Sony Corporation No. HDCM14-089R-TN

Technical News

Issued : January 6, 2015
Revised : February 10, 2015

Subject: Software Release [AT Software: V2.20]

[Applicable Model]

Model / Destination	Serial Number	Number of Unit
HDCU1700 CED		
HDCU1700 SY3		
HDCU1700 SYL		
HDCU2000 CED		
HDCU2000 E2		
HDCU2000 E3		
HDCU2000 J2		
HDCU2000 UC5		
HDCU2080 CNB		
HDCU2500 CED		
HDCU2500 SY3		
HDCU2500 SYL		
HKCU2007 SY		

(Rev.1) Add description to support RIEDEL MediorNet.

[Description]

V2.20 is released for adding functions. Perform the version upgrade as necessary.

[Change Point]

<New function>

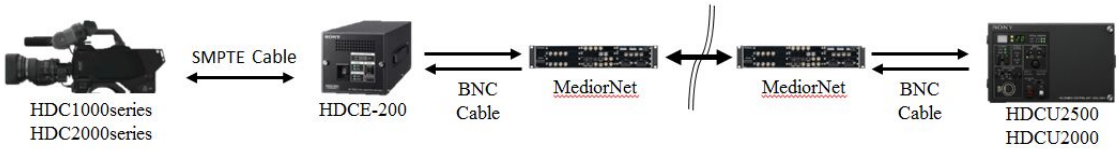
1. Support HDCU2080/1
   Add the function of HD Trunk/HD Prompter.
2. Flag function
   Receive the appeal information from the camera by the CCU, and output it from D-Sub connector on the rear panel.
3. Output the data of perpendicular of the camera
   Embed it to the CCU output signal as the metadata.

<Error correction>

1. The connection to the camera is not established when the ALL CAM POWER ON command is received from MSU.
   Correct the process since there is an error in command ID.
2. The detection may be failed as if the EN board would be inserted although it is not inserted when the power is turned on.
   Correct the error for the detection of the old type board which is diverted from the HDCU1000.
3. The multiple audio of the NEXT output on DRX board in the CCU may be OFF when the HDFX200 is connected.
   Correct the error that the audio data may not embedded on the SDI output on the RC board.
4. When the TRIAX ADAPTOR TYPE is set to D-Triax, the connection to the HDC1500 series is not established after the power is turned on.
   Correct the error in the startup process.
5. Muted audio is embedded on Link B.
   Correct the process for 3D mode.

[Detail of supporting RIEDEL MediorNet] (Rev.1)

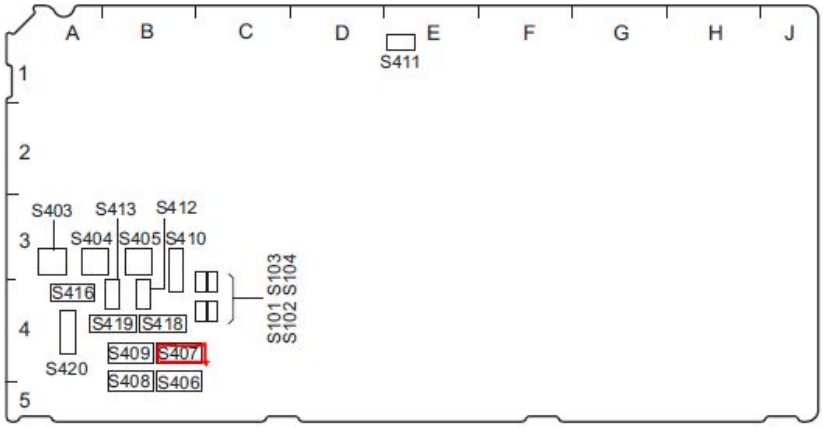
The figure below shows the connection example when the HDCE-200 and HDCU2500/2000 are configured in the MediorNet system of RIEDEL.



