TRUMP in the field of Medical industry

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Digital Radiography System

Digital Radiography System TRUMP-001

Brief Introduction:

The advanced digital radiography system with CCD detector technology and special design to DR system, brings you superb diagnostic image quality and digital brief workflow. It meets the high requirements from the hospitals for the radiography and fluoroscopy to the whole body at very attractive price.

Super imaging matrix, excellent Imaging quality

Equipped with—

- the most professional original X-ray tube in the world and the super high frequency Generator
- the highest 16 bit collection system in the world, which has the function of auto optimization of the collected information and auto processing of different image.

With which the perfect and clear and reliable image can be obtained.

Newest generation CCD detector

The advanced CCD detector provides high conversion efficiency, and reduces radiation dose. With high technology of anti-corrasion, the imaging quality is consistence and reliable in long term, the cost can be reduced largely.

It features as below:

- high quantum detection efficiency
- high spatial resolution
- high density resolution
- high dynamic range
- reliable performance and stability
- Super suitability to different environment

Green low dose technology, more safety to Doctor and patients

With the high quality generator, stable X-ray tube, and advanced CCD detector, this DR system can greatly reduce the scattering of X-ray, ensure the accuracy of dose, and reduce the harm to doctors and patients largely.

Easy to install

Due to revolutionary UC arm design, the flexible system this DR system is very easy to install and operate. So hospitals save space and money. In addition, the workflow is optimized for simple and effective use. So doctors save time to use.

Excellent maneuverability

With the LCD touch screen and advanced software, doctors are provided with excellent and easy handling system, and easily to realize all parts of digital radiography.

Powerful pre-processing and post-processing

Tracking and positioning:

Adjust detector's vertical height, automatically aligns tube and detector to maintain source to image distance (SID), fully get rid of the traditional height adjustment and application.

Seamless network integration

Systematic and comprehensive support with DICOM, multiple connection with RIS / HIS / PACS, fast image storage, browsing, querying, and printing.

System Configuration

- High Voltage Generator EMD EPS-R50
- X-ray tube RAD-14
- Excellent CCD Detector IMIX-2000 4K
- Collimator R302A
- Grid JPI
- UC stand
- Wall stand
- Mobile carbon fiber radiographic table
- Advanced Imaging system
- User manual Accessories

Technical Specification

High Voltage Generator EPS-R50

- Rated power 50kW
- kV range 40 to 150KW
- mA range 10 to 630mA
- mAs range 0.4 to 1000mAs

X-ray tube RAD-14

- Focus 0.6/1.2mm
- Power 27/75kW
- Max. tube voltage 150kV
- Anode heat storage capacity 300kHu

CCD Detector IMIX-2000, 4K

- Imaging erea 43×43cm
- Resolution 4.3Lp/mm
- Pixel Matrix 4k×4k

Mobile radiographic table

- Table size 2100×727×812mm
- Tabletop longitudinal moving ±395mm
- Tabletop transverse moving ±100mm
- Maximum Weight Load 135kg
- Table material carbon fiber

UC stand

- Longitudinal moving 450 to 1650mm
- UC stand rotating range －30° to 120°
- SID range 1000mm to 1800mm

Collimator R302A

- Mode of adjustment manual
- Radiaton field 48×48cm(SID=100mm)

Grid JPI

- Focus 100/180cm
- Grid ratio 10:1
- Grid density 70lines/cm

Imaging system

- CPU Pentium
- RAM 512MB
- Harddisk 80GB
- Monitor 21" LCD
- Network card 100/1000Mbit/s NIC
- Accessories Dicom

Digital Radiography System TRUMP-002

Digital Radiography

Quality, value, performance

The high-end digital radiography system with CCD detector technology, is based on modular components for all X-ray applications and workload requirements. It employs the very latest features for easy and ergonomic workflow:

- Wide clinical applications
- Flexible component geometry

- Advanced generation CCD detector
- User friendly interface
- Powerful pre-processing and post-processing
- Comprehensive network compatibility

Wide clinical applications

A comprehensive solution to all parts of body radiography, especially for oblique radiography. High resolution images deliver the best.

Flexible component geometry

Stretch the possibilities of radiographic room size and budget to the maximum with the high performance DR system.

Improve your workflow, exam speed and comfort with the efficient CCD digital radiography system .

Advanced generation CCD detector

The CCD detector provides high conversion efficiency, and reduces radiation does. It features as below :

- High quantum detection efficiency
- High spatial resolution
- High density resolution
- High dynamic range
- Reliable performance and stability
- Super adaptability to different environment

User friendly interface

Column and collimator with LCD touch screen, as long as you touch the screen you can easy manipulate detector and tube .

Power pre-processing and post-processing

Tracking and postioning :

Adjust detector’s vertical height, automatically aligns tube and detector to maintain source to image distance (SID) , fully get rid of the traditional height adjustment and application .

