Ikegami

Tapeless Solution

Editcam3
DNS-33W

Editcam3

The DNS-33W Editcam3 is the latest evolution in tapeless recording,
It combines superb camera technology with sophisticated new features.
Ikegami has continuously upgraded and expanded the state of nonlinear acquisition,
which it introduced to the broadcast market a decade ago.
The DNS-33W radically changes the way video will be captured, edited and distributed.

The Starting Point of Tapeless

No Digitizing

In the Editcam system,
clips are recorded onto removable media called FieldPaks.
Once a FieldPak is inserted into an adapter,
the clips are directly accessed by the Avid nonlinear editor.
It is this ability to edit on the same media that the camera records to
that frees the user from the time consuming process of digitizing.

Recording

Features

■ 12-bit A/D Converter

Employing an advanced 12-bit A/D converter ensures improved contrast in low light luminance portions of the image. Knee expansion circuitry incorporated at the first stage of the digital processing restores linearity in high luminance areas which is lost in the in the pre-knee process. Through this technology, linear signal processing at 600% is achieved in the digital processing, resulting in improved signal characteristics, including knee and flare.

PRE KNEE / KNEE EXPAND

OUT PUT — IN PUT — 600% — KNEE EXPAND
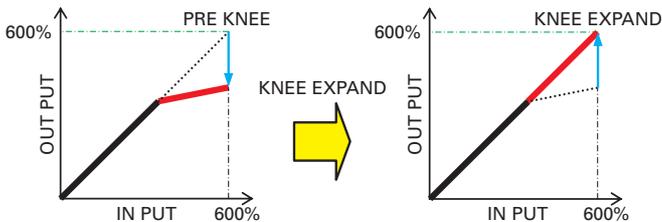
■ Digital Process

A newly developed digital processing ASIC is employed, which handles almost all of the signal processing. Designed at 0.18micron rule, the ASIC quantizes video signals with up to 38 bits for internal processing. Full digital processing after pre-knee ensures stable and reliable picture quality. Circuitry that has in previous generation DSP cameras been analog, such as white balance and white shading, is now digitized, to deliver the highest quality video with excellent S/N in all modes of operation. The digital ENC circuit, which is built into this chip, provides stable composite video from the camera head.

■ S/N 66dB (Typical)

Excellent S/N 66dB(NTSC) / 64dB(PAL), which heretofore would have been impossible, has been achieved thanks to newly developed CCD signal processing, improvement of pre-amp, digitization of remaining analog circuit and adoption of 12-bit A/D conversion. Video signal noise has been reduced by 50% in practical operation from our previous model.

■ AIT (Advanced Interline Transfer) CCDs

High performance 520K pixels(NTSC) / 600K pixels(PAL) 16:9/4:3 switchable AIT CCDs offer very low smear level of -135dB with 100,000 times lighting condition. This figure actually exceeds that of previous FIT chips.

■ ECC (Electronic Color Compensation) Filter

Employs 4 position(3200K/4300K/6300K/8000K) ECC filter. It provides higher sensitivity at high color temperature with similar operation to current top end broadcast cameras. A 4-position Neutral Density Filter is provided to accommodate the full range of outdoor lighting conditions.

■ Hyper Gain

Hyper-gain up to +48dB allows minimum illumination of just 0.03lux(F1.4 with 50% video level).
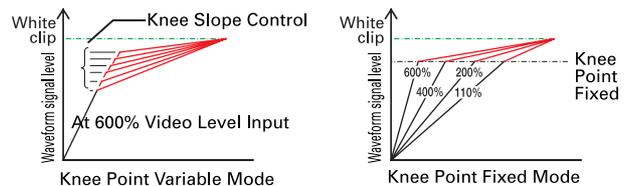
Normal   **Gain UP**

■ Adaptive Auto Knee

In addition to the conventional auto knee circuit that varies the slope of the knee according to the degree of over exposure, the DNS-33W includes an adaptive auto knee that adapts both the point and slope of the knee to give improved contrast in the highlight area. The adaptive auto knee has five different pivot points, selected by the menu, so that operator can optimize the performance according to the application.

White clip — Knee Slope Control — White clip — Knee Point Fixed

Waveform signal level — At 600% Video Level Input — 600% 200% 400% 110%

Knee Point Variable Mode   Knee Point Fixed Mode

■ Super-Knee

This function retains color in high light areas where it typically looses saturation in knee circuit. The Super Knee circuit uses the 600% dynamic range in digital to recover the color saturation.

