

 **SOREDEX****SCANORA[®] 3D**

Versatile – Easy – Cost-effective

Cone Beam and digital panoramic imaging
combined in one cost-effective system.

With thirty years of experience in designing and manufacturing state-of-the-art dental panoramic and tomographic systems SOREDEX turns another page in dental imaging history by introducing the SCANORA® 3D, a Cone Beam 3D system that combines versatile fields of view and standard digital panoramic with a dedicated pan sensor.

The SCANORA® 3D follows the lead of the original SCANORA® system introduced twenty years ago. Then, for the first time, spiral tomography was used in dental imaging to generate cross-sectional tomograms, that produced valuable diagnostic information, especially useful for implants.



Versatile – easy – cost-effective



Two systems combined. Real digital panoramic and Cone Beam 3D in one unit.

The SCANORA® 3D takes dental imaging and implant planning to the next level.

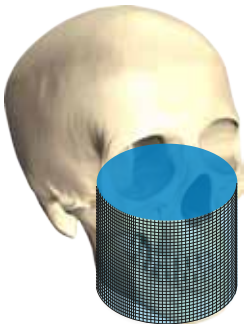
The new SCANORA® 3D opens a new world of diagnostic possibilities.

Superior versatility

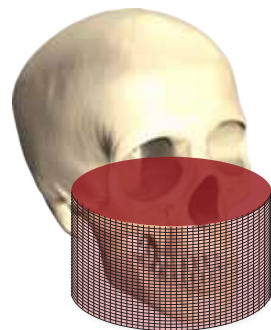
The SCANORA® 3D offers superior versatility by combining cone beam 3D imaging, with three selectable fields of view, plus optional dedicated panoramic imaging. At the press of a button, the unit automatically switches between 3D and panoramic imaging modes, making it quick and efficient to use.



The smallest FOV (6 cm x 6 cm) is ideal for single implant operations, localized dental examinations and TM joints.



The medium FOV (7.5 cm x 10 cm) is suitable when the entire dental complex, including the mental and mandibular foramen, need to be examined. This field of view can also provide information for drill guide fabrication.



The largest FOV (7.5 cm x 14.5 cm) is ideal when the complete dentition, both TM joints and upper cervical spine, must be examined. This field of view is also suitable for studying maxillofacial area with airways.

User-selectable 3D fields of view

With three fields of view (FOV) the proper image volume can be selected for each specific diagnostic task. The field of view can be positioned anywhere within the maxillofacial area.

Selectable 3D resolution

The SCANORA® 3D combines low dose, fast imaging and high accuracy. Standard resolution offers fast imaging with low dose, suitable for most diagnostic tasks. High resolution improves accuracy with slightly higher imaging time and dose. The smallest attainable voxel (volume element) size is 0.133 mm.

- **Superior quality, traditional full field panoramic images – not only low resolution synthesized panoramic images**
- **No need to overexpose the patient for a standard panoramic view**
- **No risk of dropping or damaging an expensive sensor**

Two machines in ONE

In most examinations a panoramic image is the first step and provides an overview of the whole dentition. SCANORA® 3D provides the speed and efficiency of traditional panoramic imaging in conjunction with advanced 3D technology. This combination speeds office workflow and produces superior panoramic image quality. 90% of your extraoral imaging needs remain a standard panoramic view. Why overexpose your patients while settling for a low resolution synthesized panoramic imaging? SCANORA® 3D gives you a standard, full field panoramic view plus three FOV Cone Beam images in one, easy-to-use fully automated system.

Panoramic imaging with AutoSwitch™

The SCANORA® 3D uses a dedicated CCD sensor for high-quality panoramic imaging. The unique AutoSwitch™ feature changes between panoramic and 3D modes making the SCANORA® 3D quick and easy to set up. There is no need to manually change detectors nor completely reposition the patient.



AutoSwitch™ changes the detectors between 3D and panoramic. NO expensive sensors to exchange, move, drop or damage.



