



Connected R&F

In touch with the digital world.

NDR+ Digital Acquisition Module

Share digital images while protecting your investment in a proven acquisition platform.

Take the middle road in the digital revolution by upgrading your GE Healthcare Remote R&F system with advanced capabilities for connecting to radiology networks.

The intuitive user interface of NDR+ puts the digital world at your fingertips. Control image acquisition with the touch screen, which at 19 inches provides enhanced image quality and is large enough to display images without distortion or alteration. Workflow is further improved by the connected workstation loaded with post-processing applications, archiving and storage media, as well as printer management.

NDR+ is based on the exceptional image intensifier technology available in two formats, 22 cm or 32 cm.

The CCD camera is compatible across a full range of GE Healthcare x-ray generators and remote R&F tables.

Connected R&F gives you more.

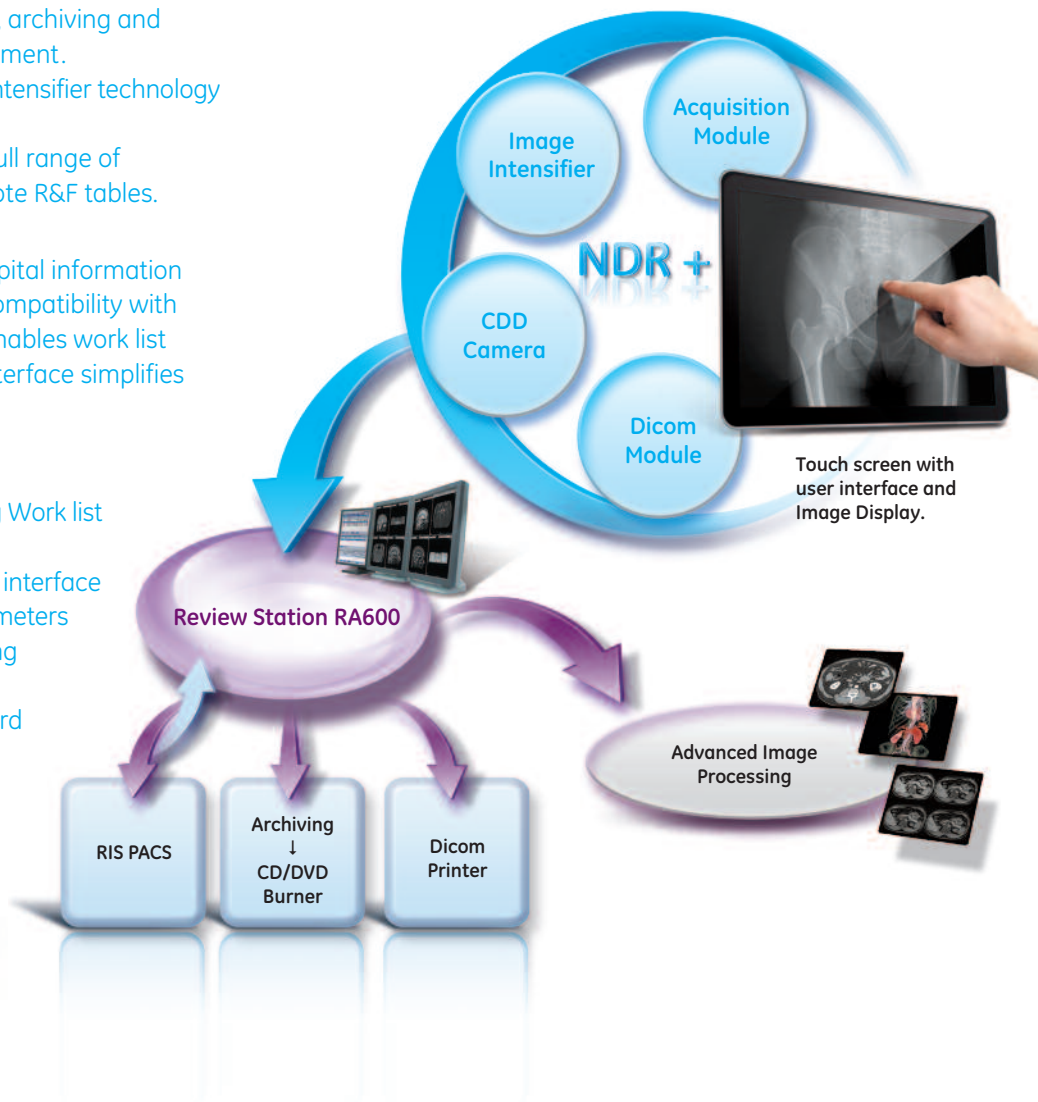
The dedicated workstation plugs into hospital information systems as well as radiology networks. Compatibility with international standards such as DICOM enables work list management while the optimized user interface simplifies workflow.

Customer Benefits

- HIS/RIS connectivity via DICOM including Work list management
- Simplified Work flow and optimized user interface to manage only key acquisition on parameters
- Modern review workstation with archiving capabilities
- Reduce X-Ray dose compared to standard CR product in digital Radiography.

