Advancing the technology of Computed Tomography for over 30 years, Hitachi is a recognized innovator of lower dose*, high diagnostic value CT solutions.

Today, the latest in 64-slice technology is packaged into a complete and fully capable system – SCENARIA.

SCENARIA delivers dose efficiencies, superb image quality and enhanced workflow to meet the needs of a wider range of imaging environments.

An intelligent combination of radiology and cardiology clinical capabilities in a feature-rich configuration ensure that SCENARIA provides extremely powerful clinical value. And with Hitachi’s unparalleled service and support, SCENARIA will prove to be a solid capital investment now and for years into the future.

* In clinical use, dose saving features may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practices employed. Consultation with a radiologist and physicist are recommended to determine the appropriate dose needed to obtain diagnostic image quality for a particular clinical task.
SCENARIA simultaneously acquires 64-slices in a fast 0.35-second scan time enabling shorter breath-holds and reduced patient motion artifacts without compromising image quality. Submillimeter slices optimize fine detail images for small lesion and vessel assessment. And the advanced technology in SCENARIA facilitates your selection of optimum protocols for high image quality with lower dose acquisition.

**The SCENARIA Technology Advantage**

- 2D-ASC (Anti- Scatter-X-Ray Collimation) reduces detected scattered radiation
- Hitachi’s advanced and proprietary CORE™ image reconstruction algorithm supports higher pitch scanning for reduced radiation exposure
- Intelli IP is Hitachi’s iterative processing engine that provides excellent image quality at lower dose by reducing image noise, while maintaining image spatial details
- The .35 second scan with higher density ray sampling rate of SCENARIA provides superior image detail

**Scan Parameters**

- Rotation times (seconds): 0.35, 0.4, 0.5, 0.75, 1.0, 1.5, 2.0
- Data collection density: 2,880 views per second
- Minimum Slice thickness (mm): 0.625
- FOV (mm): 20-500
- Max scan range (in/mm): 79/2000
- Max scan rotations: 100
- Volume scan pitch: 0.56 to 1.578

**Scan Acquisition Types**

- Scanogram with real-time display – AP & Lateral
- Normal scan - axial mode
- Volume scan - helical mode
- Dynamic Scan mode for Time Density Analysis
- ECG Scan modes, Retrospective and Prospective (option)

**Image Quality**

- Spatial resolution: 17.18lp/cm @ 0% MTF, 50mm FOV
- Contrast resolution: 2.5mm @ 0.25%, 160mm FOV

* with Hitachi Performance Phantom supplied with system

**Protocols**

- Pre-programmed emergency
- Pre-programmed normal
- Pre-programmed user default
- Limitless user-defined, customizable protocols

**Note:** All Hitachi default protocols provided are reviewed and optimized by HMSA’s Protocol Committee to ensure ALARA practices are met.
Hitachi’s patient focused philosophy is built into SCENARIA. Its leading dose reduction and awareness features put the patient first without compromising image quality – meeting ALARA (As Low As Reasonably Achievable) standards.

**CT Dose Check**
Notifies the operator during exam protocol set-up when reference radiation dose levels will be exceeded based on predetermined reference dose levels that can be selected by your facility. This Dose Check monitoring meets the 2010 NEMA Standard (XR 25) published by The Medical Imaging & Technology Alliance (MITA).

**DICOM Dose Structured Report (Dose SR)**
Creates DICOM Standard format dose report for each SCENARIA patient examination and enables submission of reports to your PACS or to dose registries.

**Intelli EC**
Hitachi’s proprietary 3D mA modulation technology, Intelli EC automatically modulates mA to lower individual patient dose levels depending on patient anatomy and size. mA modulation occurs both in the x, y plane as the tube rotates and over the patient’s z-axis as the table moves. Intelli EC can be set to provide real-time control of mA, to achieve a constant Noise Standard-D deviation in the resulting images.

**Intelli IP**
Iterative processing provides advanced iterative reconstruction processing enabling dose reduction for comparable image noise and contrast conspicuity. Intelli IP reduces noise while preserving spatial details.