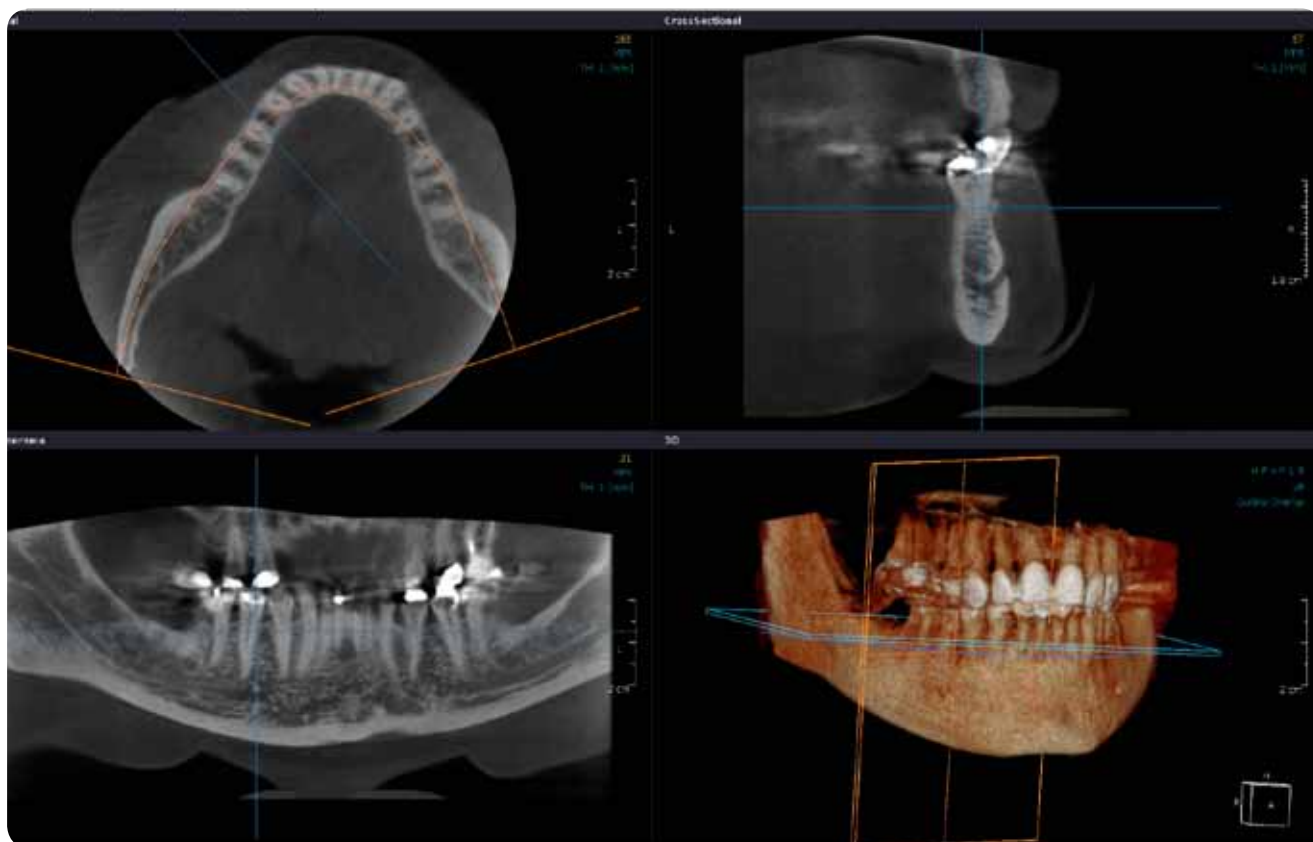
The unit set up for panoramic imaging.



The panoramic preview image on the unit display.

Excellent diagnostic performance

The SCANORA® 3D system provides a new and innovative way of seeing dentomaxillofacial anatomy and solving diagnostic tasks. The high-definition panoramic image shows the regions that need further investigation. The optimum 3D technique for a specific task can be easily selected, treatment planned and finally follow up studies done, all with one efficient unit. The system contains user-selectable features that contribute to excellent diagnostic performance.



The viewing software has complete selection of powerful tools for utilizing the diagnostic information.

Outstanding computing intelligence

For the first time in dental imaging, the SCANORA® 3D uses a sophisticated algebraic reconstruction technique (ART) for reconstructing the volume data. ART improves image quality and is less sensitive to the main causes of image artifacts such as patient movement, restorations and implants. Reconstruction times are super fast, starting from one minute, due to advanced computing technology.

High technology flat-panel detector

The flat-panel detector is a masterpiece of modern CMOS technology. Compared to traditional image intensifiers, flat-panel detectors offer superior image quality due to their large dynamic range, better contrast and lack of image distortion. Additionally they are insensitive to electromagnetic interference, are compact in size and have a very long service life.