Normal   **Super Knee ON**

■ 4ch Audio

4ch audio recording is available. Sampling frequency can be set at 44.1KHz or 48KHz. Audio input from front MIC, rear audio inputs(2inputs) or Unislot(RF Receiver) can be assigned to each channel.

■ Touch Control 3.5inch Color LCD

The 3.5 inch color LCD panel can display recording status information, accesses menus pertaining to camcorder recording, or display camera output / playback video. Display mode and settings can be changed with touch panel operation.

■ D-Tap Connector

A D-Tap connector for powering a light is located at the inside of the front of the handle. This eliminates the need to run a power cable to the battery bracket. Light control can be synchronized to REC control of camera.

D-Tap Connector

■ 1.5" Viewfinder with slide mechanism

Equipped with a high performance viewfinder of 600TVL horizontal resolution, the viewfinder can be moved back and forth / right and left by means of an innovative sliding system. In addition to conventional locations, the viewfinder has a rear tally light on the backside for easy taking confirmation at various shooting angles.
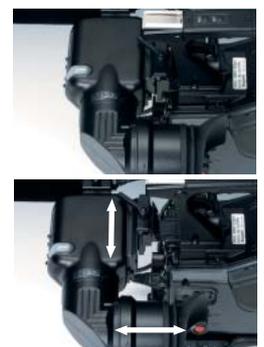
In addition to Diagonal DTL. Skin-tone DTL, boost frequency control and H/V balance control, new features are employed. These new features provide a more natural DTL effect and higher resolution effect in the video from high light to low light portion.

■ New Skin DTL

The new Skin DTL eliminates not just the DTL edge, but also the high frequency portion of skin tone for greater effect than conventional skin DTL.

Normal DTL   **New Skin DTL ON**

■ Wide Band DTL

By generating DTL at a wide band of boost frequencies, the picture becomes sharper especially when the zoom is at wide angle.

■ New Slim DTL

A more effective slim DTL function is available for thinner horizontal DTL edge.

■ Vertical Slim DTL (5 Line DTL)

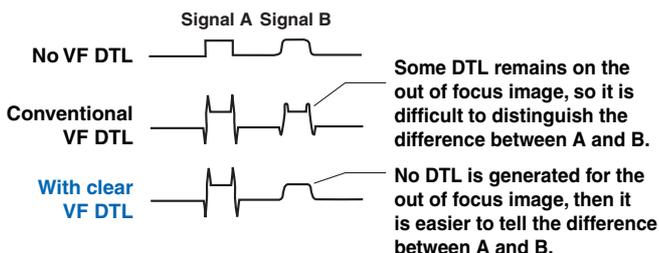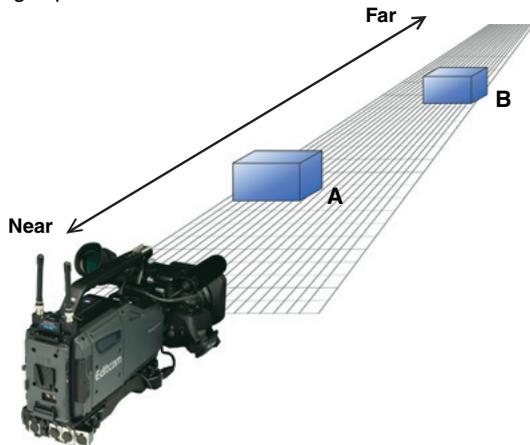By making vertical edge from 5 lines, slim DTL effect can also be achieved for the vertical edge.

Normal DTL   **Vertical Slim DTL ON**

■ Clear VF DTL

Clear VF DTL emphasizes only the in-focus point, so easier focusing is possible.

Far

B

Near

A

Signal A Signal B

No VF DTL

Conventional VF DTL

Some DTL remains on the out of focus image, so it is difficult to distinguish the difference between A and B.