●Settings of HDCU2000/2500

(1) Dip switch

Be sure to set S407 TEST4 on AT-167A board of HDCU2000/2500 to ON.
The function to absorb the transmission delay of MediorNet is assigned.



AT-167A Board (Side A)

(2) MENU

Set "CABLE" of <TRANSMIT> in CCU CONFIGURATION C19 page to "COAX(HDCE)".

(3) REFERENCE signal

Supply the same reference signal to SYNC in of MediorNet and REFERENCE input of HDCU.

* Be sure to set S407 TEST4 on AT-167A board of HDCU2000/2500 to OFF when the MediorNet is not used.
* Confirm if the DTX PLD is V2.01 or later.
* Either HDCU1700 or HDCU2080 cannot connect to MediorNet
* The following functions are disabled when connecting to MediorNet
  - HD Prompter (The HD Prompter cannot be used even for the PinP of VF.)
  - HD Trunk
  - Network Trunk
  - Standby Incom
* The Frame Synchro of the Return signal is forcibly fixed to ON, and cannot be turned to OFF.
* The frame frequency of the REFERENCE signal must be the same as the acquisition Format.
  (Example) When shooting in 1080/24PsF, the REFERENCE signal of BB or 1080/50i signal cannot be used.

●Settings of MediorNet

Upgrade the firmware, the hardware, and the FPGA of MN-HDP6 card and MN-XSS card of MediorNet to the versions listed below, or higher.

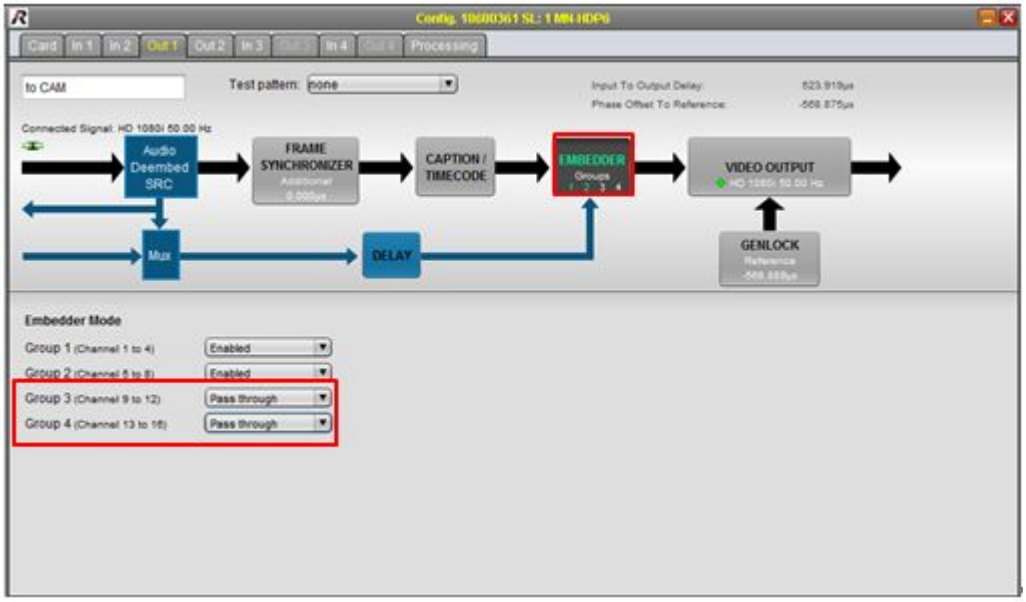
	MN-HDP6	MN-XSS
Firmware	Ver.0002.01.0007	0000.13.0680
Hardware	Ver.3039.00.0000	0000.01.0002
FPGA	Ver.0016.07.0029	0000.10.0036

The setting screens of the MediorNet, which appear below, are based on the above version combination. The setting screen may not be the same depending on the version.