Uncompromized quality

The SCANORA® 3D system has been designed from the ground up using the very latest 3D imaging technology. The SCANORA® 3D is an extremely versatile Cone Beam 3D X-ray system, capable of variable size volume imaging of the dentomaxillofacial area as well as high-resolution classic digital panoramic imaging.

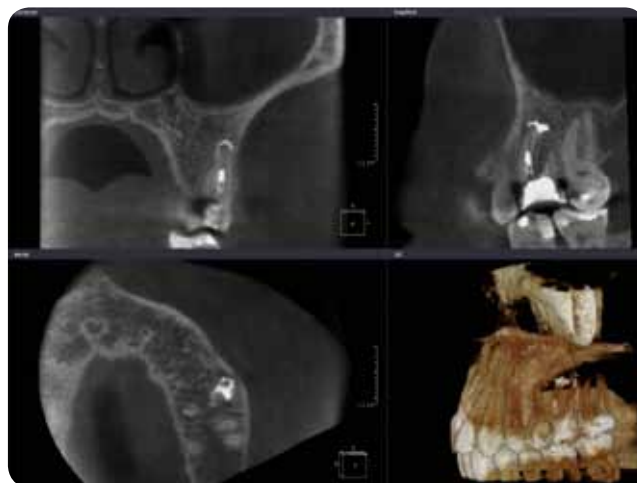
Always the lowest possible X-ray dose

Three selectable 3D fields of view allow the examination area to be precisely selected, thus reducing patient dose to an absolute minimum. Pulsed X-ray generation reduces dose because the effective exposure time is only a fraction of the scanning time. Whenever a high-quality panoramic image is needed, the built-in, low-dose CCD sensor can be used.

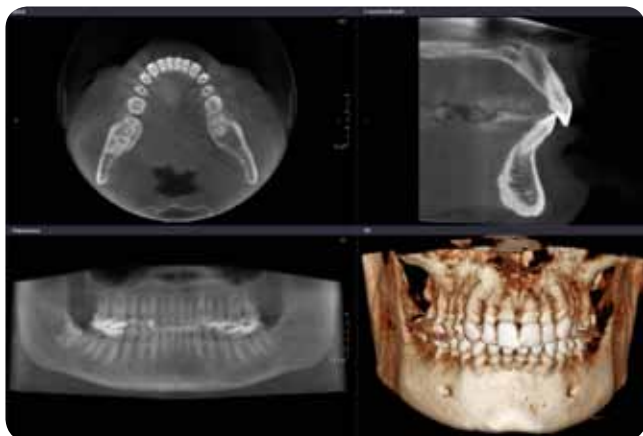
Dose levels of the SCANORA® 3D are considerably lower than with medical CT imaging and carefully follow the ALARA principle – X-ray dose “As Low As Reasonably Achievable”.

Full diagnostic information

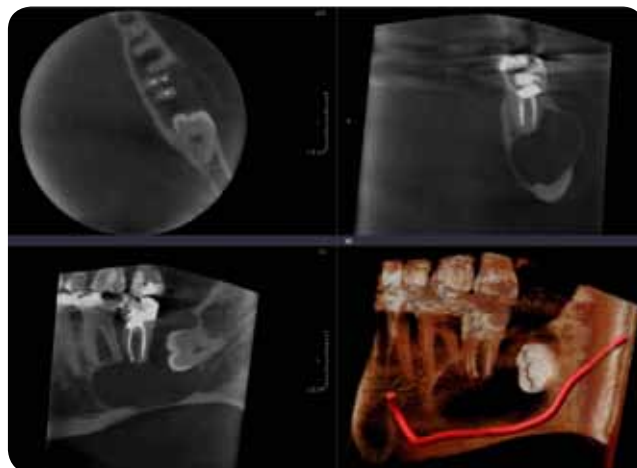
After scanning and image reconstruction, a full range of diagnostic options can be utilized. The diagnostic information can be thoroughly examined with the many powerful software tools and features. For instance, a complete set of cross-sectional views of the jaw can be automatically generated by drawing a center line along the axial slice.



The smallest field of view 6x6 cm is ideal for studying local regions of interest.