With clear VF DTL

No DTL is generated for the out of focus image, then it is easier to tell the difference between A and B.
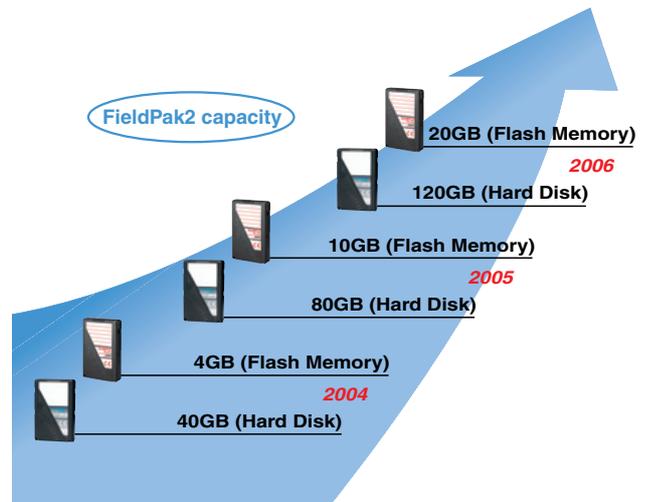
■ Compression codec and recording time

Standard compressions include JFIF3:1/10:1/20:1 and DV25. DV50 and MPEG50 are optionally available. (*Recording time table shows typical recording time excluding audio data)

Recording time.table	Flash Memory			Hard Disk		
	4GB	10GB	20GB	40GB	80GB	120GB
DV25	18min	45min	90min	180min	360min	620min
JFIF3:1/DV50/MPEG50	9min	22min	45min	90min	180min	360min

■ FieldPak2

The FieldPak 2 is the media Editcam technology records to. They are currently available in 20GB, 40GB, 60GB and 80GB capacities. A 40GB FieldPak will yield approximately 165 minutes of recording DV25 compression with 4ch audio recording. Also available are solid state RamPaks.

FieldPak2 capacity

20GB (Flash Memory)
2006
120GB (Hard Disk)
10GB (Flash Memory)
2005
80GB (Hard Disk)
4GB (Flash Memory)
2004
40GB (Hard Disk)

■ Various recording Function

<Retro-Loop>

This groundbreaking feature allows cameramen to capture events after they have occurred. In Retroloop mode, the video is recorded to a buffer of pre-deteremined length (from 5 seconds to over 8 minutes at DV25), but only saved when the cameraman presses the record button.

<Time-lapse recording>

The incorporated interval program allows for the capturing frame rates from one out of two, up to one frame in 24 hours. Time-lapse recording applications include botanical studies, speeding up of cloud movements and speeding up of construction jobs, to name a few.

<Intelligent recording>

Editcam Intelligent recording ensures that audio and video are recorded safely to an empty section of the hard drive, even if you were reviewing previously recorded material at the time.

■ Portable Non-Linear Recorder [DNE-31]

The DNE-31 EditcamStation2 is a portable non-linear recorder, which uses the same recording media (FieldPak2) as the DNE-33W. Playback and rough editing of recorded clips in FieldPak2 are available. Connected to a conventional camera, captured video can be digitally recorded directly to a FieldPak2 for later use by an Avid non-linear editor.

Tapeless Workflow

Shooting

Sophisticated Editcam3 technology accelerates your creative motivation. Low center of gravity mechanical designation and new large shoulder pad support comfortable on the shoulder active shooting.

Eject

The FieldPak2 is manufactured with shock absorbing insulation to protect the internal drive. It gives the recording media high reliability.