(1) MediorNet EMBEDDER

Set MediorNet Embedder Mode Group3(ch9-12) and Group4(ch13-16) to Pass Through. Otherwise, the TRUNK line between the camera and HDCU cannot be used,

(Reference of Configuration screen)



(2) MediorNet GENLOCK

Select "Lock to Reference mode" for GENLOCK.

(3) MediorNet GENLOCK PHASE SHIFT

Set the MediorNet GENLOCK PHASE SHIFT as below depending on the REFERENCE mode of CCU and HD-SD Delay.

1) Formats in 1080 system

Setting of CCU		MediorNet GENLOCK PHASE SHIFT	
REFERENCE	HD-SD Delay	to CAM	to CCU
SD	0H Delay	**-106H**	**-92H**
	Line Delay	**-106H**	**-92H**
	Frame Delay	**-16H**	**-2H**
HD	0H Delay	**-106H**	**-92H**
	Line Delay	**-16H**	**-2H**
	Frame Delay	**-16H**	**-2H**

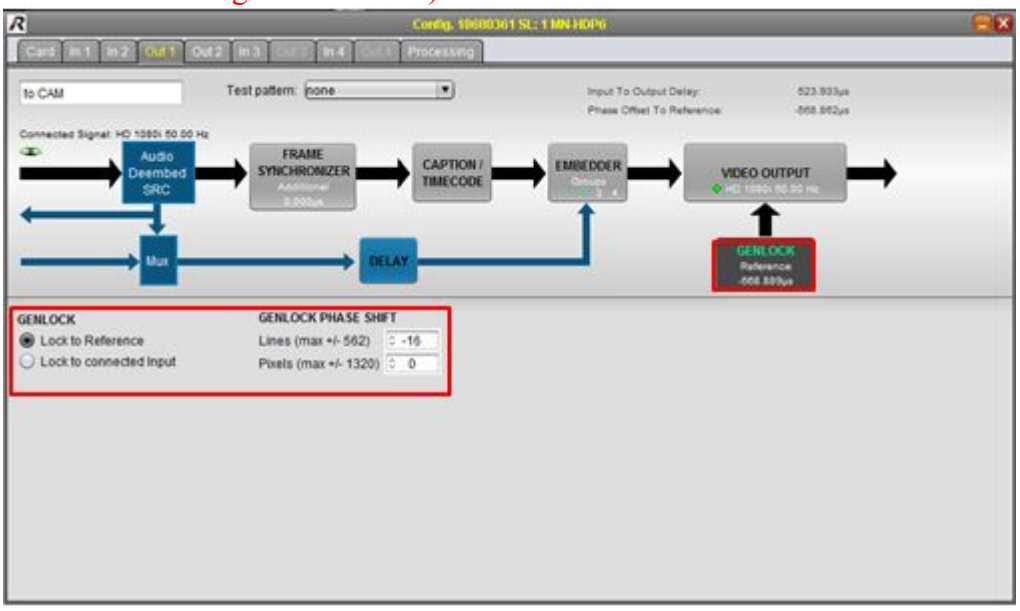
2) Formats in 720 system

Setting of CCU		MediorNet GENLOCK PHASE SHIFT	
REFERENCE	HD-SD Delay	to CAM	to CCU
SD	0H Delay	**-136H**	**-122H**
	Line Delay	**-136H**	**-122H**
	Frame Delay	**-16H**	**-2H**
HD	0H Delay	**-136H**	**-122H**
	Line Delay	**-16H**	**-2H**
	Frame Delay	**-16H**	**-2H**

Note 1) When selecting 1080P Format and CCU VIDEO CONVERT is set to Enable, set the output phase of the MediorNet as below.