Main technical features

- 22 or 32 cm II
- 1kx1k 10bits CCD camera
- LCD touch screen monitor
- cine loop acquisition in fluoroscopy, up to 25 fps
- Radiographic sequence acquisition, up to 6 fps
- Full Dicom module
- Work list management linked to the hospital HIS/RIS
- Review Work station with DVD/CD archiving solution.



Options & Upgrades program



Technical characteristics

User Interface

• Access	19"/48 cm LCD with infra-red touch screen/Keyboardless
• Patient worklist from HIS	MPPS
• Local patient name creation	Anonymous locally and modification/creation on the review Workstation

Image Acquisition

• Dose regulation	ABD with selectable ROI
• Grey scale inversion	selectable by operator
• Gamma	selectable by operator
• Fluoroscopic	
• Display	25 fps 1024 x 1024 x 12 bits
• storage	cine loop 25 fps. Max 1024 images
• LIH	Yes / Automatic
• Dynamic recursive noise filter (FNR)	2 with motion control
• Noise reduction	3 values selectable by operator
• Edge enhancement	Yes value set up by service
• High level fluoro	Yes.selectable by user
• Radiographic	
• Acquisition	6fps max selectable by operator 1024 x 1024 x 12 bits
• Storage	single or sequence, automatic on Disk Drive, Max 1024 per patient
• Edge enhancement	Yes value set up by service
• Manual density control	Image darkening (selectable by operator)
• Acquisition protocole	Yes, 3 with preset of edge, acquisition speed, MDC, Grey scale inversion, Gamma and ROI

Image post processing

• W/L	Yes
• Zoom X4	Yes
• Shuttering	Yes
• Grey scale inversion	Yes
• Edge enhancement	Yes
• Image review	Yes
• Cine loop	Yes

Images Storage

• Nbr of patient	1 only
• Nbr of images	1024 max
• Nbr of sequences	50 max

Option

• Additional monitor	19" LCD monitor for image display/review only (no TS)
• Wall stand LCD support	Yes, variable height
• Monitor cart for one or two LCD 19" monitor digital tomography	Yes

Image display/monitor

• Monitor	19"/48 cm LCD B/W with table stand
• Resolution	1280 x 1024 x 12 bits
• Contrast	1000:1
• Max luminance	1000 cd/m ²
• Aspect ratio	4:3

Image Transfer

• DICOM Image	R&F		
• SOP Classes		User of Service (SCU)	Provider of Service (SCP)

Transfer

X-Ray Radio Fluoroscopic Image Storage	Yes	No
X-Ray Angiographic Image Storage	Yes	No
Grayscale Softcopy Presentation State	Yes	No
Workflow Management		
Modality Worklist	Yes	No
Storage Commitment Push Model	Yes	No
Modality Performed Procedure Step	Yes	No

- DDG provides Standard Conformance to the following DICOM SOP Classes:

SOP Classes Name	SOP Class UID	SCU	SCP
Verification	1.2.840.10008.1.1	Yes	No
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	Yes	No
X-Ray Radio Fluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2	Yes	No
Storage Commitment Push Model	1.2.840.10008.1.20.1	Yes	Yes

• DICOM standard application context name for DICOM 3.0

Application Context Name	1.2.840.10008.3.1.1.1
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Image intensifier

22 cm

• II type	TH9438QX H661 VR13
• FOV	3 selectable by operator
• Useful entrance field size (mm)	Normal: 215 Zoom 1: 160 Zoom 2: 120
• Resolution limits at the center (lp/cm)	Normal: 56 Zoom 1: 62 Zoom 2: 70
• Contrast ratio large area (10 mm)	Normal: 36 Zoom 1: >36 Zoom 2: >36
• contrast ratio small details (10 mm)	Normal: 23 Zoom 1: 25 Zoom 2: 31
• DQE at 59,5 keV	65%
• Conversion factor	Normal: 260 cd/m ²

32 cm

• II type	TH9432QX H801 VR13
• FOV	3 selectable by operator
• Useful entrance field size (mm)	Normal: 290 Zoom 1: 215 Zoom 2: 160
• Resolution limits at the center (lp/cm)	Normal: 48 Zoom 1: 54 Zoom 2: 62
• Contrast ratio large area (10 mm)	Normal: 36 Zoom 1: >36 Zoom 2: >36
• Contrast ratio small details (10 mm)	Normal: 22 Zoom 1: 24 Zoom 2: 30
• DQE at 59,5 keV	65%
• Conversion factor	Normal: 320 cd/m ²

Camera

• Type	CCD 1 x 1K x 12 bits
• Progressing scanning	Yes
• Pixel size	6,45µm x 6,45µm
• S/N	> 67 dB
• Total system limiting resolution	Normal: >12 lp/cm Zoom 1: >18 lp/cm Zoom 2: >22 lp/cm

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