64ch Multi-slice CT

SCENARIA

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Hitachi Medical Corporation, Kashiwa-site, is certified as complying with the International Environmental Management System (ISO 14001).

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HITACHI
Inspire the Next

64ch Multi-slice CT

SCENARIA

Enjoy a new scenery
of our new 64-ch multi-slice CT.

What we aimed to create was a new 64-ch multi-slice CT which was desinged in consideration of the efficiency and optimization from a patient entering the examination room until the examination is completed. With this in mind, HITACHI has continued with persistent development even to realize 0.1 mm, 0.1 mSv, and 0.1 sec. improvements.

Each of all the detailed specifications that top up the framework called the "64-ch multi-slice CT" gives CT examinations a new scenery called "possibility".

The new arrival of the 64-ch multi-slice CT, SCENARIA, which is more than just 64 channels, developed not only for the sake of the advancement of technologies or research purposes, but also for everybody who is involved in the examination, is presented by HITACHI.

SCENARIA

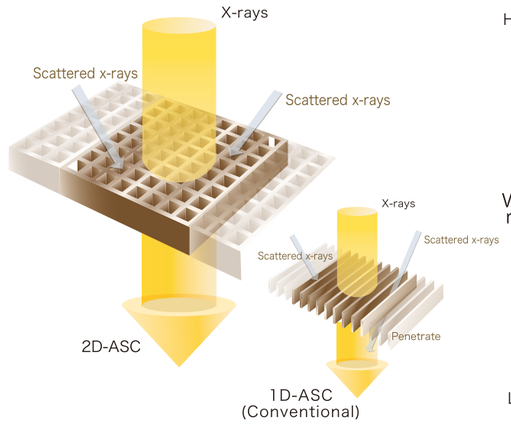
New possibility for CT images

HITACHI's advanced hardware and software designs realize high-speed scan and high-quality image unachievable on the conventional 64-ch CT.

Equipped with a high-speed rotating mechanism and newly developed detector that realize whole-body imaging at a high-speed view rate.

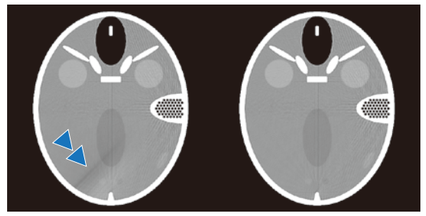
Imaging process that realizes high-speed scan and high-quality image

2D-ASC → Hi View Rate → CORE method → Intelli IP



2D-ASC (2-dimensional anti-scattered x-rays collimator)

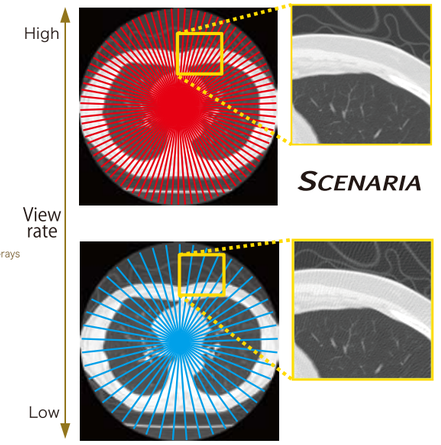
SCENARIA is the first 64-ch CT system equipped with a 2-dimensional anti-scattered x-rays collimator. Scattered x-rays that inevitably increase with a wider width of detector can be cut with the collimator of not only the channel direction but also the body-axial direction.



Weighted Feldkamp method CORE

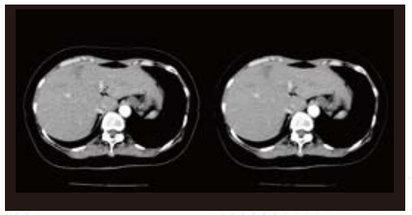
CORE method (3-dimensional image reconstruction algorithm)

HITACHI's advanced image reconstruction algorithm, CORE (Cone-beam Reconstruction) method can make the effective cone angle smaller to reduce the cone-beam artifact by selectively using data in the proximity of the center of the detector.



