

# Ikegami



DNG Camera System with  
Digital Disk Recorder

# HIDN-X10 Editcam HD

PRELIMINARY

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Digital Disk Recorder

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## Multi-format Shooting / Multi-format Recording

2.1 megapixel CMOS sensors are used to shoot 1080/60i, 1080/50i, 1080/24p, 720/60p or 720/50p, all as native format. Moreover, these HD images are recorded in full resolution on the FieldPak2 removable media with the Avid DNxHD codec in MXF file format.

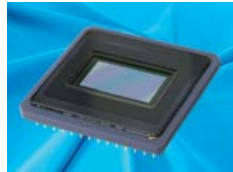


## New Technologies For The Highest Picture Quality

By employing a new image device and superior video processing, the EditcamHD achieves 1000TV line of horizontal resolution, 56dB (target) of S/N ratio, and F10 (target) at 2000lx for sensitivity. Power consumption of the camera head is only 32W (target), comparable to SD type camcorders. The latest compression codec is used to retain the superb picture quality in the recorded clips.

### ■ Three (3) 2/3inch 2.1 megapixel CMOS sensors

Newly developed CMOS sensors are employed to achieve superior picture quality. CMOS sensors have wide dynamic range and, in principle, no smear. Each pixel of the CMOS sensor has its own amplifier (which changes electric charges to voltage signals), so it can perform signal amplification on a pixel basis. The sensors include significant circuitry, resulting in interlace or progressive operation (multi-format) with digital output all in a very small device with low power consumption. For these reasons, CMOS sensors are essential to this new camera recorder development.



### ■ Chip C4 ASIC

Ikegami-Sophisticated video processing technologies greatly influenced the development of Chip C4 ASIC (Application Specific Integrated Circuit). Chip-C4 processes digital output, video from the CMOS sensors including knee, gamma, color and DTL correction. For example, various DTL functions, soft DTL, skin tone DTL, horizontal/vertical/diagonal DTL, and DTL boost frequency, are controlled in the Chip C4.

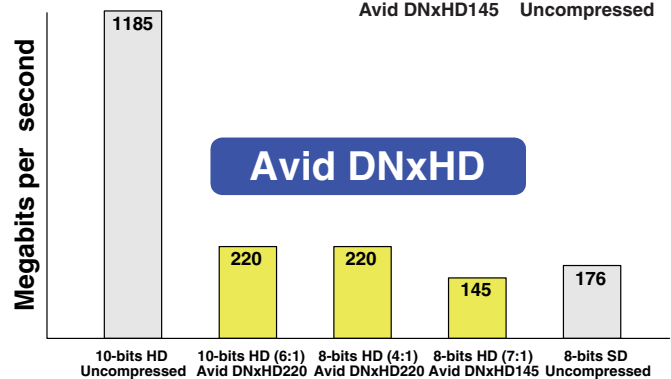


### ■ Avid DNxHD Codec

Avid Technologies Inc. developed DNxHD encoding that is specifically designed for nonlinear editing and multi-generation compositing in collaborative postproduction and broadcast news environments. Though uncompressed high-definition (HD) data rates require 1.2Gbps, Avid DNxHD encoding offers mastering quality HD media at dramatically reduced file sizes. The Avid DNxHD codec offers selectable bit depths and data rates that most closely match those of the source media. Users can choose 8 or 10-bit sampling at 145M and 220M bit rates. Initially, the HDN-X10 will support 145M bit rate Avid DNxHD. (220 Mbps would be supported in the future.)



Avid DNxHD145 Uncompressed



## High Level of Integration With Nonlinear Editing Systems

Audio and video data recorded on a FieldPak2 can be directly accessed and edited from an Avid nonlinear editing system, such as DS Nitris, Media Composer Adrenaline HD, NewsCutter Adrenaline HD, and XpressPRO HD, without digitizing or moving files.

