04 13 05 14 20 21 22 5d 5e 5f 60 65 66 62 63 64 07 16 03 12 32 0f 7f 07 15 07 50 3d 06 c0 57 06 00 5f 7f 01 67 7f 00 83 4f 00 00 e2 00 ff e6 06 07 01 00 00 00 e3 05 e3 01 6e 03 0c 00 10 00 b8 3c 20 80 80 01 02 03 04 67 d8 5d c4 01 78 80 00 01 1d 80 18 71 1c 16 20 58 2c 25 00 40 84 63 00 00 9e 66 21 56 aa 51 00 1e 30 46 8f 33 00 50 1d 74 00 00 1e 00 00 00 35", 00 00" }

## **IP/Telnet Command List**

When using IP each command must end with a carriage return \r or a newline \n Each response will have both carriage return \r and a newline \n added in the format <cr><lf>

**Dr.HDMI 8K** default IP port is 2201. e.g. 192.168.1.100:2201 Use only lowercase characters

#### A generic command to write a value:

set x y set - indicates value will be written to **Dr.HDMI 8K** x - target to be written y - value or values

#### A generic command to read a value:

get x get - indicates value will be read from **Dr.HDMI 8K** x - target to be read

#### The Full Dr.HDMI 8K IP command list is included as a text file in each Firmware package.

Make sure to use the command list that is included in the package matching your current firmware.

## FAQ

#### My display is supposed to accept 4K60 4:4:4 signals but it does not work?

For most UHD TV set we tried, there are always extra configuration options to active in order to achieve a 4K60 4:4:4 600MHz link. For ex, on samsung: in order to enable the 444 colorspace for 4k in Samsung TV's you must go to "settings" and "hdmi" and "UHD color" and enable it. Then also you must assign the HDMI port1 as "PC" in the tools menu. Only after these two steps will 600MHz be accepted. Similar activation tricks are required on most UHD TV's. Additionally, most UHD TV's only have specific ports that are 600MHz capable.

#### I have a PC mode on my TV (or a PC monitor) what resolutions are supported for graphics mode?

All PC graphics mode within the 1500MHz bandwidth are supported, including ultra-high resolution such as WQSXGA, QUXGA, QFHD, WQUXGA and 4K/8K.

#### What input/output resolution does the Dr.HDMI 8K support in HDTV mode?

All known SD, HD, Full HD and UHD formats are supported including: 480i50,480i60, 480p50, 480p60, 576p50, 576p60, 720p50, 720p60, 720p100, 720p120, 1080i25, 1080i30, 1080p24, 1080p25, 1080p30, 1080p48, 1080p50, 1080p60, 1080p72, 1080p75, 1080p96, 1440p50, 1440p60, 2160p24, 2160p25, 2160p30, 2160p50, 2160p60 (these are examples only, anything within the 1500MHz bandwidth is supported.)

#### What version of HDMI does the Dr.HDMI 8K work with? Do I need HDMI 1.3/1.4a/2.0a/2.0b/2.1? Does it matter?

It does not matter. Dr.HDMI 8K works with any version of HDMI from 1.0 and up.

#### Do I need to set anything special in my HDMI source device to set the resolution correctly?

No. The HDfury Dr.HDMI 8K will be detected as 8K capable device by your source and it will always accept and process the highest quality stream from your source devices. There is no need to set the HDMI source to any specific resolution.

#### Is there any latency (delay) introduced to the signal?

Virtually none. The latency added is in the order of a few pixel clocks only. Nothing noticeable at all.

#### What about long HDMI cable runs? Can I expect issues?

For 600MHz users must use "high speed" cables, or 600MHz/18Gbps certified, ideally the length should be between 6ft and 12ft for proper 600MHz/18Gbps pass-thru. For 4K30, 1080p or less almost all cables are ok. HDfury Dr.HDMI 8K acts as a HDMI repeater device. So having HDfury Dr.HDMI 8K in the path will amplify and recover the signal. You should not need any passive (or active) HDMI amplifiers, especially if you put the HDfury Dr.HDMI 8K in the middle of your cable run. If you previously had to use an amplifier, the HDfury Dr.HDMI 8K can most likely take its place. The HDfury Dr.HDMI 8K has been used with 50 foot (and longer) HDMI cables without issues including copper, active or fiber solutions.