0.35 seconds/rotation high-speed scanning

A view rate of approximately 1.5 times that of the conventional 64-ch CT system is realized with SCENARIA, drastically improving the data density on the periphery of FOV by high-speed scanning of 0.35 seconds/rotation, which can be used not only for cardiac scanning but also routine and whole-body scanning.



OFF ON

Intelli IP (Noise reduction processing)

Intelli IP (Iterative Processing), which attempts to reduce noise from data obtained by low-dose scanning, by means of iterative processing, is incorporated as standard. Using the high-speed processor dedicated for SCENARIA also allows real-time processing during scanning.

New possibility for examination enviornment

Feeling of safety given constantly to the patients from when they enter the examination room until the examination is completed. Also, ensured operability for the operator, new design and functions are incorporated for users.

Semi-large bore and a wide-table that will make any patient comfortable.

The design that will reduce a sense of anxiety for patients.

Open Design Concept

A completely new design consisting of the semi-large bore with the diameter of the aperture of 750 mm, a wide table of 475 mm, and a slim gantry of 880 mm which is equivalent to that of the conventional single system, will help eliminate a sense of anxiety and stress for patients before the examination. Furthermore, the color choice of coloring inside the gantry lets the openness stand out.

Semi-large bore

The semi-large bore which is bigger by 50 mm than the diameter of the ordinary aperture is useful not only for patients with a large frame but also for older patients who have difficulties of lifting their arms up.

Wide table

The wide table with the table width of 475 mm and HITACHI's thoughtfully designed mat with a fin allows examinations to be carried out while the whole body of the patient is wrapped up. This will also prevent contrast agent or blood from attaching to the table.

The picture shows an image and does not reflect the accurate situation of actual examinations.

A newly developed “Touch Vision” having full guidance functions will make examinations much easier for every patient.

Touch Vision: A friendly environment for examinations

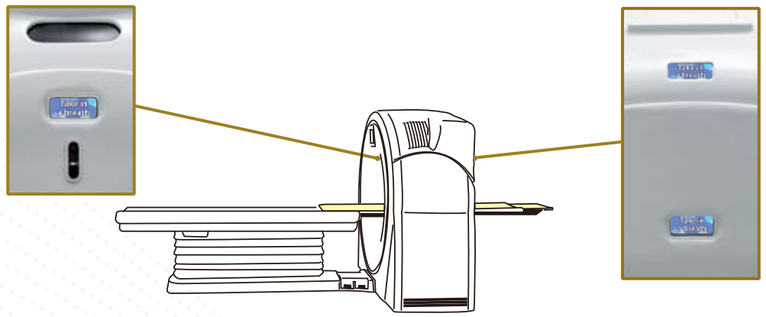
Instructions for examinations can be given in 10 different languages are available as well as the patient information.

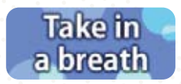
10-language display


Patient information display

Examination guidance (Spanish)

Breathing exercise





Breath Guide

Breath Guide (Spanish)

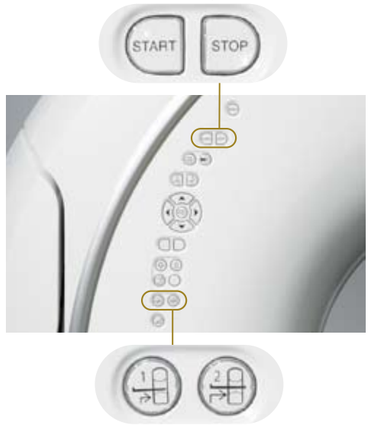

Breath Guide (for children)

The “Breath Guide” display that is easily recognizable from any position

The Breath Guide display that informs the timing of the breath hold can be found in 3 different places inside the gantry, which makes recognition easier. With the auto voice and the display, Breath Guide will surely be useful to the patient.

The control panel that allows operations near the patient up until immediately before the examination starts, and the console that promotes accurate operations will ensure comfortable and effective examinations for both the patient and operator.

Scan Start/Stop button



Gantry control panel

By customizing the height and the movement distance of the table for head and chest examinations in each facility, positionoing of the patient can be done quickly. Furthermore, switching on and off of X-ray can be carried out on the panel positioned on the gantry while checking the status of the patient and contrast agent just before the scanning.