Mount

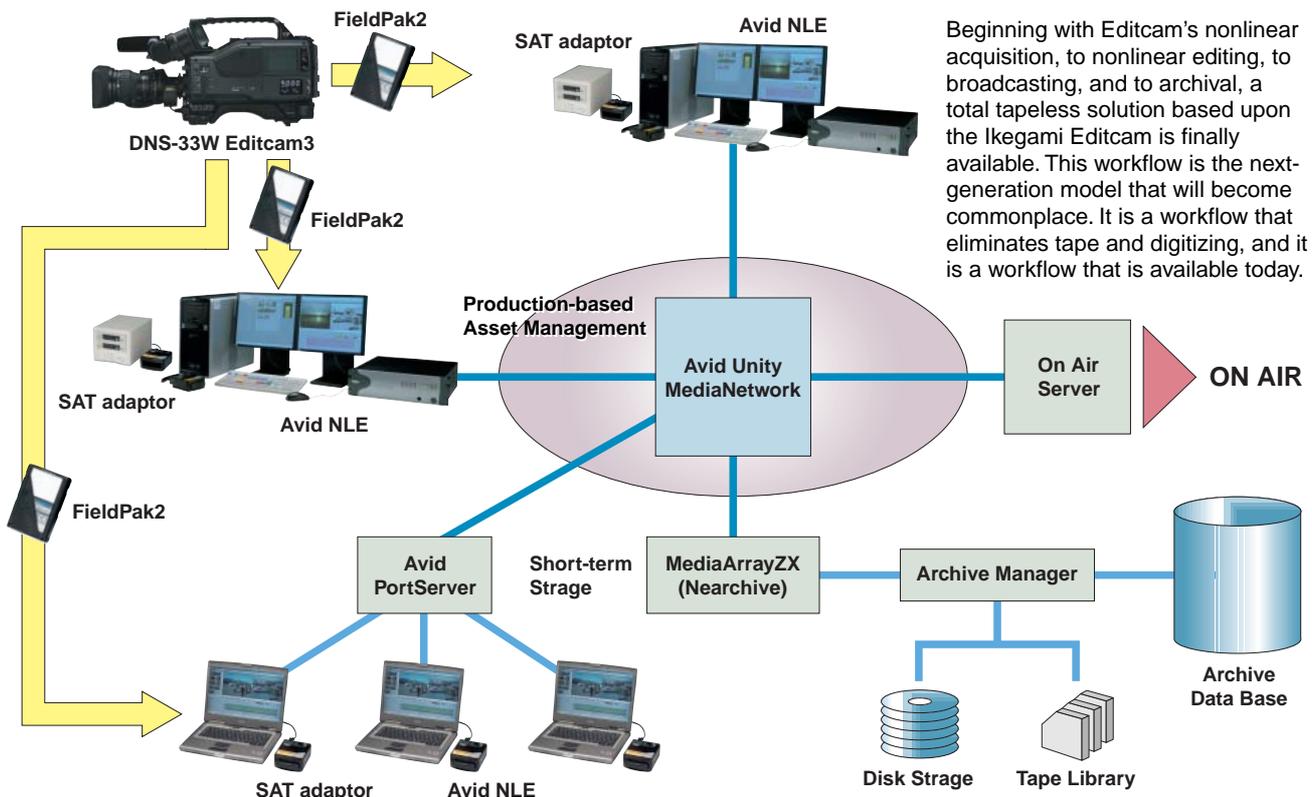Inserting the FieldPak2 into an SAT adaptor provides easy mounting for editing with an Avid NLE.