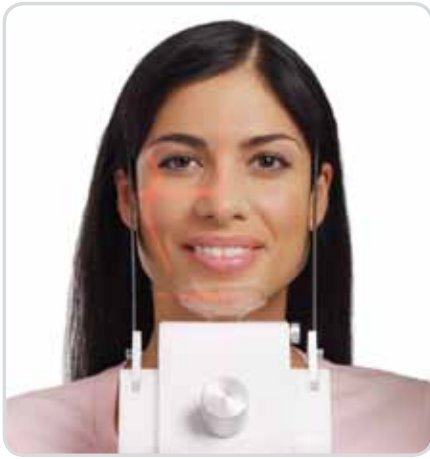
The largest field of view 7.5 cm x 14.5 cm clearly shows the whole dental area.



Visualization can be done in many different ways. Enhancing the visibility of details helps diagnostic decisions to be made.

Cone Beam 3D imaging made easy

The SCANORA® 3D system has been designed to make your workflow as fast and efficient as possible. The unique AutoSwitch™ feature selects the detector according to the required imaging mode. There is no need to change sensors nor radically reposition the patient or realign the unit. Short scan and reconstruction times further increase the efficiency and usability of the unit.



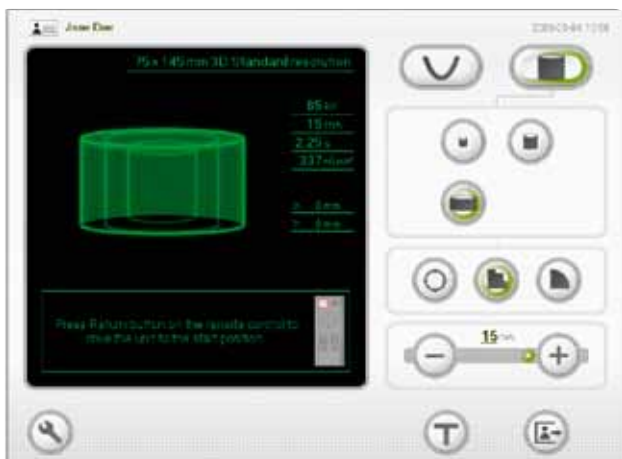
In Cone Beam imaging a patient movement tolerance of less than one voxel's dimension is desirable. A seated patient is important in achieving this and reducing movement artifacts.

Rigid patient support

The SCANORA® 3D uses an integrated motorized seat for superior patient stability and accurate patient positioning. The chin rest and temporal supports firmly hold the patient's head to eliminate movement artifacts in 3D and panoramic imaging.

Easy preparation for imaging

The SCANORA® 3D offers preset imaging programs that cover most common diagnostic examinations. All the imaging parameters can also be freely selected using the large ClearTouch™ control panel. The patient is easily positioned using the remote control and positioning lights.



ClearTouch™ control panel intuitively guides the user through the examination sequence.

Image preview

After exposure the preview image appears on the ClearTouch™ control panel. The user can easily verify the imaging procedure has been successful.



Ready for diagnosis

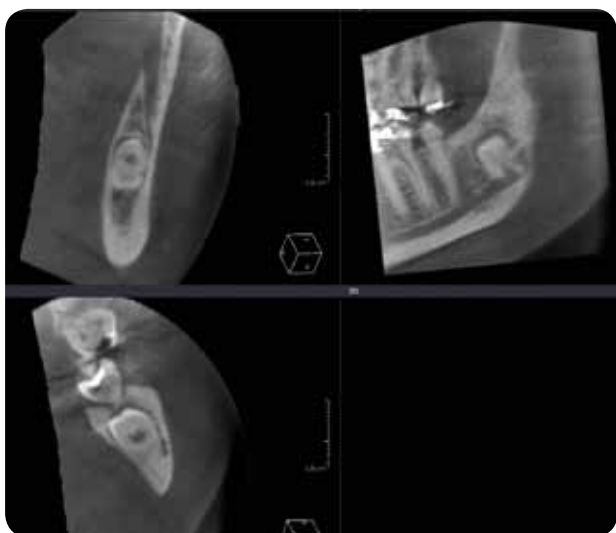
Once the preview image has been accepted, the 3D image set appears for examination and diagnosis on the workstation.

Innovative and sophisticated ART reconstruction algorithm produces superior image quality with less artifacts.