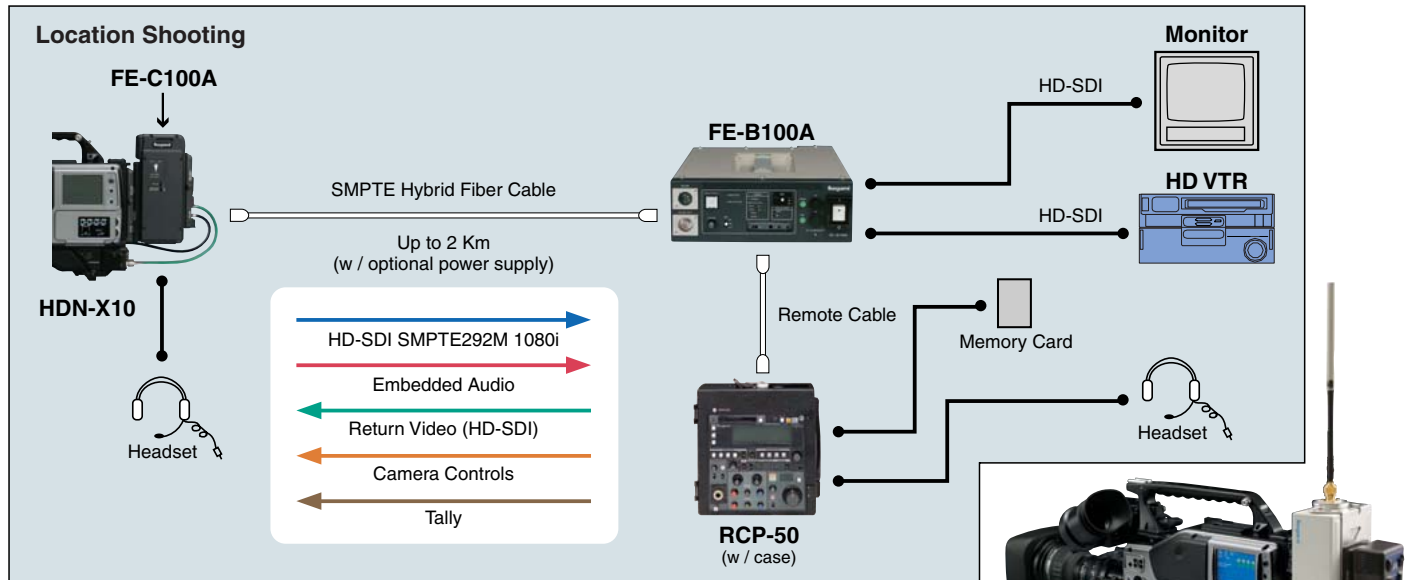


## Versatile Operation

### Optical Fiber Camera Control System

The FE-C100A Fiber Camera Adapter transmits HD-SDI, 2-ch Audio up to 500m (or up to 2Km with an additional separate power supply) on SMPTE Hybrid fiber cable.

The FE-B100A delivers Return video (HD-SDI), PGM audio, Intercom, Power, Tally, Camera Controls and Genlock(option) in a compact size and lightweight of 9.7lbs.



### PP-57

The Ikegami PP-57 is a compact HD digital microwave link. When attached to the HDN-X10, HD wireless RF camera operation is available. The system's maximum operational range is 1.6km.

## New Innovative Functions

### Proxy video recording / Support for Meta data

The HDN-X10 can record high definition video onto a FieldPak2 and simultaneously record proxy video to an attached USB flash memory device. Proxy video is easily transmitted from remote sites by IP network, such as the Internet. This operation enhances news production and other remote shooting. Meta data, which is clip information that pertains to the cameraman's name, location data, clip duration, time of recording and other data, is very useful for data searching and managing for archive.

## Future Migration

The standard FieldPak2 employs a hard disk drive, however, other nonlinear media can be readily used.

