



Send Video Clips to PACS, Burn and Label Disks at the Modality

Technology Designed for Medicine™

MDR® Video RP is a medical device which records high-resolution streaming video to CD or DVD media in a DICOM format with automatic, full color label printing including patient and exam data. MDR Video RP has all the features of NAI Tech Products popular MDR Video system including sending to PACS and writing to USB media plus new disk labeling and disk import capabilities.

Applications

MDR Video RP is ideal for use with c-arms, x-ray fluorography, angiography, ultrasound, endoscopy and vascular imaging systems. Its ability to capture long video segments and transfer full-motion clips to PACS or disk offers advantages for both non-DICOM and DICOM modalities. It improves workflow and communication in a wide range of clinical applications including speech pathology, echocardiology, endoscopy and radiotherapy planning. MDR Video RP is a self-contained, compact system which installs easily on portable modalities, surgical carts, and fluorographic systems.

Burn and Label Disks in the Same Drive

NAI Tech Products has integrated into the MDR Video RP, patented RadialPrint™ technology which burns data onto the disk and prints a full color inkjet label within the same drive. This technology is ideal for the MDR Video as it provides a compact and completely self-contained solution, easily adapted to any imaging system. MDR Video with RP is the perfect combination of technologies to produce a truly innovative, cost-effective and portable solution.

'ESP' Extends Functionality of Modality Disk Burners

Another exciting new feature of MDR Video RP is ESP (Electronic Scribing Process). This technology reads the patient demographic data from unlabeled disks and automatically labels them with the correct patient information. A DICOM viewer can also be appended to the disk if one is not already added by the modality. If inkjet printable media were not used for the original disks, MDR Video RP will import the data to its internal hard drive and burn a new disk with a printed label on suitable media. An optional 'Media Import' feature allows the MDR Video RP to send data imported from a DICOM compliant disk to PACS.

WaterShield™ Disks

NAI Tech Products recommends WaterShield™ disks for the best image quality and durability for your high-resolution, full color disk labels. Watershield disks feature instant drying, water resistance, high gloss and exceptional durability to safeguard your important medical records.

Write DICOM Images to USB Media

In addition to CDs and DVDs, MDR Video RP can download exams directly to USB storage media with a DICOM viewer. A convenient USB 2.0 port is located on the front of MDR Video RP for this purpose.

Convenient and Intuitive User Interface

For the RP version of MDR Video we have removed the user interface from the main unit into a separate housing. No matter where the MDR Video RP is placed, the user interface can be conveniently located for user interaction. A web based user interface is also available.

Why MDR Video RP?

- Records images to DVD/CD-R in DICOM Part 10 format with label and viewer
- Labels disks with patient and exam data
- 'ESP' function labels DICOM disks created on other drives and adds DICOM viewer
- Optional Media Import function
- Compatible with almost all video-based systems
- Expands capabilities of DICOM modalities
- Modality Worklist, ACR or keyboard patient data entry
- Large capacity internal hard disk is always ready for recording
- Highest image quality
- Transfers to network as DICOM Store SCU

Specifications

DICOM Part 10 Compatibility for Recorded Disks

Ethernet 10/100/1000 Base T

DICOM Storage Class SCU

DICOM Storage Class SCP (option)

DICOM Modality Worklist

Video Input/Output:

- High resolution monochrome to 160MHz pixel clock frequency
- High resolution RGB to 136MHz pixel clock frequency
- Interlaced and non-interlaced formats
- Monochrome up to 2048 x 2048
- Standard NTSC/PAL S-Video formats
- DVI-D input using DVI-D/VGA adapter (sold separately)

Video Record Rates

User selectable frame rates; full, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7

Video Record Modes

- Prospective - User defined limits, time and frame rate
- Sequential - Conventional, Record Start/Stop control
- Snapshot - High resolution still frames from streaming video

Image Review

- Last cine hold/playback with frame by frame review
- Last image delete
- Image recall with frame by frame review

Image Compression*

- JPEG
- *JPEG 2000

Audio Input/Output

- RCA input/output
- Audio recording capability (future release)

