

## Release Notes

---

### Model: HDR-60/HDR-70

---

Firmware

Date: 2016/07/07

Version: HDR\_60\_70\_FW\_2016\_0713

Recorder FW REV LCD: 05C3DB10320E06

Recorder FW Rev: C3DB

File System Rev: 10

Recorder FPGA Rev: 0E

Interface FPGA Rev: 32

Recorder ESP Rev: 06

Codec FW REV LCD: 130 0C4 D10B

Codec Host Bootloader: 130

Codec Host App: 0C4

NTT VASA+ FW REV: D10B

Host FW REV LCD: C215003406

Host APP FW Rev: C215

RS-232/422 Command Rev: 0034

Host Bootloader FW Rev: 06

File Name: HDR70\_flash\_C3DB\_host\_C215\_codec\_C4\_ifpga\_32\_ALL.bin  
HDR70\_flash\_C3DB\_host\_C215\_codec\_C4\_ifpga\_32\_no\_NTT.bin

### Bug Fix

1. Fix the bug when user presses buttons to skip to next clip during play, the FFWD/FRWD will not be worked until the play process is restarted (stop or pause and play again)
2. Fix audio noises issue when powering-up with no SDI input connected. Noise appears after the SDI input is connected to the system after the boot-up process is done.
3. Fix incorrect RTC when setting the RTC with leap year date. (eg. 2016/02/29)

### New Feature

1. When switching to different format during recording, the HDR-60 will switch to next empty bin to continue the recording.

---

**Model: HDR-60/HDR-70**

---

Firmware

Date: 2016/05/12

**Recorder FW REV LCD: 05C3D910320E06**

**Recorder FW Rev: C3D9**

**File System Rev: 10**

**Recorder FPGA Rev: 0E**

**Interface FPGA Rev: 32**

**Recorder ESP Rev: 06**

**Codec FW REV LCD: 130 0C4 D10B**

**Codec Host Bootloader: 130**

**Codec Host App: 0C4**

**NTT VASA+ FW REV: D10B**

**Host FW REV LCD: C212003406**

**Host APP FW Rev: C212**

**RS-232/422 Command Rev: 0034**

**Host Bootloader FW Rev: 06**

### **New Feature**

1. Deep Format: The SSD health status is monitored. When the efficiency of the SSD Read/Write is low, the LCD of the system will ask to operate the "Deep Format" to fill 0 to each cell of the SSD to enhance its Read/Write efficiency. When the "Deep Format" information is prompted on the screen, users can ignore this warning message. However, there is a risk that some issues will occur during recording due to the bad Read/Write efficiency of the SSD.

2. HDD S.M.A.R.T. bad sector info: HDD health monitoring has been added to this release. When the S.M.A.R.T information of the HDD shows that there are bad sectors, the LCD will show warning message. Users can ignore this message. However, there is a risk that some issues will occur during recording due to the bad Read/Write efficiency.

3. Genlock cross reference: This new feature allows HDR-60/70 to accept black burst as reference signal when playing in HD.

4. New bitrate selection: 80Mbps I-frame only

5. When user press the record button and system detects that the input format is not matched to current BIN's format, the system is going to seek another empty BIN and then start record process at the empty BIN.

6. Clip information display is changed to "CLIP XX/YY" where XX is the current clip number and YY is the total number of clips in current BIN.

7. New commands in RS-232/RS-422:
- available record time
  - total number of clip in current BIN

### **Bug Fixed**

1. Fix potential unexpected disk power down during record
2. Fix potential codec error state when the mode switching transition is too short
3. Fix incorrect file timestamp with leap year date
4. Fix unexpected audio noise in ch 5, 6, 7, 8 when play right after recording.
5. Make recording process more robust
6. Add fixes in MXF wrapper for AMA link MXF file into Avid MC v.8.x (4:2:2 only)
7. Fix RTC inaccuracy issue
8. Fix incorrect user's configuration being recalled when executing "Recall User Setting" when there's no user's configuration being stored ever.
9. Fix incorrect warning message displayed when record time beyond 10 hours (error 0x55)
10. Fix incorrect freerun time code generated after setup RTC
11. Fix occasionally no response to RS-232/RS-422 commands during particular operations:
  - Bin select
  - Reset codec