Setting of CCU		MediorNet GENLOCK PHASE SHIFT	
REFERENCE	HD-SD Delay	to CAM	to CCU
SD	0H Delay	**-115H**	**-101H**
	Line Delay	**-115H**	**-101H**
	Frame Delay	**-25H**	**-11H**
HD	0H Delay	**-115H**	**-101H**
	Line Delay	**-25H**	**-11H**
	Frame Delay	**-25H**	**-11H**

(Reference of Configuration screen)



* Regarding the RET signal, the noise may be seen on Prompter signal when the CAPTION function (any letters can be indicated on the screen) of MediorNet is used.

[Preparation]

[Software Files]
Version update of the software and PLD is required.

File name	Update target	Version
hdcu2000.rom	Software	V2.20
E_000_005_26_12	PLD (SDP-17)	V2.10
E_000_005_29_09	PLD (DRX-9)	V2.10
E_000_005_30_07	PLD (RC-105)	V2.10

* Please contact to your local Sony's service office for obtaining the software files.

* Software tool for the PLD upgrade
DLT_v35.exe Software tool for PLD version update
DLT30_install.pdf DLT_v35 Install Guide (Japanese)
DLT30_install_E.pdf DLT_v35 Install Guide (English)
Refer to HDCM12-041 for obtain the files above.

<Memory stick>
The software version upgrade is executed using a memory stick. Prepare a memory stick of the following types.
The memory stick that has already been used for other applications can also be used if it has blank capacity of 2 MB or more.
- MSA-8AN (8MB)
- MSA-16AN (16MB)
- MSA-32AN (32MB)
- MSA-64AN (64MB)

Create the following directory in a memory stick, and copy hdcu2000.rom.
Enter the directory name with upper-case letters.
Because of the display on Microsoft Windows system, be careful that only the top character is displayed in upper case, and the remaining characters are displayed in the lower case characters.
\MSSONY\PRO\CAMERA\HDCU2000 (Enter all in upper case)

<PLD upgrade tool>
- Personal computer
OS: Windows 2000/XP, with USB port
Above software tool for version update is already installed
- PLD download jig (cable) Part No. J-7120-220-A

[Installation Procedure]

< Software >
1. Turn off the power to HDCU2000/HDCU2500/2080/1700
2. Insert the memory stick in which the version upgrade data is copied in the specified directory, into the memory stick connector of the AT-167 board.
3. Set the switch S401 (the switch located in the top) at the end of the AT-167 board to the "SD" position.
4. Set the switch S402 (the switch located in the bottom) at the end of the AT-167 board to the "ADV" position. While keeping their respective positions with hands, turn on the power of the HDCU2000/2500/2080/1700.
5. When the Memory Stick Access LED has changed from the red to green light, release your hand from switch S402.

6. After the green LED of the MAIN-POWER of the HDCU2000/2500/2080/1700 keeps blinking for about 15 seconds, it turns on.
7. Return the switch S401 position from “SD” position to the original position.
8. Turn off the power once and turn it back on. The system will boot up with the new software.

<PLD>
Write data into PLD of each board following the Service Manual Chapter 1-13.

- Caution
  The PLD internal data on the SDP-17 board is written or rewritten via the CN3/AVP-15 board. Rewrite the data with the e-Production tool with switch S1-8 on the AVP-15 board turned on. After it is rewritten, return switch S1-8 on the AVP-15 board to off.

[Confirmation/Adjustment]

<Confirming the software version>
Check the ROM version at the CHARACTER output or the MONITOR output.
(On this page, the names of the ROMs are displayed on the screen regardless of the model names. Therefore, the ROM name “HDCU2000” is displayed for HDCU2500 also.

```
| *ROM Version*                |
| CHU                          |
| CCU   HDCU2000               |
|      2.20     14.12.17       |
|______________________________|
```

<Confirming the PLD version>
Check the PLD version name at the CHARACTER output or the MONITOR output.

Firmware		V2.20 (Change target)
PLD	AT-167	V4.12
	AVP-15	V1.11
	SDP-17	V2.10 (Change target)
	DTX-9	V2.01
	DRX-9	V2.10 (Change target)
	RC-105	V2.10 (Change target)