Editing

Editcam technology eliminates the time consuming process of digitizing clips prior to editing. This innovative workflow gives editors more time to focus on the creative side of video creation.
(It is not necessary to consume time importing to NLE. Innovative no digitizing workflow provides more time to editors to concentrate on video creation.)
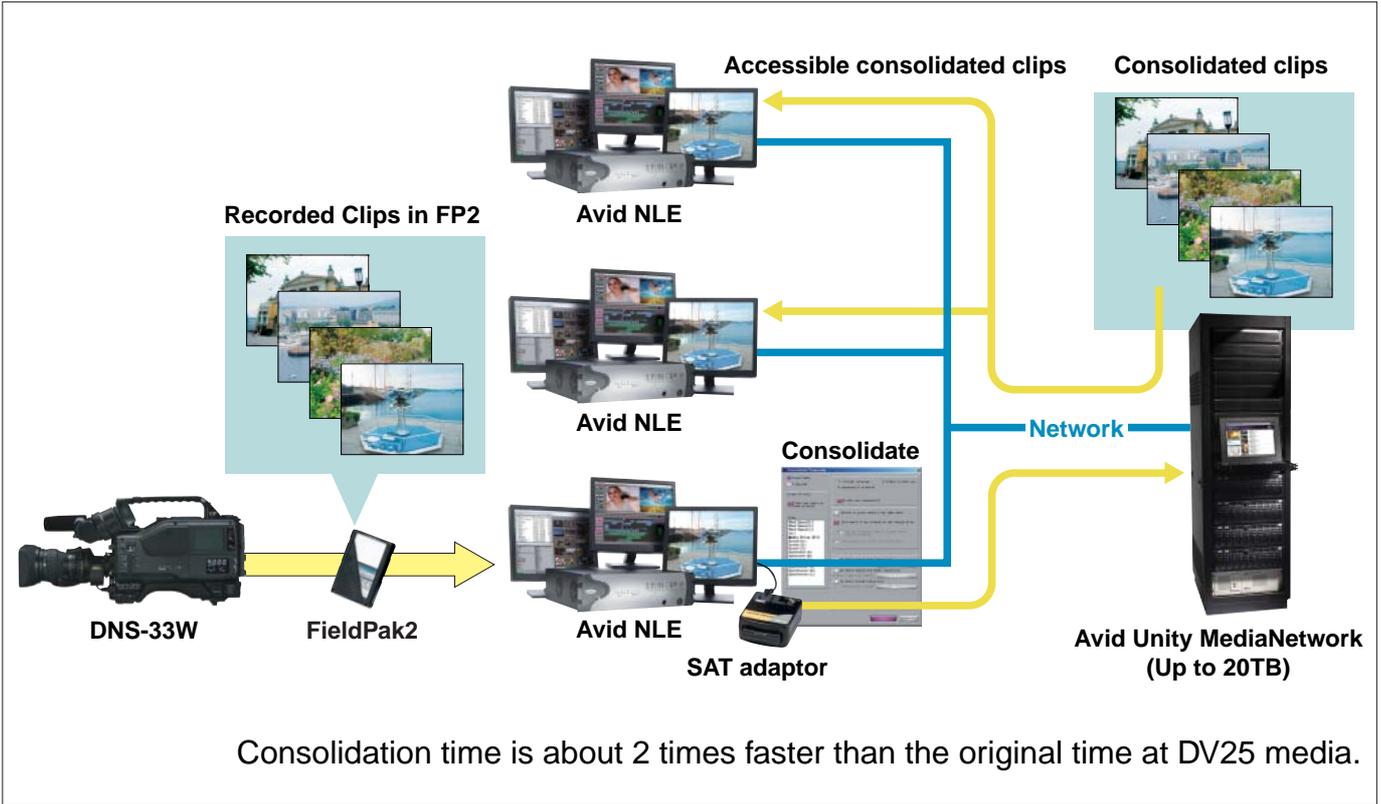
No Digitizing!

Ikegami's total tapeless solution

FieldPak2

SAT adaptor

Avid NLE

DNS-33W Editcam3

FieldPak2

SAT adaptor

Avid NLE

FieldPak2

Production-based Asset Management

Avid Unity MediaNetwork

Avid PortServer

Short-term Strage

MediaArrayZX (Nearchive)