Advanced tabletop movement control

Advanced infra-red sensors control, entirely replace the traditional foot brake, provide more convenience.

Comprehensive network compatibility

Systematic and comprehensive support with DICOM, multiple connection with RIS / HIS / PACS, fast image storage, browsing, querying, and printing.






Main configurations:

High frequency
High voltage generator
Proven X-ray tube
Excellent CCD detector
Outstanding collimator and grid
Flexible ceiling suspended
Mobile carbon fiber radiographic table
Vertical wall stand
Advanced imaging system





Digital Radiography System TRUMP-003

Advanced System Design

Outstanding Image Functions

System Characters

The fully application of state of art technology

·Combining the state of art technology of a-Si FPD detector with special image processing technology to fulfill high quality digital image.

·Open image workstation makes operation very easy and have strong processing functions.

·System design and unit integration ability guarantee high quality image.

Multi-function design

·Multi-function in one unit, according to the different clinical requirements, Optima URS or table can be chosen, one DR can finish the test of whole body.

·One panel with many body parts, 17"×17" FPD can fulfill the big part such as breast test, the FPD doesn't to be rotated.

Module extendable design

·Based on the standard composition, it can be extended according to the customers' requirements.

·Without HIS, worklist, diagnosis workstation, laser printer and CD-RW are options.

·The fully solution from single workstation to whole PACS system.

Complete DICOM support

·The newest version DICOM 3.0(2000 version) and the special requirements of DR image is fully supported.

·It's compatible with lower versions so that it protects the original investment of the hospital.

System safety design

·The system safety operation is guaranteed to meet the daily operation requirements.

·Special data base design to avoid data lose by improper operation. The data safety is guaranteed.

·At the high frequency of exposure and radiography, the system can work in high efficiency and stable to meet the requirements of high patient passing rate.

Work station Software Functions

Outstanding image processing functions

·Automatic/Manual ROI window level & window width.

·Automatic/Manual electric cut. Image flip, rotation, mirror image.

·Continual zoom & roam.

·Image measure, notation & enhancement.

Database management

·Patient information (patient name, ID, date, etc.) can be stored and revised.

·Convenient for enquiry.

