

SONIALVISION G4 edition

Multi-purpose Digital R/F System



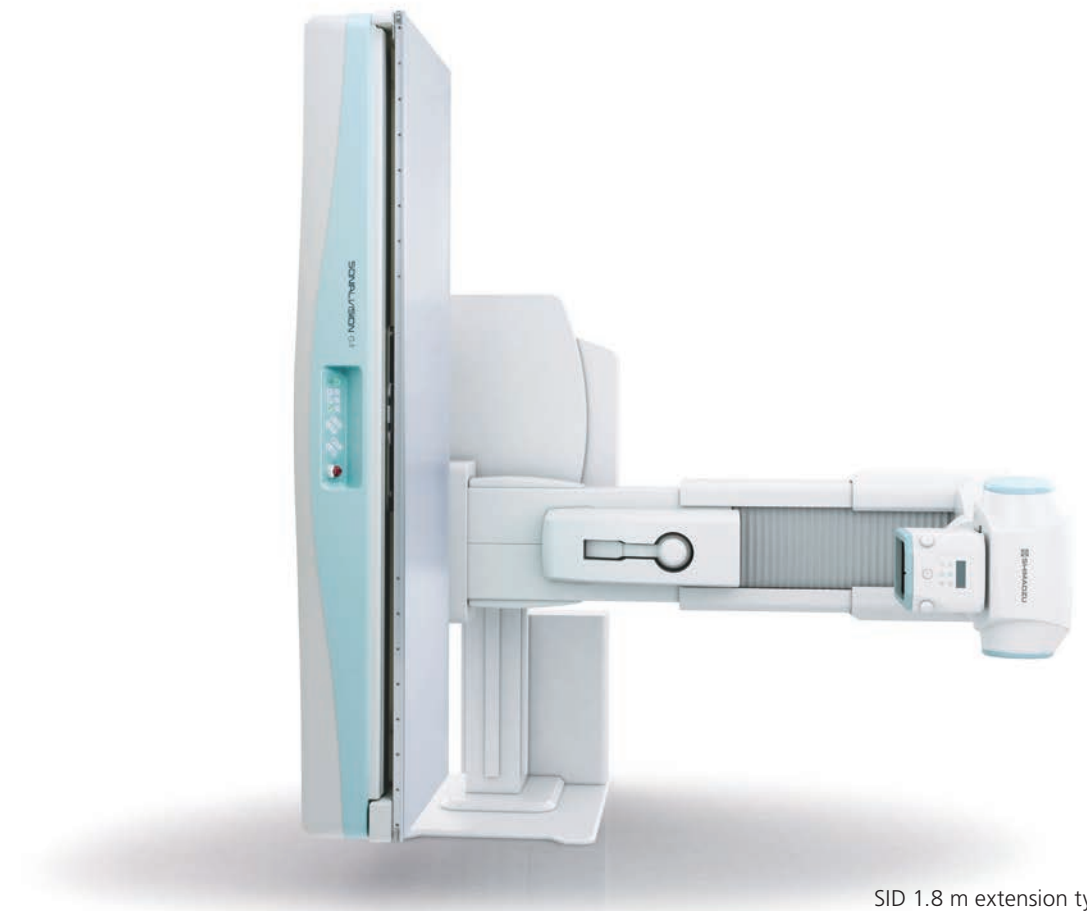
Better Decisions in Different Examination Environments

Multi-purpose Digital R/F System

SONIALVISION G4  edition



With the SONIALVISION G4, Shimadzu offers a multi-functional universal system —one that is useful in a variety of examinations and examination environments, providing optimal image quality, ease of operation, and accommodating patient's comfort.



SID 1.8 m extension type 



High Quality Images in Real Time

High-resolution and high-contrast images achieved with real-time image processing



View both legs, entire chest, or abdomen with a large field-of-view (up to 17 × 17 inches). Switch to a small field-of-view for detailed examinations of finger tips or other orthopedic regions.