Archive Manager

On Air Server

ON AIR

Archive Data Base

SAT adaptor

Avid NLE

Disk Strage

Tape Library

Beginning with Editcam's nonlinear acquisition, to nonlinear editing, to broadcasting, and to archival, a total tapeless solution based upon the Ikegami Editcam is finally available. This workflow is the next-generation model that will become commonplace. It is a workflow that eliminates tape and digitizing, and it is a workflow that is available today.
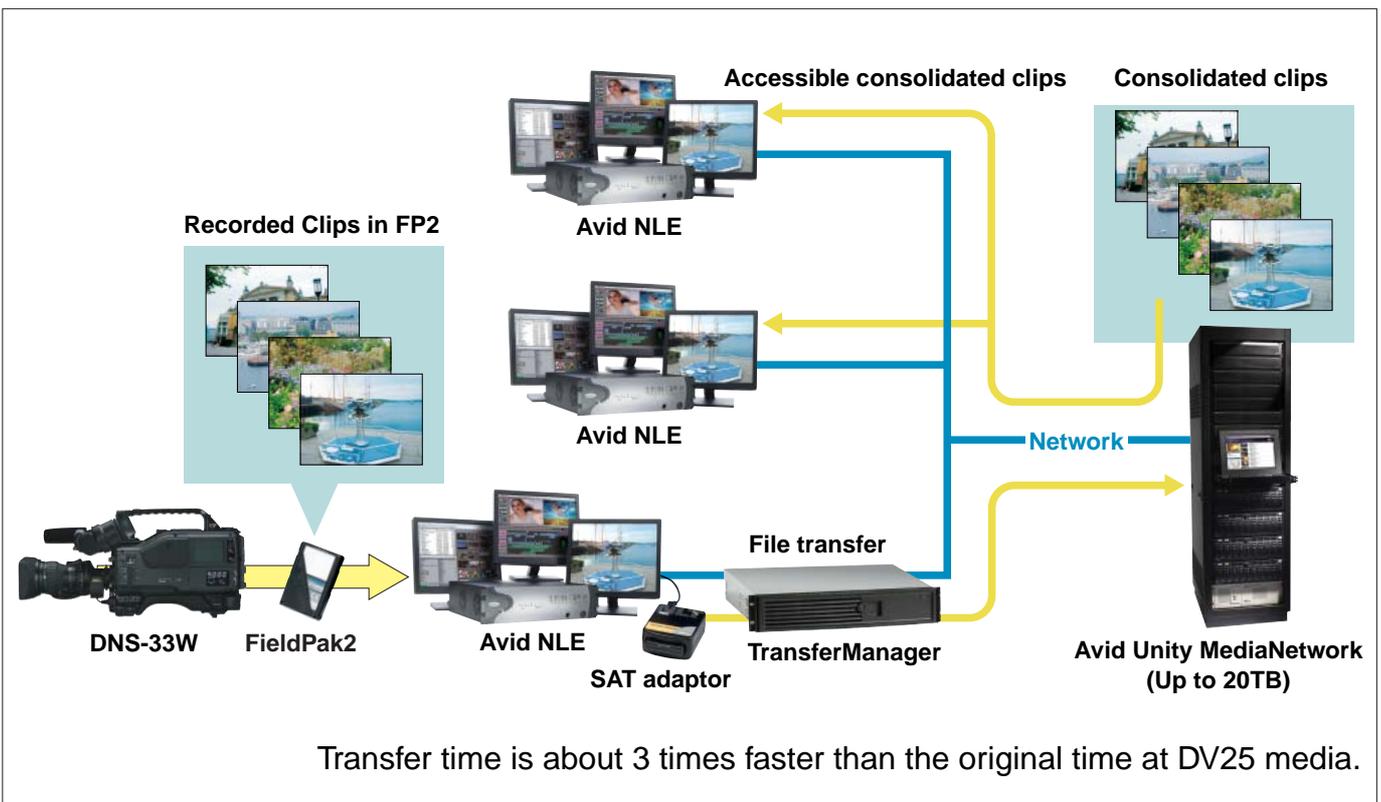
Server Ingesting System

After ingesting Unity server, Avid clients can simultaneously read these media.

Application-1

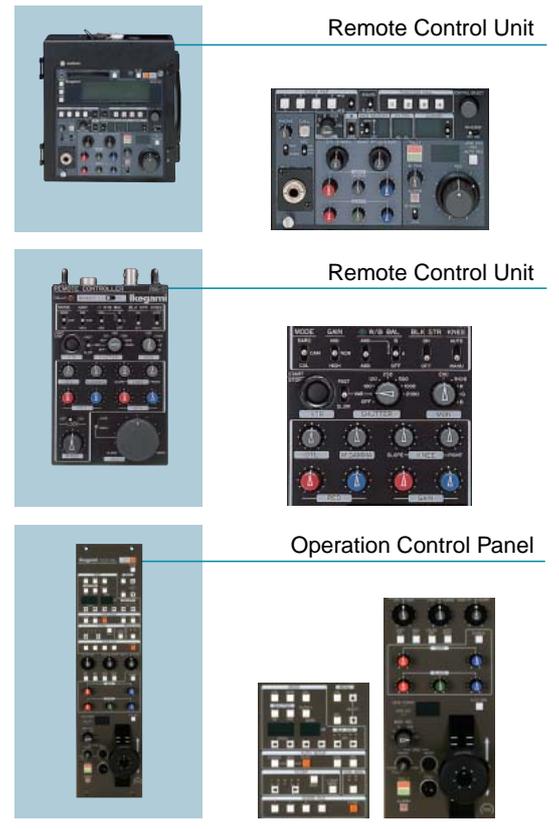Accessible consolidated clips   Consolidated clips

Recorded Clips in FP2

Avid NLE

Avid NLE

Consolidate

Network

DNS-33W   FieldPak2

Avid NLE

SAT adaptor

Avid Unity MediaNetwork
(Up to 20TB)

Consolidation time is about 2 times faster than the original time at DV25 media.

Application-2

Accessible consolidated clips   Consolidated clips

Recorded Clips in FP2

Avid NLE

Avid NLE

Network

File transfer

DNS-33W   FieldPak2   Avid NLE

SAT adaptor   TransferManager

Avid Unity MediaNetwork
(Up to 20TB)

Transfer time is about 3 times faster than the original time at DV25 media.