Complete DICOM 3.0 support

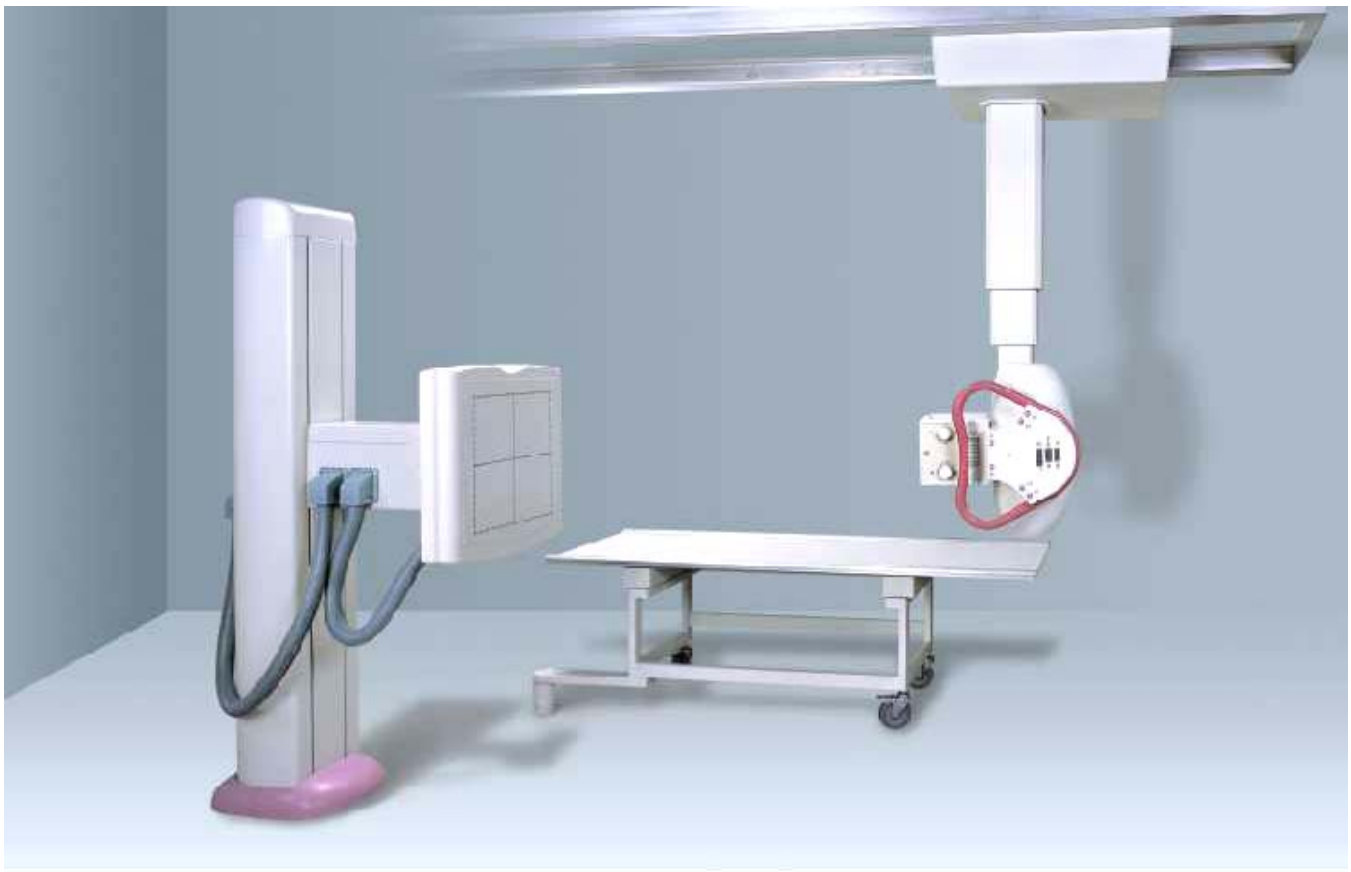
DICOM print support

DICOM archive support

DICOM transmission support

DICOM worklist support

DICOM 3.0 support (2000 edition)



The new advanced digital radiography system

- Latest patent design.
- Single panel, full function.
- Can perform radiography to any body position, and oblique radiography.
- Full-auto tracking and positioning.

Various System Configuration Meet Different Clinical Requirements

- Multi-function Integrated Design
- ·Patent DR system.
- ·Bucky stand / radiography table design to meet the full
- range requirements from chest to general radiography.
- ·X-tube and flat panel full automatic tracking functions to
- improve the efficiency.
- ·The big range movement of Ceiling system with table
- movement to meet the requirements of whole body
- different position radiography.

Digital Radiography System TRUMP-004

Mobile Digital X-ray System

TRUMP-004-A

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Application:

This mobile digital X-ray system can move to any place to make DR radiophotography in all direction, also suitable for Emergency diagnosis for the patients in stretchers and wheelchairs.

Advantages:

a) Adopt the advanced technology, the High quality imaging can be obtained.
b) Imaging very quickly, more suitable for Emergency diagnosis.
c) Drive by large rechargeable battery cell, which can reduce the operator' working strength.
d) Super silence design, the system can move quickly, smoothly and silently.
e) AEC exposing function, there are different exposure modes to be selected.
f) Excellent High frequency and high pressure Generator, tube and detector, which can make patients get the lowest X-ray dose, it is kind of green radiography, patients' health can be protected. Wireless remote control exposure, with which the operator can make exposure far away from the X-ray system. The operator' health can be protected.
g) All of the fault information are showed in codes, which is easy for operator to correct it and minimum the risks of damage to the X-ray system.

Brief Introduction:

Easy to move

Due to the advanced modern rack design, the system can be moved in all directions.
The special large flexible wheels keep the balance of the system. So doctors' save time and energy when moving it to patient room, ICU or other places. Moreover, the intelligent anti-collision buffer ensures the security of main system and patients when moving.

Easy to positioning

The revolutionary rotation column and flex arm are more convenient for doctors to position. They can be operated and locked easily. So doctors only need to press the controller under the tube to achieve all kinds of radiography.
In addition, the tube and collimator can be rotated around the arm on horizontal and transverse direction for the special positioning.

Easy to operate

Getting rid of the traditional data wire, the wireless flat panel detector offers doctors more convenience to operate.
The remoted exposure controller eliminates the radiographic obstacle. Doctors can operate the system in the other room easily.
The proven imaging software brings doctors faster imaging and more stable image processing.

Easy to radiography

Anatomically programmed Radiography (APR) settings make it possible for X-ray patients with various examinations. Meanwhile, wrong or missing filters can be eliminated.
Most notably, pediatric examinations are achieved with a low X-ray dose.

Easy to diagnoses

The images are displayed immediately on the large LCD touch screen after exposuring. And the advanced inside workstation can process image automatically. So doctors can diagnoses on the touch screen easily without any adjustment.

Easy to post-processing

This DR system simplifies the workflow and offers doctors' more post-precessing functions. So doctors can review, output, storage images in the special inside DR workstation.
On the other hand, systematic and comprehensive support with DICOM, multiple connection with RIS / HIS / PACS, fast image storage, browsing, querying, and printing.