Normal status


During scanning

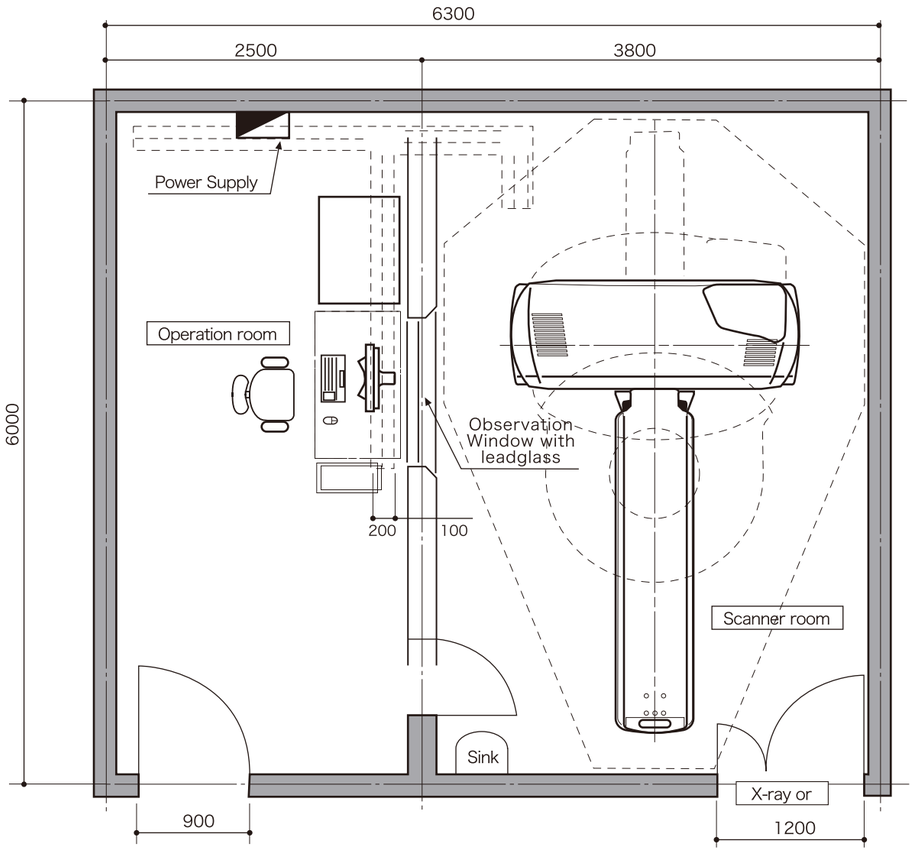
Integrated keyboard that shows the status of examination

The LED incorporated in the keyboard shows the status of imaging visually by changing its color from blue in the normal status to orange during scanning.

A New console that realizes a compact operational environment.

A 24-inch wide monitor can display the important user information in an easily understandable manner. Furthermore, the integrated keyboard with a unified button for “START” of contrast agent and “MOVE” of the bed makes a more compact operational environment than with the 2-monitor type.

Layout drawing



Unit : mm

Specifications of Product

☐Number of slices	64 slices/scan	☐Storage capacity of image data	Built-in HDD: approximately 200,000 images
☐Shortest scanning time	0.35 secconds		External memory device (DVD-RAM): approximately 16,000 images
☐Minimum slice thickness	0.625 mm		
☐Width of detector	40 mm (0.625 mm x 64 slices)		
☐Diameter of aperture	750 mmø	☐Standard software	Intelli IP (noise reduction processing)
☐Capacity of x-ray tube	7.5 MHU		Predict Scan (contrast agent monitoring)
☐X-ray tube voltage	80, 100, 120, 140 KV		CEV-CPR (blood vessel analysis software)
☐X-ray tube current	10-600 mA		DICOM 3.0 image transfer
☐Width of tabletop	475 mm		DICOM Print
☐Effective range of scanning	1,750 mm	☐Power supply voltage	3-phase 400V
☐Maximum load of table	230 kg	☐Power supply capacity	100kVA
☐ Setting scan position	Laser marker *		

*This CT system is CLASS 2 laser product. Continuous wavelength 600 - 700nm, Maximum output 1mW. Do not stare into the laser beam.