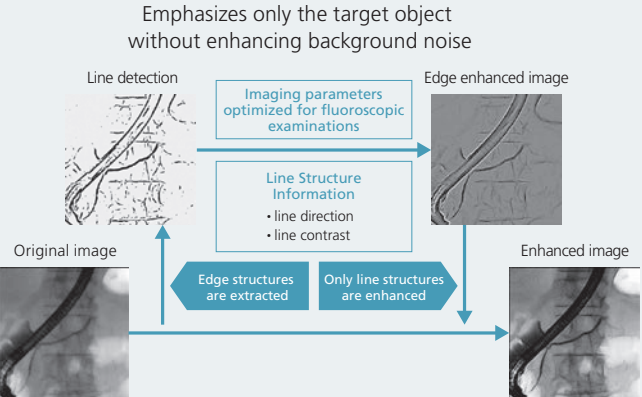
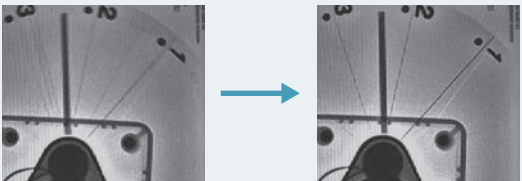
Advanced digital image processing SCORE PRO Advance

SONIALVISION G4 provides sharp and clear images in various examinations. Especially with fluoroscopy, the background noise component is reduced in real time and the target object is emphasized efficiently. SCORE PRO Advance offers lower exposure levels and optimal image quality.



Adoption of the motion tracking noise reduction

By performing block matching between frames, and recursive processing between the most matched blocks, noise is efficiently reduced without any lag.

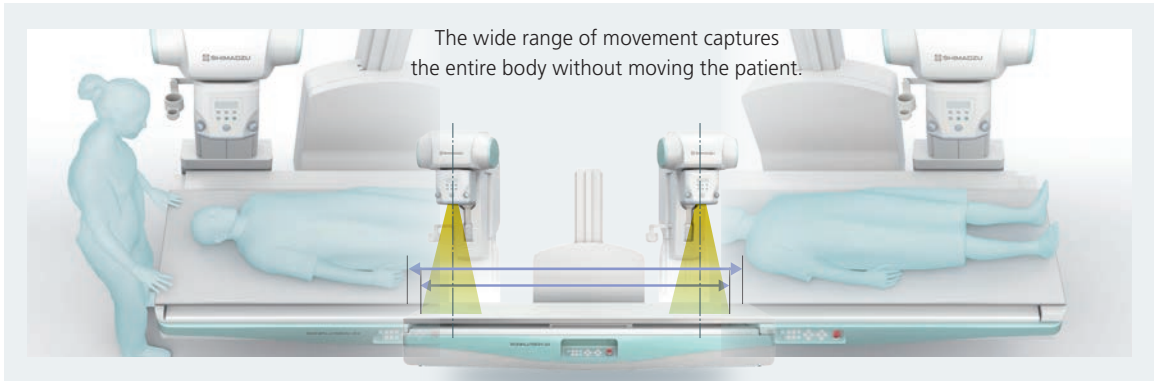


Versatile Design for Various Examinations

The system has been thoughtfully designed consider-accommodate all users in a diversity of situations, making it ideal for a wide variety of examinations.

Orthopedic and General Radiography Studies

The large field-of-view provides the flexibility to accommodate a wide variety of radiographic examinations.



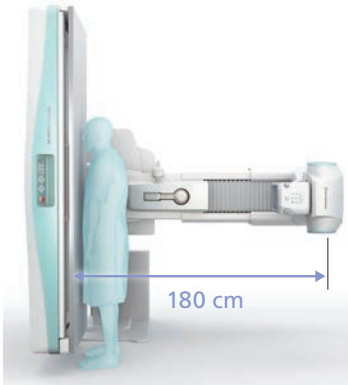
Over 2 m Imaging Range



Our wide dynamic range imaging ensures high image quality while suppressing halation.



90 deg. X-ray tube rotation allows studies to be performed on stretcher patients.