User-Conscious Features

Monitor Level Volume

Audio Level Volume

Retro-Loop Switch

Touch Control Color LCD

FieldPak Access Lamp

1.5" Viewfinder with Slide Mechanism

Loud Speaker

LCD Back Light Switch

P.FUNC Switch

ECC Filter Button

ND Filter Knob

HYPER GAIN Switch

Audio Monitor Output Selection Switch

Audio Output Group Selection Switch

Ergonomic Shoulder Pad

IEEE1394 Output Connector

Audio Input Level Volume

POWER SWITCH

Control Switch Panel

D-TAP Connector

Emergency Manual Eject

Reset Button (Inside of MIC Plug)

Maintenance Connector

TC In Connector

TC Out Connector

GENLOCK In Connector

Video Out/SDI Connector

Memory Card Slot

Rear Tally Lamp

Rear Tally Switch

I·D·E

Audio Out Connector

REMOTE Connector

MON Out Connector

Audio In Connector

Ikegami

PEAKING CONTRAST BRIGHT ZEBRA TALLY

Shutter/SUPER-V Switch

AWB/ABB Swicth

Rotary Pulse Switch

SET Button

Microphone Connector

REC Button

Lens Connector

Earphone Receptacle

■ Remote Controllers

Remote Control Unit

Remote Control Unit

Operation Control Panel

■ Adaptors

26pin VTR Adaptor
VTA-206V

MA System Adaptor
MSA-206V

■ Multi-core Transmission System

Multi-core
Camera Control Unit
MA-400

System Application

MCA-400

MSA-206V

■ **Multi-core cable extension**

By attaching the MA system adaptor MSA-206V and MA camera adaptor MCA-400 to the camera head, the DNS-33W can be used with the MA-400 CCU for multi-core cable operation. Customers gain increased versatility with camcorder which can also operate as system camera.

MA-400

Useful Accessory

■ **Unislot**

The DNS-33W employs a newly designed Unislot on the rear portion of the camera housing for various plug-in accessories.

■ **IEEE1394 output (Option)**

Optional IEEE1394 video/audio output(no input and no remote control facility) is available. Regardless of the compression employed in the recording process, IEEE1394 output is done by DV codec.

■ **Slot-in wireless mic receiver (Option)**

A slot-in wireless microphone receiver can be inserted into the Unislot without extra cable connection. The cableless design improves ruggedness and reduces size of equipment on the shoulder.

(AZDEN)

(SENNHEISER)

Accessories

Portable Non-liner Disk Recorder

DNE-31 Editcam Station2

Non-liner Editor

Avid MediaComposer Adrenaline

Avid XpressDV

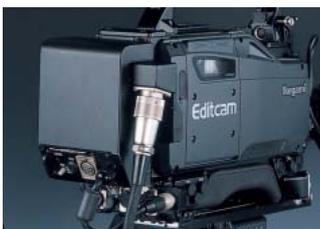Avid XpressPRO with Mojo

FieldPak Adaptor

SAT-110 USB2.0 Adaptor
SAT-200 SCSI Adaptor

Recording Media

FieldPak2-40G
(HDD Type)

RAMPak-4G
(Flash Memory Type)

Multi-core Transmission System

MCA-400 Multi-core Adaptor
/MSA-206V System Adaptor

MA-400
Multi-core Camera Control Unit

CJ-102 Joint Connector
MCC-10 (10m)
MCC-30 (30m)
MCC-50 (50m)
MCC-100 (100m)

