



## **HDCU-3500**

IP-ready Camera Control Unit (CCU) for HDC-3500 4K/HD system camera

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Software Release Notes

Version 1.80

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## NEW FEATURES

### 1. Added 720P HFR format

If connect to the camera with HZC-QFR50 or HZC-HFR50 installed, the formats are added.

- a) When connecting between HDC3500 and HDCU3500/HDCU5500 with FIBER CAMERA CABLE, set as follows.

S01 <CAMERA I/F> CABLE TYPE: FIBER CAMERA CABLE

S05 <MULTI FORMAT> CCU VIDEO CONVERT: ENABLE

720/59.94P(4x), 720/59.94P(3x), 720/59.94P(2x) 720/50P(4x), 720/50P(3x), 720/50P(2x) are added.

- b) When connecting between HDC3500 and HDCU3500/HDCU5500/HDCU5000 with HKCU-SM50 option installed with SINGLE MODE FIBER, set as follows.

S01 <CAMERA I/F> CABLE TYPE: SINGLE MODE FIBER、

S05 <MULTI FORMAT> CCU VIDEO CONVERT: ENABLE

720/59.94P(4x), 720/59.94P(3x), 720/59.94P(2x) 720/50P(4x), 720/50P(3x), 720/50P(2x) are added.

- c) When HKCU-SFP50 option is installed in HDCU3500/HDCU5500/HDCU5000, the following formats are added as IP output. When inserting the optical module of 25Gbps into HKCU-SFP50 and setting ST 2110 HFR in N06 <IP LIVE> to ENABLE, 720/59.94P(4x), 720/59.94P(3x), 720/59.94P(2x) 720/50P(4x), 720/50P(3x), 720/50P(2x) are added.

Table 1. Assignment of output terminals when HD HFR is operating

HFR				UHD SDI				SDI OUT		SDI IO	
				A/E <sup>*1</sup>	B/F <sup>*1</sup>	C/G <sup>*1</sup>	D/H <sup>*1</sup>	1	2	1	2
HD	2x	12G	1080P	Link 1/2/(1/2)	Link 1/2/(1/2)	Link 1/2/(1/2)	Link 1/2/(1/2)				
			1080I	Link 1/2/(1/2)	Link 1/2/(1/2)	Link 1/2/(1/2)	Link 1/2/(1/2)				
			720P	Link 1/2/(1/2)	Link 1/2/(1/2)	Link 1/2/(1/2)	Link 1/2/(1/2)				
		3G-A/B	1080P	Link 1	Link 2	Link 1	Link 2	Link 1	Link 2	Link 1	Link 2
			1080I	Link 1/2	Link 1/2	Link 1/2	Link 1/2	--	--	--	--
		3G-B	1080I	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2
			720P	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2	Link 1/2
		1.5G	1080I	Link 1	Link 2	Link 1	Link 2	--	--	--	--
			720P	Link 1	Link 2	Link 1	Link 2	Link 1	Link 2	Link 1	Link 2
	3x	12G	1080P	Link 1/2/3/(2)	Link 1/2/3/(2)	Link 1/2/3/(2)	Link 1/2/3/(2)				
			1080I	Link 1/2/3/(2)	Link 1/2/3/(2)	Link 1/2/3/(2)	Link 1/2/3/(2)				
			720P	Link 1/2/3/(2)	Link 1/2/3/(2)	Link 1/2/3/(2)	Link 1/2/3/(2)				
		3G-A/B	1080P	Link 1	Link 2	Link 3	(Link 2)	Link 1	Link 2	Link 3	(Link 2)
			1080I	Link 1	Link 2	Link 3	(Link 2)	--	--	--	--
		1.5G	1080I	Link 1	Link 2	Link 3	(Link 2)	Link 1	Link 2	Link 3	(Link 2)
			720P	Link 1	Link 2	Link 3	(Link 2)	Link 1	Link 2	Link 3	(Link 2)
	4x	12G	1080P	Link 1/2/3/4	Link 1/2/3/4	Link 1/2/3/4	Link 1/2/3/4				
			1080I	Link 1/2/3/4	Link 1/2/3/4	Link 1/2/3/4	Link 1/2/3/4				
			720P	Link 1/2/3/4	Link 1/2/3/4	Link 1/2/3/4	Link 1/2/3/4				
		3G-A/B	1080P	Link 1	Link 2	Link 3	Link 4	Link 1	Link 2	Link 3	Link 4
			1080I	Link 1/2	Link 3/4	Link 1/2	Link 3/4	--	--	--	--
		3G-B	1080I	Link 1/2	Link 3/4	Link 1/2	Link 3/4	Link 1/2	Link 3/4	Link 1/2	Link 3/4
			720P	Link 1/2	Link 3/4	Link 1/2	Link 3/4	Link 1/2	Link 3/4	Link 1/2	Link 3/4
		1.5G	1080I	Link 1	Link 2	Link 3	Link 4	--	--	--	--
			720P	Link 1	Link 2	Link 3	Link 4	Link 1	Link 2	Link 3	Link 4