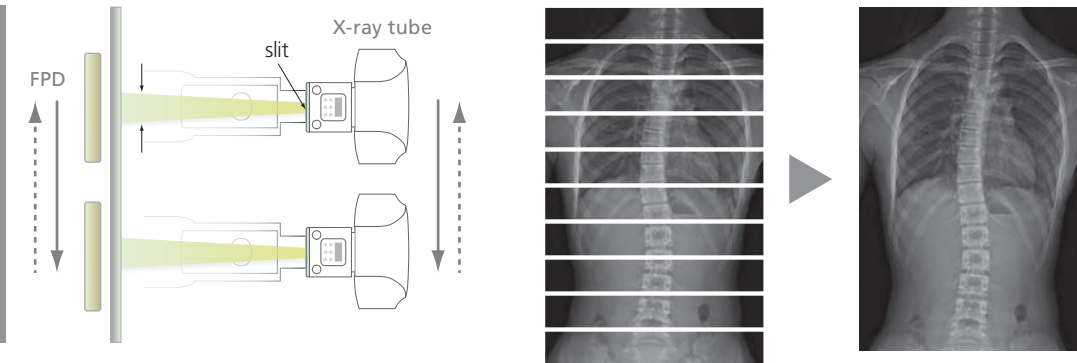


Chest radiography is easily performed by extending the SID. OPTION

Applications for Supporting Orthopedic Examinations

SLOT Advance OPTION

This produces long-view images by focusing X-rays through a slot as the imaging unit is moved parallel to the patient in order to acquire successive images that are automatically stitched together into a single long image.



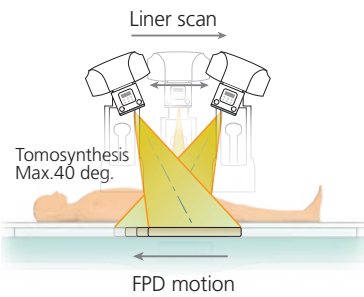
A series of slot-shaped images are acquired several centimeters apart as the imaging unit (X-ray tube and FPD) is moved.

Slot images are automatically stitched together to create a single long-view image.

Significant reduction of examination time

Simply set the starting and ending positions, then start the exposure, that's all it takes to obtain proper long view images using our Slot Radiography. All the post-processing required to connect, adjust, and display the images on the monitor is done automatically immediately after exposure, SLOT Advance by SONIALVISION system eliminates the time-consuming steps of setting up the cassette and making adjustments, not to mention moving the patient between standing and horizontal positions, which are all required by conventional CR long-length imaging.

Tomosynthesis OPTION



Imaging technology that fuses cone-beam CT reconstruction with digital image processing.

Dual Linear Drive Tomosynthesis

This tomosynthesis radiography method moves the FPD parallel to the X-ray tube focal point. Tomosynthesis can increase the amount of information provided in images by minimizing the truncation area of incident X-rays and reconstructing a larger effective area. The smaller truncation areas also result in less radiation exposure that does not contribute to diagnosis.

T-smart PRO assisted by AI*

Shimadzu's Proprietary Reconstruction Method that Reduces Metal Artifacts



T-smart tomography includes AI image processing functionality based on deep learning technology. That means tomosynthesis images reconstructed with metal artifacts minimized can be acquired easily by simply pressing the exposure button one time to reduce the time and effort required for examinations.

*The AI (Artificial Intelligence) technology used in T-smart PRO is a "trained model" that was trained at some point and performed accuracy evaluation. It doesn't continue learning after installation.

Urological Examination

Urological imaging with a large field of view while being dose conscious, together with a wealth of additional functions, are provided in support urological examination.

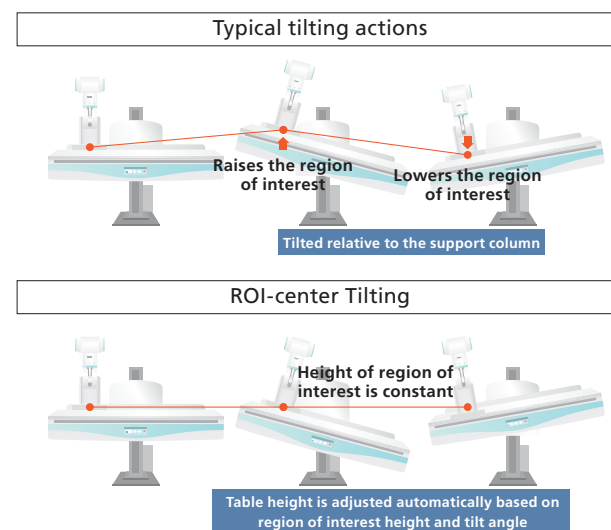
Urological Examinations

The edge of the imaging range can be positioned as close as 9.5 cm from the head-end of the table (given a 17 inch FOV), making it easy to perform procedures using an optical endoscope.