System Configuration

a) High Voltage Generator Sedecal SM-20HF-B X-ray tube Toshiba E7865X FPD
b) Detector Varian PaxScan 4336R Rack Collimator R 221/A Imaging system

Technical Specification

a) High Voltage Generator Sedecal SM-20HF-B

- Rated power 20kW
- KV range 40 to 150KV
- mA range 10 to 200mA
- mAs range 10 to 500mAs
- Inverter Frequency 20kHz

b) X-ray tube Toshiba E7865X

- Focus: 0.3/1.0mm
- Power: 3.2/36.5kW
- Anode heat storage capacity: 140kHu
- Anode rotation speed: 2700r.p.m

c) FPD Detector Varian PaxScan 4336R

- Imaging area: 14"×17"
- Resolution: 3.6Lp/mm
- Pixel Matrix: 3072×2560
- Imaging time: 8s
- Weight: 5.0kg

d) Rack

- Stand height: 1970mm
- Stand rotating angle range: ±280°
- X-ray tube assembly rotating range round X axis: ±180°
- X-ray tube assembly rotating range round Z axis: – 30° to 90°
- X-ray tube focus height range from floor: 600 to 2060mm
- Weight: 560kg

e) Collimator R 221/A

- Mode of adjustment: manual

f) Imaging system

- CPU: Intel, Celeron
- RAM: 1GB
- Harddisk: 60GB
- Network card: 100/1000Mbit/s NIC
- Accessories: Dicom

TRUMP-004-B

Features

- Advanced technologies
- Optimized clinical workflow
- Outstanding operability
- Efficient APR function
- Fast bedside imaging
- Automatic image processing
- Fully dicom compatible
- Superior DR image quality

Advanced technologies

- HSO technology (high-frequency stable operating technology)

With the advanced high-frequency stable operating technology. The generator produces stable quadrate wave, and the tube offers high penetration and high quality X-ray.

- IOP technology (intelligent overload protection technology)

The anti-overload circuit of tube incessantly inspects the surplus X-ray tube heat capacity to protect the tube and main unit.

- PEA technology (precise exposure alarm technology)

When operator finighes the accurate exposure or sets up the illogical exposal parameters, the buzzer will alarm and display on the main unit immediately.

Optimized clinical workflow

This is a digital mobile radiography system with digital FPD technology. And fast digital image display on the control monitor. It enables a daily workflow without interruption-no cassettes, no waiting time for cooling or recharging of the detector. The unique touch screen allows easy control of the desired examination. Compared with analog unit, the digital filmless images are displayed on the touch screen instantaneously after exposure.

Outstanding operability

It provides you with faster and optimized clinical workflow . With the compact design, outstanding imaging power, easy maneuverability and positioning. It offers you more digital advantages.

Efficient APR function

Anatomically Programmed Radiography (APR) settings make it possible for X-ray patients to take various examinations. Especially for ICU patients. Meanwhile, wrong or missing filters can be eliminated. Most notably, pediatric examinations can be achieved with low X-ray exposure.

Fast bedside imaging

With the FPD technology and mobile design. It enables the digitization of mobile radiography. It can be moved to ICU or patient room easily. Images can be captured at the table immediately after exposure. There is no need to read or replace cassettes.

In addition, it allows basic image processing to function directly, such as adjusting brightness, contrast, and edge enhancement etc. After exposure, the images can be processed automatically with the self-installed software. Compared with analog unit. There is no need of exposure again when parameters or operations happened to be missing

Fully Dicom compatible

The Dicom function facilitates more convenient patient registration. Sending and printing functions enable easy transmission and printing of all X-ray images to the hospital network.

Superior DR image quality

With the advanced HSO,IOP,PEA technologies, and high quality imaging system, our product offers you high spatial resolution, high density resolution, and high sharp images.

System Configuration

- High Voltage Generator IMD
- X-ray tube IMD
- FPD Detector Varian
- Rack IMD
- Collimator R105
- Imaging system

Technical Specification

High Voltage Generator	**IMD**
Rated power	30KW
KV range	40 to 125kv
mA range	15 to 430mA
mAs range	0.5 to 200mAs
Inverter Frequency	100kHz

X-ray tube	**IMD**
Focus	0.6/1.3mm
Power	7.5/30kw
Anode heat storage capacity	375KJ
Anode rotation speed	3000r.p.m

FPD Detector	**Varian**
Imaging area	14” x 17”
Resolution	3.6Lp/mm
Pixel Matrix	3072 x 2560
Imaging time	7s
Weight	5.0kg

Rack	**IMD**
Height	1460mm
Width	735mm
Length	1253mm
Focus from the floor range	474 to 1995mm
Weight	280kg

Collimator	**R105**
Mode of adjustment	manual

Imaging system	
CPU	Intel, Core 2
RAM	2GB
Hard disk	320GB
Network card	100/1000Mbit/s NIC
Accessories	Dicom