**Intelli Cardiac Scan Modes (Option)**
- Prospective ECG Gating with Axial SnapShot mode
- Retrospective ECG Gating

**Predict Scan**
Monitors contrast uptake to a user-selectable threshold value and automatically initiates the scan for optimized image contrast at minimum radiation dose and reduced injected contrast volume.

**Automatic Lateral Shifting Table**
Enables lateral table shift of up to ±80mm by manual or automatic Scanogram selection to precisely center the organ of interest.

**Multi-Bowtie Filters**
Reduces radiation in areas outside the filter’s field of view.

**Reduced kV Imaging**
Supports lower kV and dose based on individual patient size
- 80kV
- 100kV
In addition to available standard kV operation
- 120kV
- 140kV
SCENARIA Defines High Performance with Solid Design and Technology.

Patient comfort and throughput is a driving signature of Hitachi. SCENARIA personifies this with a larger, more accommodating aperture and lateral moving patient table. Now elderly and large patients can approach SCENARIA without apprehension.

Gantry Detector System
SCENARIA design reflects the important dynamics that happen between patient and technologist. A multi-function LCD display strategically placed in the Gantry allows the technologist to precisely control positioning and set-up functions.

Gantry
- Gantry aperture: 75cm
- Gantry tilt: ± 30 degrees
- Gantry Display: 10.4 inch LCD
  Multi-function for ECG, status monitor or patient instructions
- ECG Data Input
- Scan localizer: Laser marker (at preparatory position and scan position)
- Gantry, table controls: emergency stop, start/stop scan, home, preset, move to scan plane, table reset, tilt, laser alignment lights, demo breath hold buttons/lights, table in/out, table up/down, collision sensor
- Foot pedal controls: home, preset
- Breathing lights
- Patient communication: intercom, auto-voice

X-ray Tube
The X-ray tube combines high power with high durability for long-term image quality. A fast tube-cooling rate minimizes interscan times to promote faster scanning and throughput. No chiller is required simplifying the installation process and enhancing system reliability.
- Anode heat capacity: 7.5MHU
- Anode max. cooling rate: 1,380kHU/min
- Tube cooling: Oil/Air
- Focal Spot (mm): 0.7 x 0.8; 1.2 x 1.4

X-ray Generator
Integrated with the performance characteristics of the high-heat unit X-ray tube, the generator delivers the optimal X-ray power per protocol.
- Type: High-frequency inverter control
- Output: 72kW
- kVp selection: 80, 100, 120, 140kV
- mA selection: 10-600mA (5mA steps)
- Max tube current: 600mA (≤120kV), 510mA (140kV)

Patient Table
The high-weight-capacity table accommodates a wide variety of patients without compromising comfort or throughput. Lateral movement allows for precise centering. And the low minimum table elevation facilitates placement of disabled and elderly patients.
- Table-top width: 19in (475mm)
- Table length: 110in (2805mm)
- Table weight capacity: 506 lbs (230kgs)
- Horizontal accuracy: ±0.25mm
- Vertical travel range: 18in (450mm) to 41in (1050mm)
- Tabletop travel: from 5mm/sec to 200mm/sec
- Horizontal travel range: 83in (2110mm)
- Lateral Slide motion:
  - Moving speed: 10mm/second
  - Shift range: up to ± 80mm (right or left from center)

- Type: Solid state ceramic
- Number of detector elements: 64 x 888
- Detector output: 64 x 888
**Operator's Console**
Clear logical layout allows simplified selection of complex clinical applications and protocols. A single wide screen display and system monitors facilitate multi-tasking at the console. From acquisition and reconstruction through post-processing, SCENARIA's operating console sets the bar for maximum efficiency.
- Display: single 24-inch LCD widescreen monitor
- Display resolution: 1920 x 1200
- Fully automated, interactive software platform
- Pre-programmed patient demographics and protocol selection
- Complete protocol-driven scan control
- Auto-archive
- Auto-film