#### How are the new lossless audio formats via HDMI input handled? E.g. DTS-HD/MA and DD/E-AC3: Are they stripped down to DTS core or Dolby Digital respectively to fit the requirements of the S/PDIF standard?

HDfury Dr.HDMI 8K does not compress or otherwise down convert the incoming audio.

#### Can i power Dr.HDMI 8K from USB port to avoid another ac plug?

There is no exact answer to that, power consumption depends on signal bandwidth, to be optimal 5V2A is best (we always recommend higher specs than real consumption, so everything runs cool). In reality you need around 5V 1.5A to operate perfectly at max capabilities.

A classic/single USB port as per specs is 5V 0.5A max normally, in such case, unit won't get enough power.

However, USB ports are usually built and implemented using 4 ports USB HUB chipset, and most of the time, the power is shared thru all of them, that means that if you only use 1 of them, then you can get up to 5V 2A from it. So, if you have a device with 4 USB ports and you only use one of them for Dr.HDMI 8K, then it should work just fine.

## FAQ ATV4K

#### Why when I select a new EDID do the ATV4K want to retest Dolby Vision?

The ATV4K keeps a memory of successful EDIDs. If you configure a new EDID it will ask to retest Dolby Vision and/or HDR. But the next time you configure that same tested EDID it won't ask to test again.

#### Netflix on ATV4K only show 5.1 titles?

One tip to save other Apple TV users some confusion, it may not say Atmos in the menu of the app (ex 5.1 in Netflix) you're using at first, but as long as you see Atmos under audio settings, just begin playing content you know supports Atmos and the app will adjust. Prime Video and Netflix seems similar in this regard. As for titles we know have Atmos, Prime video has Jack Ryan, Netflix The Old Guard and Disney + the Mandalorian. Each of those is platform original and there for should be available in every region.

#### I cannot get Atmos from ATV4K but I can from other source.

Make sure your Apple TV 4K Audio setting Change Format is turned off. If you had it turned on to get at least Dolby Digital 5.1 out of your TV before you got Dr.HDMI 8K. Turn Change Format off, ATV4K will then detect the Dr.HDMI 8K as Atmos compatible.

#### I can get Atmos from all sources and all apps but not from Netflix on Shield 2019 or ATV4K?

If you can get Atmos on Prime and Disney + from both devices no problem but never better than 5.1 from Netflix – simply go into your Netflix account setting on a Laptop and check your audio payback setting and make sure it is set to high and not any lower and restart your source.

## FAQ DV

#### What value should the LLDV value for max Lum be set to for most users?

For most users, the default LLDV value for Max Lum of 1000 nits will be good.

#### Why do I have a red tint and colors that are too saturated?

If you set the DV primaries to DCI-P3 and send the LLDV to a display device that does not have a DCI-P3 color profile; the colors, when applying a BT2020 color profile instead, will appear more saturated including a red tint noticeable on faces. The solution is to send BT2020 and not DCI-P3.

# If you have a display that supports DCI-P3 but the fire stick 4k only supports RGB and YCbCr how can you force it to output DCI-P3?

When you set the LLDV Primaries setting to DCI-P3, the Fire Stick is told that the TV wants DCI-P3 instead of BT2020. Even though the Fire Stick may not have a DCI-P3 color format output option, the Dolby Vision to LLDV tone mapping performed by the Dolby provided software should output DCI-P3 colors. The ATV4K does not have a DCI-P3 output option and it does send DCI-P3 colors when the DV EDID is configured to DCI-P3.

#### How do you set the Oppo UDP 203/205 to output LLDV instead of Dolby vision?

In Oppo HDR Setting, set Dolby Vision Processing to Player-led. You can leave HDR to Auto if you only want LLDV for Dolby Vision discs. If you want the Oppo to convert SDR and HDR10 to LLDV, set HDR to Dolby Vision.

#### How do you tell if the Oppo UDP 203/205 is setup correctly and outputting LLDV?

Do a long press on the Oppo remote Information button. Scroll down to Output Information. You should see: Format Dolby Vision and Color Space 12-bit. That is confirmation of LLDV output from the Oppo.

## FAQ NVIDIA SHIELD

#### I can get Atmos from all sources and all apps but not from Netflix on Shield 2019 or ATV4K?

If you can get Atmos on Prime and Disney + from both devices no problem but never better than 5.1 from Netflix – simply go into your Netflix account setting on a Laptop and check your audio payback setting and make sure it is set to high and not any lower and restart your source.