\*1 E, F, G and H can be set only with HDCU5000 installed HKCU-SDI50.

## 2. Added 2019 to the version of PAYLOAD ID

The standard setting for VIDEO PAYLOAD ID in M07 <SDI ANCILLARY DATA> is LATEST (2019). If the connection destination does not support the latest standard and malfunctions, it is possible to adjust the setting value of PAYLOAD ID to the past standard by returning the age of VIDEO PAYLOAD ID.

## 3. NMOS connection improvement (only when HKCU-SFP50 installed)

- Added a function to change the device name displayed in NMOS RDS.
- Added a mode (Resume Mode) that automatically starts transmission when the device is restarted because there are other companies' RDS that do not instruct resending when the device is restarted.
- Added the ability to manually set DNS server and domain.

## ERROR CORRECTION

1. **Improved communication stability when a delay occurs in the control line of camera.**
2. **NMOS connection improvement (only when HKCU-SFP50 installed)**
  - Fixed the problem that the color gamut of HDR and the information of OETF are not reflected in NMOS SDP.
3. **Corrected Meta data packet in the IP transmission system to improve transmission/receive errors with other devices. (only when HKCU-SFP50 installed)**

## INSTALLABLE COMBINATIONS

If want to use the functions added in this V1.80, upgrade the following peripherals.

HDC3100, HDC3500, HDC5500, HDC5000	: V2.80 or higher
HDCE-TX30, HDCE-RX30	: V1.11 or higher
MSU-1000, MSU-1500	: V3.70 or higher
RCP-1500, RCP-1501, RCP-1530	: V3.70 or higher
MSU-3000, MSU-3500	: V1.21 or higher
RCP-3500, RCP-3501	: V1.20 or higher

## CONFIRMATION AFTER UPDATE

1. Confirm the versions in the APPLICATION item of the menu of HDCU3500/5500/5000, DIAGNOSIS - <VERSION1> (D03) page.

\*<Change item> is compared with previous software package version: V1.71

APPLICATION	<b>V1.80 (Change item)</b>
UPDATER	V1.00
OS	<b>V1.80 (Change item)</b>
SY	V1.22
VIF	<b>V1.52 (Change item)</b>
TX1(HIGH)	<b>V1.51 (Change item)</b>

TX1(ULTRA)	<b>V1.51 (Change item)</b> (Display only when using HDCU5000/HDCU5500, HDCU3500 with installing HKCU-FB50)
TX1(HFR720)	<b>V1.51 (New)</b>
TX2	<b>V1.50 (Change item)</b> (Display only when using HDCU5000/HDCU5500, HDCU3500 with installing HKCU-FB50)
NET1	V2.24 (Display only when installing HKCU-SFP50)
NET2	<b>V2.27 (Change item)</b> (Display only when installing HKCU-SFP50)
ENC1	V1.01 (Display only when installing HKCU-REC50/55)
ENC2	V1.06 (Display only when installing HKCU-REC50/55)

2. After checking the version of TX1(HFR720), make the following settings and check that the output video of 720P(4x) is displayed. (Only HDCU3500/HDCU5000, HDCU5500 + HKCU-SM50)

S01 <CAMERA I/F> FIBER TRANSMIT RATE: HIGH

S05 <MULTI FORMAT> CAMERA FORMAT: 1080/59.94P(4x)

S06 <HDR> HDR MODE: OFF

S05 <MULTI FORMAT> CCU VIDEO CONVERT: ENABLE

S07 <OUTPUT FORMAT1> SDI-OUT1: 720/59.94P(4x)