A urology foot switch is available for operating the imaging chain. OPTION

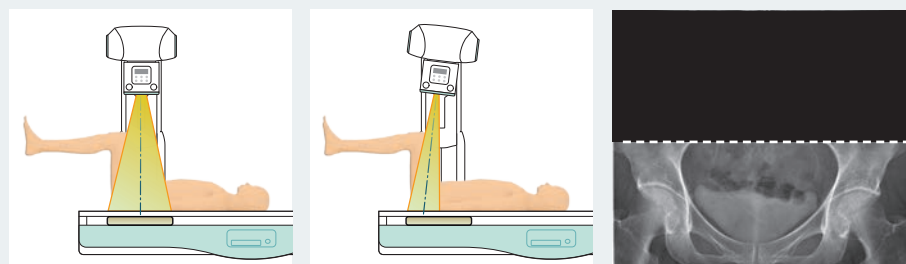


Various dedicated options for Urology, such as Leg supports, Drain Bag, and an Endoscopy unit support arm are available.



The table can be tilted relative to any reference position. Examinations can be performed without changing the region of interest height, even if the table is tilted.

A specialized collimation function is used for effective dose reduction.



Endoscopic Examinations

Achieves both the high image quality and low dose levels necessary for sophisticated interventional procedures.

Endoscopy



The vertical drive unit on the back side of the R/F table is designed to be very compact. That ensures a high degree of freedom for laying out systems in combination with a monitor support system.

Achieves High Image Quality with Low Exposure Levels

SCORE PRO Advance

Noise components are reduced in real time to efficiently enhance only the target areas being observed. That enables both intensive exposure reduction and improved fluoroscopic image quality even for biliopancreatic endoscopy.



The flat gutter free table top design provides easy patient transfer and is easy to clean. A wide, fully flat table with a high weight capacity enhances patient safety even during endoscopy procedures.



Gastrointestinal Series and Swallowing Examination (Videofluoroscopy)

17 × 17 inches large field of view and high image quality is perfect for everything from routine checkups to specialized examinations and observations.

Gastrointestinal Series and Swallowing Examination (Videofluoroscopy)



Wheelchair patients can be examined simply by extending the SID.

Fluoroscopic images can be saved in DICOM format.

Max 15 cm/sec. quick movement of the imaging chain together with soft start/stop ensures stress-free, efficient examinations with higher productivity



An oblique projection function prevents overlapping organs in examinations.



Angiography Examinations

Selects the optimal DSA mode for each application

Angiography



Blood Vessels can be Observed Over a Large Area (Max. 17 × 17 inches)

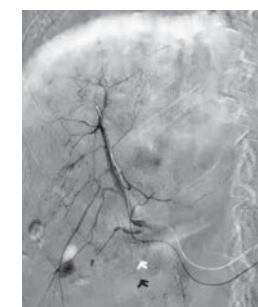
DSA Unaffected by Movement OPTION

RSM-DSA (Real-time Smoothed Mask DSA)

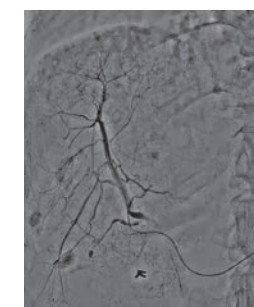
In addition to regular DSA, movement-tolerant RSM-DSA is also available.

That means both DSA images and RSM-DSA images can be obtained from a single exposure, so that the RSM-DSA mode can be enabled to continue an examination if the patient moves.

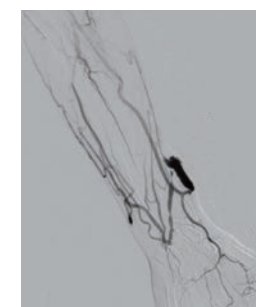
More information can be obtained by comparing images to DSA images, such as by determining the relative positions of blood vessels and bones or displaying a scale with images.