#### Prime APP on Nvidia Shield 2019 is not giving me Atmos?

Try turning off Dolby Audio processing.

## **Main Specifications**

- 1x Input / 1x Output
- 1500MHz 48Gbps Pass through
- Video Bandwidth 48 GBP/sec.
- HDR10+/Dolby Vision Support.
- 4K 10, 12, 16 Bit Support
- 16 Bit Per Pixel Deep Color Depth Available (48 Bit)
- Max Res: 4K120 4:4:4 10b, 8K60 4:2:0 10b, 8K30 4:2:2 12b + DSC
- > CEC Support: For inter-device control between the primary input and both outputs.
- > OLED infoscreen to provide useful and insight view of signal information
- > Advanced EDID management via RS232
- Improved EDID Management solution.
- Sniff EDID and CDS from connected sink devices.
- AutoMix EDID feature will create a custom EDID by mixing sink EDID with audio or video flags
- > Control Modes: Webserver, IP.
- > HDMI Booster/Extender: Capable of extending 1080p resolution up to 15m. in and 15m. out (30m. total for 1080p), 10.2Gbps UHD resolution up to 10m, 18Gbps UHD resolution to 5m.
- > HDMI Doctor: Solves most HDMI integration issues such as EDID, HPD.
- > HDMI Equalevel: Precise signal equalization for both input and output signals delivers the best possible picture quality with no dropouts.
- > Deep Color Support
- xvYCC Color Support
- Flexible/Portable/Plug'n Play
- > 3D Ready: Capability to pass 3D stereoscopic signal formats.
- > Share your config with the community.

## Supported Audio/Video Signals

Supported Format: SD/HD/FullHD/UHD/FUHD, basically INPUT/OUTPUT any video format up to 4K120 4:4:4 10b or 8K60 422 12b FRL6 1500MHz 48Gbps.

> Supported Resolution examples:

480p/720p/1080i/1080p24/1080p25/1080p30/1080p50/1080p60/1440p50/1440p60/2160p24/2160p2 5/2160p30/2160p50/2160p60/2160p120/4320p60 and DCI + DSC

Support all UHD/BR and HDR standard resolution: 8K30 4:2:2 12bit BT2020 HDR, 8K60 4:2:0 10bit BT2020 HDR, 4K120 4:4:4 10bit, ..

> Support all VESA mode video formats (PC Resolutions) up to ultra-high resolution such as WQSXGA, QUXGA, QFHD, WQUXGA, 4K/UHD, 8K/FUHD.

> Support any Audio format such as PCM at up to 192kHz, compressed audio (IEC61937), DSD, DST,DTS, DTS-HD, Dolby True HD, DTS-MA, HBR, DD+, DTS:X and Dolby Atmos.

#### **Technical Specifications**

- > I/O: 1x HDMI In, 1x HDMI Out, RJ45, USB power.
- > OLED Display: 1" diagonal, 128×64, 2 colors

> Audio: PCM at up to 192kHz, compressed audio (IEC61937), DSD, DST, DTS, DTS-HD, Dolby True HD, DTS-MA and HBR.

- > Power Supply: External 5 Volt 2 Amp.
- Input Lag: <1ms (nanoseconds count)</p>
- > Product Dimensions: 3.9"L x 2.3"W x 0.8"H in CM: 10 x 6 x 2.2 Weight: 120g 0.23 LBS
- > Enclosure: Black metal/Blue OLED
- > Regulation: CE, EAC, FCC, RoHS

## Certifications





Dr.HDMI 8K RoHS Certification



Dr.HDMI 8K FCC Certification

## **Pro Tips**

-iRule use x0D instead of r (or x0A for /n) to terminate the IP command string.

- Some sources like X1S or K8500 might need to have powercord removed/reconnected between EDID changes

- Atmos via ARC require HDMI Cable that support 192khz ARC, even if a cable support 600MHz video signal it can still fail for 192khz audio signal.

- Any 4:2:2 signals is always processed at 12b and never clipped. That's why it mentions "up to 12b".

# Team HDfury thanks you for your support

# For help visit our <u>support server</u> or <u>contact us</u>.



# www.HDfury.com

Dr.HDMI 8K was built with love and passion.