Optional Accessories (sold separately)

- Compact Keyboard PS2/USB
- Dual remote input foot switch or interface cable
- Hand switch
- Monochrome input video cables
- VGA to VGA input cables
- DV I-D to VGA adapter
- Video splitter/amplifier

ACR - Automatic Character Recognition

- Patient Name
- Patient ID
- Accession Number

Media Formats

- DVD+R (12cm 4.7GB) Typical data record rate 21.6MB/s
- DVD±RW (12cm 4.7GB) Typical data record rate 10.8MB/s
- CD-R, CD-RW (12cm 700MB) Typical data record rate 2.4MB/s
- We recommend WaterShield media for the best image quality, durability and performance
- USB 2.0

Storage Capability

All image data is cached to MDR's internal 250GB (minimum) hard drive with hours of video recording capacity which is always ready to record.

Maximum record length for DVD between 17.5 minutes and more than 120 minutes dependent on incoming video source specifications, frame rate, compression type and compression quality settings selected by the operator.

Playback Compatibility

Images may be viewed using any DICOM workstation with multiframe playback capability or Windows® PC with appropriate format drive, using the MDR DICOM Viewer written to MDR recorded media.

MDR DICOM Viewer

- Allows review of MDR recorded images in a DICOM format from any Windows® PC
- Supports fast and efficient playback of extended multiframe series and single images
- Features cine clip trim tools to set start and end frames for review and export of clips or single frames
- File export video clips and single frames from clips to DICOM and Windows® media formats
- Windows® printing and e-mail utilities

Electronic Scribing Process (ESP)

DICOM disks from most other burners can be labeled and a viewer added using MDR Video RP

Media Import Function (option)

Exams from DICOM media can be imported to MDR Video RP and sent to PACS

Disk Labeling

- Inkjet printer using RadialPrint Technology with four print quality modes:
- Best 1200 x 600 dpi
- High 600 x 600 dpi
- Normal 600 x 300 dpi (default)
- Draft 300 x 300 dpi
- Single CMY color ink cartridge

Physical Characteristics

Dimensions: Height 150mm (5.9") x Width 267mm (10.5") x Depth 394mm (15.5")
Weight: 12.3kg (27 lbs.)

Power Input

100-240 VAC, ± 10%, 47-63Hz, 140 VA

Classification

- IEC 60601 Class I, No Applied Part
- EN 60601-1-2 Class B, Group 1
- IEC 60529, IP 21

Agency Approvals

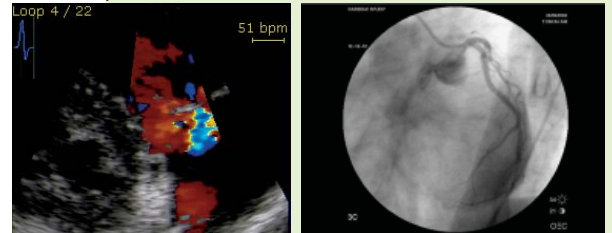
- UL 60601-1 (1st Edition);
- EN 60601-1-2; CISPR 11B;
- CAN/CSA C22.2 No 601.1-M90



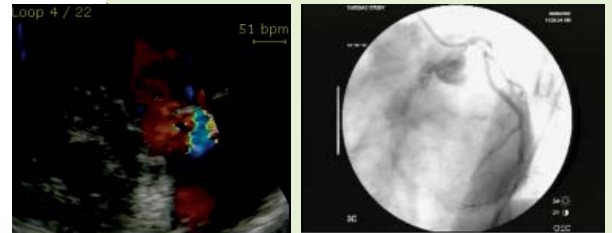
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Superior Image Quality

Compare the MDR image quality, clarity and details from high resolution monochrome and RGB sources with its competitors



MDR RGB INPUT TO DICOM OUTPUT



MEDICAL DVD RECORDER, S-VIDEO INPUT TO MPEG OUTPUT

MDR offers an improvement of more than 5 to 1 over standard S-video recorders



* Contact NAI regarding limitations and availability
Patent pending
Features and specifications subject to change without prior notice