**Patient Registration**
- Pre-registration
- Emergency registration mode

**Image Reconstruction**
- Slice thickness (mm): 0.625 - 10
- FOV (mm): 20 – 500, by 1mm step
- Matrix: 512 x 512
- Image reconstruction time: 18 images/second
- Immediate image review
- CT number range: -2,000 to +4,000

**Image Display and Analysis**
- Multi-frame layout
- WW/WL
- Magnify
- Pan
- ROI
- Image Rotation
- Measurement
- Cine
- Edge Enhancement/Smoothing

**Image Processing**
- Multi-Planar Reconstruction (MPR)
- Maximum Intensity Projection (MIP)
- Minimum Intensity Projection (MinIP)
- Surface Rendering
- 3D Volume Rendering
- Direct MPR, automatic MPR Processing selected from Scanogram

**Network Capability**
- IHE-SWF
- DICOM Modality Worklist
- DICOM MPPS
- DICOM Query/Retrieve (optional)

**Storage Capacity**
- Images: RAID 1 Mirroring, 250 GB x 2 holds 200,000 images
- Raw data: >750 GB holds >4700 rotations
- Archive: 9.4 GB DVD (non-cartridge) holds approx. 16,000 images
- Also accepts DVD-RAM, DVD-R and CD-R/RW

**TeraRecon iNtuition™ Workstation/Server**
To enhance SCENARIA's clinical and workflow capabilities Hitachi offers a range of 3D visualization solutions through a partnership with TeraRecon, Inc. — a proven leader in advanced visualization technology. TeraRecon's iNtuition thin-client workstations leverage powerful technologies to deliver an intuitive and efficient user experience. iNtuition delivers full workstation-class clinical capabilities to multiple users – simultaneously. And, is easily scalable to meet the clinical and workflow needs with support for a wide range of imaging modalities.
**SCENARIA Maximizes Flexibility and Efficiency with Optimum Siting Requirements.**

Whether you are replacing a CT or expanding your imaging capabilities, SCENARIA will fit your specifications. The smallest footprint of any 64-slice system, SCENARIA exemplifies the Hitachi tradition of combining siting and cost effectiveness with advanced imaging design.

As a leader in diagnostic imaging, Hitachi provides a wealth of site-planning options, as well as a proven system for efficient siting. From initial site evaluation and selection to layout, delivery and installation, your Hitachi team will be there to solve any challenges and ensure a perfect installation.

**Physical Specifications (mm)**

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<tr>
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<th>Height</th>
<th>Depth</th>
<th>Width</th>
<th>Weight in Kg</th>
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<td>Patient Table</td>
<td>465-1050</td>
<td>2805</td>
<td>650</td>
<td>510</td>
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<td>Operator’s Console</td>
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<td>Image Processor Unit</td>
<td>1800</td>
<td>900</td>
<td>680</td>
<td>120</td>
</tr>
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Minimum Floor Plan - 282 sq. ft.
**SCENARIA Siting Requirements**

**Power and Environmental Requirements**
- Input voltage: 480 Vac, 3 phase
- Main breaker: 200 AMP
- Peak supply capacity: 100 kVA
- Input frequency: 50/60 Hz
- Power supply regulation: 5% or less
- Mains voltage fluctuation: ±10% or less
- Operating temperature: 20 – 28 degree C
- Operating humidity: 35 - 80%
- Water supply: none required

Typical Floor Plan - 518 sq. ft.
As a SCENARIA customer, you can count on over 100 years of Hitachi experience and innovation to provide unparalleled Service and Applications support. Our proven approach to imaging technology ensures lower dose performance, outstanding uptime, maximum productivity and the highest 64-slice image quality.
Expand your Hitachi Ownership Experience

Hitachi offers a wide range of MR, CT and Ultrasound imaging products. Each delivering superior diagnostic quality, lower dose, positive patient experience and excellent value over the life of the product. And with periodic software and application training updates included with your service contract, you can be sure that Hitachi will be with you every step of the way.