FieldPak2 has the capability to use solid-state memory, such as Flash Memory, or any other new technology. Customers will be able to use the most cost-effective media as it becomes available.



## Disk Recording Function

### RetroLoop

The RetroLoop function ensures that a videographer will capture a critical shot, since the recorder is always ready for the decisive moment. Audio and video are temporarily stored in a buffer on the disk drive. Though the cameraman presses the REC trigger after event has occurred, the HDN-X10 has been storing images from the selected period of time before the trigger was pressed.

### Time Lapse Recording

The HDN-X10 can record frames at a pre-selected interval. This function is useful for tracking the blooming of flowers, the movement of clouds, or other slow-moving events. The HDN-X10 can also record frames on command for animation sequences.

### Intelligent Recording

Even when the HDN-X10 is in playback mode, pressing the record button will automatically record the video clip to a free space on the disk. The operator can start recording at anytime.

## Other Functions



### Down converter

The HDN-X10 has a standard built-in down converter, which allows for standard definition field monitoring.

### Unislot

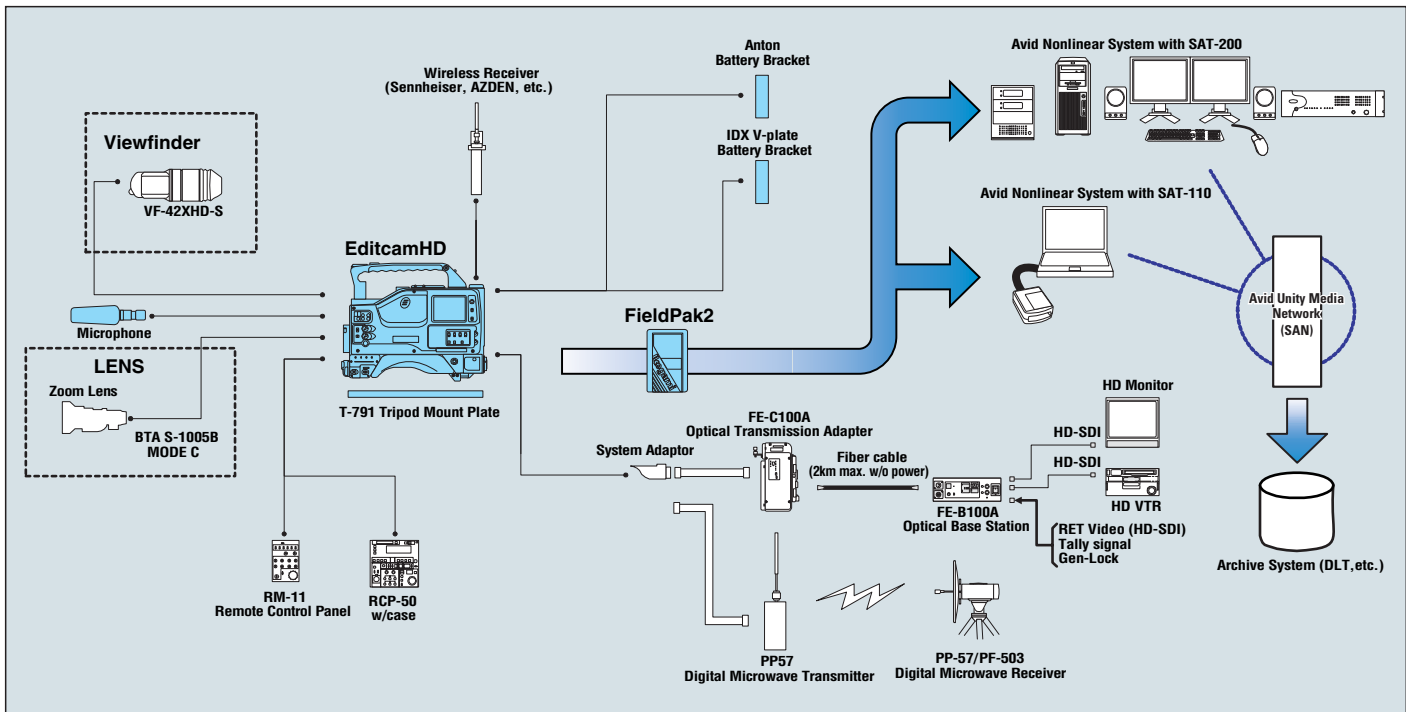
The HDN-X10 has a Unislot for either an integrated wireless audio receiver or video transmitter. Using the WV1200 2.4GHz SD audio/video transmitter, it is possible to transmit the SD audio/video signal to a maximum range of 100m for monitoring by production people.