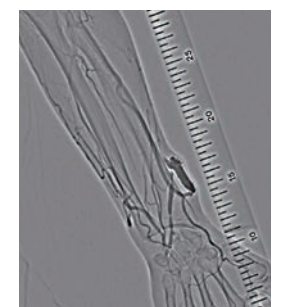
Ordinary DSA of Hepatic Artery



RSM-DSA of Hepatic Artery



Ordinary DSA of Shunt



RSM-DSA of Shunt

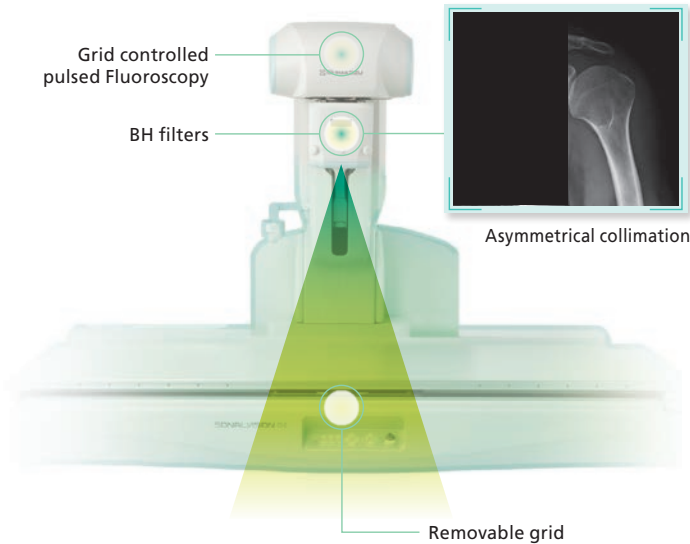
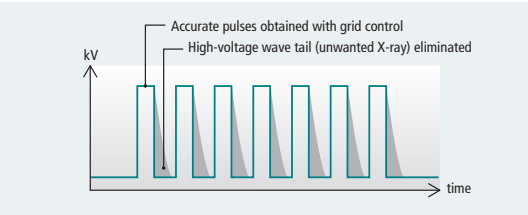
DSA is optional functionality.

Functionality for Reducing Radiation Exposure Levels

Various functionality is included for efficiently reducing exposure levels to provide a low-exposure examination environment for both patients and attending personnel.



To efficiently minimize exposure levels during examinations, the system features grid controlled pulsed fluoroscopy with wave tail elimination. In addition, intelligent BH (Beam-Hardening) filters are automatically selected according to the type of examination, reducing unnecessary X-ray that does not contribute to the actual images.



Asymmetrical collimation, on either the left or right can be applied, eliminating exposure outside the ROI.

Virtual collimation reduces unnecessary exposure by using the most recent fluoroscopic image to set the collimation for radiography.

Fluoroscopy Records can be Kept Retroactively

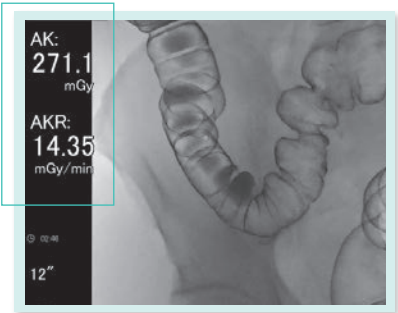
Up to 1000 fluoroscopic images can be stored on the hard drive in DICOM format. In addition, image records can be recorded retroactively to ensure the optimal timing is never missed.

Exposure Dose Levels Displayed in Real Time

Calculated dose values are displayed on the monitor in real time. In addition to using the display as a guideline for exposure levels during examinations, the dose values can also be managed as examination information via the network.

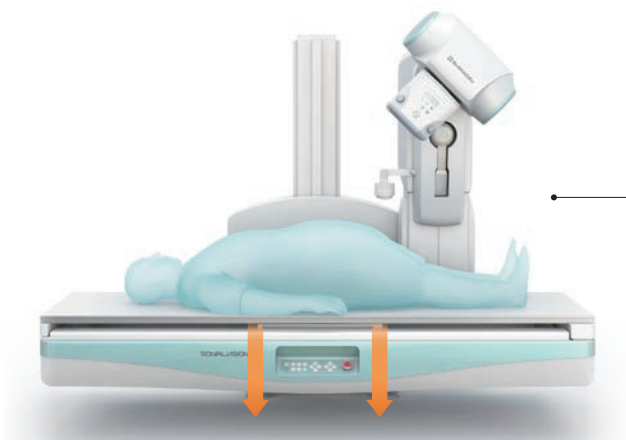
A dose area product meter can also be installed. OPTION

The removable grid provides a further advantage in dose reduction and is especially important when radiation exposure is of particular concern, such as in pediatrics, urology and gynecology.