---

### **Model: HDR-60/HDR-70**

---

Firmware

Date: 2015/12/29

**Recorder FW REV LCD: 05C3AA102E0E06**

**Recorder FW Rev: C3AA**

**File System Rev: 10**

**Recorder FPGA Rev: 0E**

**Interface FPGA Rev: 2E**

**Recorder ESP Rev: 06**

**Codec FW REV LCD: 130 0BA D10B**

**Codec Host Bootloader: 130**

**Codec Host App: 0BA**

**NTT VASA+ FW REV: D10B**

**Host FW REV LCD: F1BC003106**

**Host APP FW Rev: C1BC**

**RS-232/422 Command Rev: 0031**

**Host Bootloader FW Rev: 06**

### **Bug Fixed**

1. Genlock fixes
2. Bug fix for MOV file wrapper
3. Bug fix for Hot-plug virgin disk (error after disk format)

---

### **Model: HDR-60/HDR-70**

---

Firmware

Date: 2014/05/06

**Recorder FW REV LCD: 05C3A8102C0E06**

**Recorder FW Rev: C3A8**

**File System Rev: 10**

**Recorder FPGA Rev: 0E**

**Interface FPGA Rev: 2C**

**Recorder ESP Rev: 06**

**Codec FW REV LCD: 130 0BA D10B**

**Codec Host Bootloader: 130**

**Codec Host App: 0BA**

**NTT VASA+ FW REV: D10B**

**Host FW REV LCD: C1BC003106**

**Host APP FW Rev: C1BC**

**RS-232/422 Command Rev: 0031**

**Host Bootloader FW Rev: 06**

### **New Feature**

1. Audio channel selection: User can select to record 2, 4, 8 channels of audio

### **Bug Fixed**

1. Improve available record time for HD 50Mbps
2. Modify algorithm to detect disk status during disk boot-up (solve problem seen on JM20330)

### **Note**

1. Because file system is changed due to new audio channel selection, disk is formatted by new FW (C3A8) can not be used with older FW (prior C3A8)

---

### **Model: HDR-60/HDR-70**

---

Firmware

Date: 2014/03/14

**Recorder FW REV LCD: 05C39F032B0E05**

**Recorder FW Rev: C39F**

**File System Rev: 03**

**Recorder FPGA Rev: 0E**

**Interface FPGA Rev: 2B**

**Recorder ESP Rev: 05**

**Codec FW REV LCD: 130 0BA D10B**

**Codec Host Bootloader: 130**

**Codec Host App: 0BA**

**NTT VASA+ FW REV: D10B**

**Host FW REV LCD: C1AE003106**

**Host APP FW Rev: C1AE**

**RS-232/422 Command Rev: 0031**

**Host Bootloader FW Rev: 06**

### **Bug Fixed**

1. Add protection to prevent incorrect disk status read during disk boot up  
Resolve disk detection problems when inserting cartridge (hot-plug) to HDR  
(with latest IDE-to-SATA bridge IC)

---

### **Model: HDR-60/HDR-70**

---

Firmware

Date: 2014/03/04

**Recorder FW REV LCD: 05C39E032B0E05**

**Recorder FW Rev: C39E**

**File System Rev: 03**  
**Recorder FPGA Rev: 0E**  
**Interface FPGA Rev: 2B**  
**Recorder ESP Rev: 05**

**Codec FW REV LCD: 130 0BA D10B**

**Codec Host Bootloader: 130**  
**Codec Host App: 0BA**  
**NTT VASA+ FW REV: D10B**

**Host FW REV LCD: C1AE003106**

**Host APP FW Rev: C1AE**  
**RS-232/422 Command Rev: 0031**  
**Host Bootloader FW Rev: 06**

---

#### **Bug Fix**

- 1. Occasionally unexpected play stop error with error coded 0xBB during trick play**
- 2. Unexpected "No AV HDD" during cartridge insertion or power up**
- 3. Decoding issues regarding to trick play in 24P**

---

#### **Misc**

- 1. Need to manually format disk after upgrade FW from FW Rev.B358 if customer want to use the disk to record**
- 2. Slow play and frame step play are not ready yet**
- 3. Pre-trigger record is not ready yet**

=====

**Recorder FW REV LCD: 05C38D032B0E05**

---

#### **New Feature**

- 1. Fast Play Forward or Rewind in x3, x6, x9, and x12**
- 2. Skip to next or previous clip during play pause**
- 3. Skip to next or previous 4 seconds during play**
- 4. Play last 15 seconds of a BIN**

## 5. Timelapse record

---

### Bug Fix

---

1. Incorrect file (clip) modification date and time after "Repairing File System" or "Unlock Media" was executed
2. Cartridge disk become invisible to HDR (No AV HDD) after upgrading to new firmware
3. Garbage audio data were recorded in Group 2 audio channels when there's no group 2 audio input from SDI

---

### Misc

---

1. Need to manually format disk after upgrade FW from FW Rev.B358 if customer want to use the disk to record
2. Slow play and frame step play are not ready yet
3. pretrigger record is not ready yet