Multi-core Camera Cable

5-inch Viewfinder

VF5-6 5-inch Viewfinder

VF5075W 5-inch Viewfinder

Battery&Light/Various models

Wireless Microphone/Various models

Tripod/Various models

System Diagram
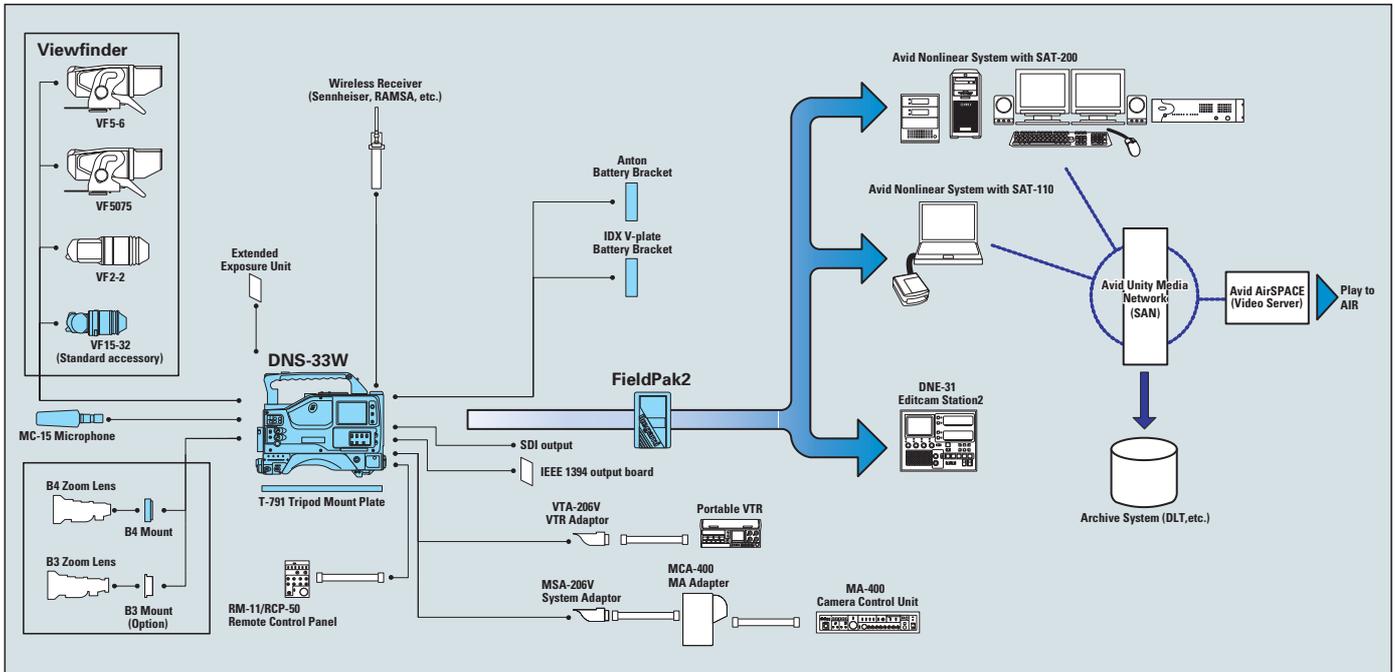
Specification

[Camera Portion]

Image Device	2/3-inch 520,000 pixel AIT 3CCD (NTSC)
	2/3-inch 600,000 pixel AIT 3CCD (PAL)
Sensitivity	F11 at 2000Lux
Mimimum Illumination	0.03Lux
	(F1.4 Lens, 48dB Gain-up, 50% Video level)
Signal to Noise Ratio	66dB (NTSC)/64dB (PAL) (Typical)
Horizontal Resolution	750TV Lines at center
Resistration Error	0.02% (Except lens distortion)
Smear Level	-135dB under 100K times lighting condition
A/D Converion Bit Rate	12-Bit
Gain Selection	-3, 0, +3, +6, +12, +18, +30, +36, +42, +48dB
Optical Filter	ND: 100%, 25%, 6.2%, 1.6%
Electric Filter	3200K, 4300K, 6300K, 8000K
Electric Shutter	1/60 (Off), 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000 sec (NTSC)
	*1/50 in PAL version instead of 1/60
Variable Shutter	1/7867sec to 1/60.5sec (NTSC)
	1/7812sec to 1/50.4sec (PAL)

[Recording Portion]

Compression Codec	JFIF(3:1/10:1/20:1), DV25, DV50(*), MPEG50(*) *Option
Recoriding Time	165 Minutes approx.
	(DV25, 40GB FieldPak2)
Video PGM Output	BNC 75ohm, 1Vp-p
Video MON Output	BNC 75ohm, 1Vp-p
Number of Audio Input	4ch
Audio Sampling	16Bit, 48KHz/44.1KHz

[Overall]

Power Consumption	27W approx.
Ambient Temperature	0 to +40 degree C /
	+32 to +104 degree F (Operation)
Dimensions	W138×H250×D320mm /
	W5.43×H9.84×D12.60inches
Camera Head Weight	4.3kg approx. / 9.74lb approx.
	(Excluding Lens and VF)

Design and specifications are subject to change without notice.