### HD-SDI output

HD-SDI video with embedded 4ch audio output is available on the HDN-X10 on standard.

## System Diagram



## Specification

### [ Rating ]

Scanning System 1080 lines 59.94Hz 2:1 interlaced (1920X1080)  
720 lines 59.94Hz 1:1 non-interlaced (1280X720)  
1080 lines 23.98Hz 1:1 non-interlaced (1920X1080)  
1080 lines 50Hz 2:1 interlaced (1920X1080)  
720 lines 50Hz 1:1 non-interlaced (1280X720)

Image sensor 2/3-inch 2,100,000-pixel CMOS  
Optical system 2/3-inch 3CMOS (R,G,B) sensor  
Sensitivity F10/2000 lx  
Lens mount BTA-S1005B  
Filter

|    | 1     | 2     | 3     | 4     |
|----|-------|-------|-------|-------|
| ND | 100%  | 25%   | 6.2%  | 1.5%  |
| CC | 3200K | 4300K | 6300K | CROSS |

Viewfinder 2-inch B/W viewfinder  
Operating voltage DC+10.5V~+17V  
Operating temperature -0°C~+40°C  
Storage temperature -25°C~+60°C  
Humidity 25%~80% (Non-condensing)  
EMI FCC class A, CE class A  
Dimensions W138.5XH250.5XD320 mm  
Weight approx 4.5Kg

### [ Performance ]

S/N 56dB (HDTV-target)  
Resolution/Modulation 1000TVL/45% or more (1080/59.94i 800TVL, 27.5MHz)  
depth 700TVL/40% or more (720/59.94p 560TVL, 28.875MHz)  
1000TVL/45% or more (1080/24p 800TVL, 27.5MHz)  
1000TVL/45% or more (1080/50i 800TVL, 27.5MHz)  
700TVL/40% or more (720/50p 560TVL, 28.875MHz)  
Registration 0.02% or less (without Lens)  
Power Consumption camera head: approx. 39W (target)  
2-inch viewfinder: approx. 6W

### [ Input signals ]

Audio signal XLR-3pin X2 (0dBu/-40dBu/-60dBu)  
Microphone XLR-3pin (-40dB/-60dB), XLR-5pin as option  
Timecode BNC SMPTE-12M-1995  
Gen-lock SMPTE-274M, SMPTE-296M, (shared with SDTV)

### [ Output signals ]

HD-SDI signal BTA S-004B, SMPTE-292M  
Monitor signal Y (BNC connector, 75Ω) or SDTV VBS selectable  
VCR signal BTA S1005B (necessary for VTA-207V)  
Audio signal XLR-5pin (0dBu)  
Earphone 3.5mm stereo jack X2  
USB connector USB2.0 X2  
Gen-lock SMPTE-274M, SMPTE-296M, (shared with SDTV)

### [ Recording Section ]

Video Signal 1080/59.94i, 720/60p, 1080/24p, 1080/50i, 720/50p  
Video Compression Avid DNxHD 145 (Avid DNxHD220 would be supported in the future.)  
Typical Recording Time approx. 90min. (100GB FieldPak2 at 1080/60i)  
Audio Sampling Rate 16-bits, 48KHz/44.1KHz

Design and specifications are subject to change without notice.

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