Solutions for Patient and Healthcare Worker Safety

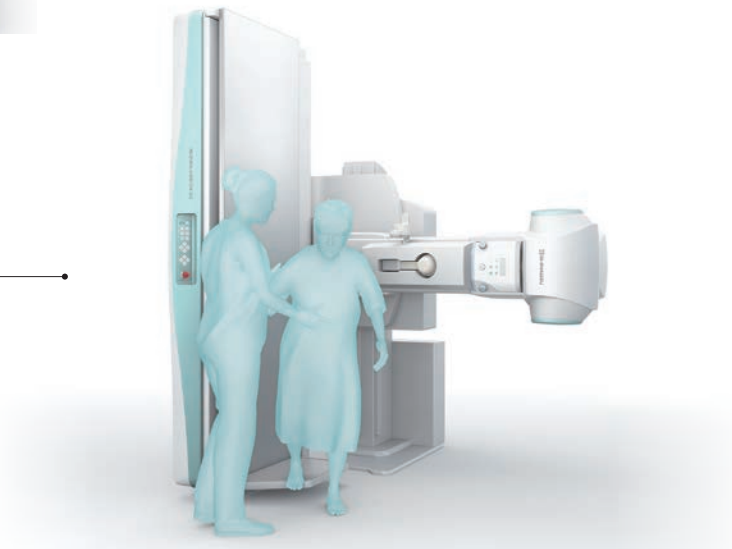
The user-friendly system is designed to provide a more comfortable examination environment for both patients and medical staff.



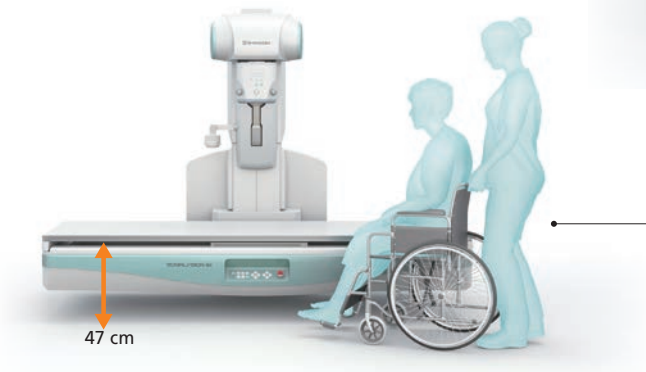
The 318 kg (700 lb) weight capacity is ample for even very heavy patients.

Up to:318kg(700lb)

The table can be lowered to help older patients easily get on or off the table.



With a minimum table height setting of 47 cm, even older patients can get on and off the table with ease.



Soft rubber surrounds the collimator output port to provide cushioning in case the patient is bumped. The clean-look new design covering all the cables around the X-ray tube ensures hygienic advantages.



The console is designed so operations can be performed more comfortably for stress-free examinations.



- The compact digital control system is tucked neatly away under the remote control console to provide an uncluttered look without consuming valuable space in the control room.
- The dual system enables fully parallel processing for processing images, registering patients, transferring images, or performing other tasks concurrently during examinations.
- Fluoroscopy table, X-ray controller, and digital image processing unit operations are always linked to minimize operating steps and ensure examinations can be accomplished easily.

Several types of monitor carts and local control consoles are available for your selection to accommodate various examination room layouts and clinical applications. OPTION



Local console with monitor



Local console with touch panel



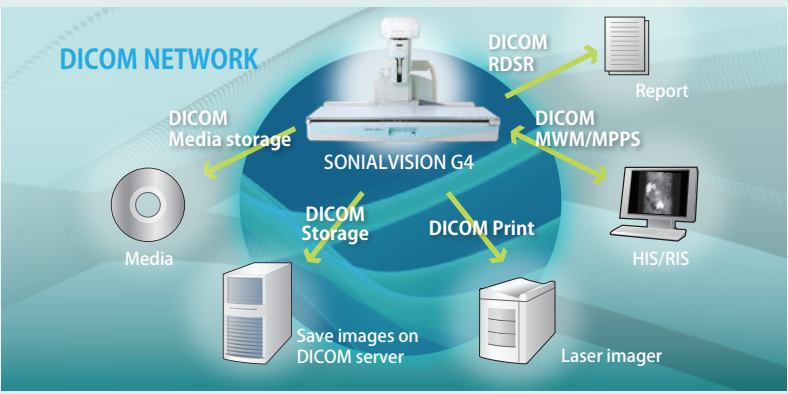
Local console



Monitor cart



Excellent Network compatibility ensures smooth patient registration, image printing, and storage. OPTION



Label Description: X-RAY TV SYSTEM SONIALVISION G4

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Shimadzu Corporation Medical Systems Division has been certified by TÜV Rheinland as a manufacturer of medical systems in compliance with ISO9001:2015 Quality Management Systems and ISO13485:2016 Medical Devices Quality Management Systems.

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- Before operating this system, you should first thoroughly review the Instruction Manual.