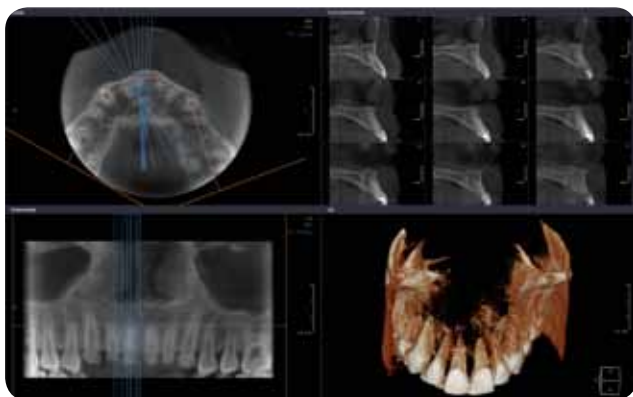
It takes only 1-2 minutes for the primary reconstruction to create the image. The visualization can be altered in real time.

True diagnostic value

The SCANORA® 3D system provides true diagnostic value with real benefits to patients and dental professionals. The versatile X-ray system comes with an integrated software solution, designed together with dental clinicians.



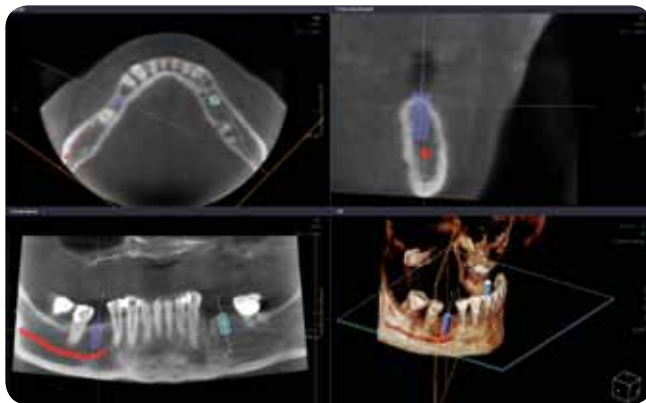
The MPR (Multi Planar Reconstruction) is the basic mode of visualizing the anatomy. The sections can be customized to show the region of interest from multiple directions.



The software automatically generates cross-sectional views after a centerline has been drawn along the jaw. No time consuming reformatting needed.



The nerve pathway can be clearly marked in the images.



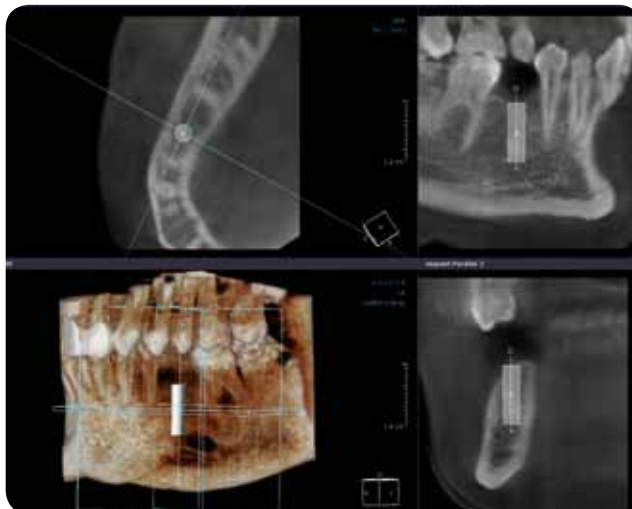
Comprehensive set of diagnostic tools

The software includes image capturing, database as well as image visualization.

In addition to regular image handling functions there is an extensive range of powerful diagnostic tools. These include surface and volume rendering with anatomic plane clipping, which is used to virtually remove covering structures to show regions of interest. Other tools allow enhancement of the visibility of teeth, bones and soft tissue with several pre-set controls. Also color mapping and transparency levels can be adjusted.

Synthesized panoramic images, where the layer is freely adjustable, can also be produced by reconstructing the 3D volume.

In the implant design mode the position of the implant can be freely navigated in relation to critical anatomical landmarks.



Valuable tools for implant planning

For proper implant site selection, accurate information is needed about the available bone, its quality, and the exact location of critical areas. Location of mandibular nerve canal or maxillary sinus can be obtained accurately and easily. With the help of a multiplanar slice display, 3D rendering, measurement tools, and the comprehensive implant symbol library, implant planning and surgery can be carried out efficiently and reliably.

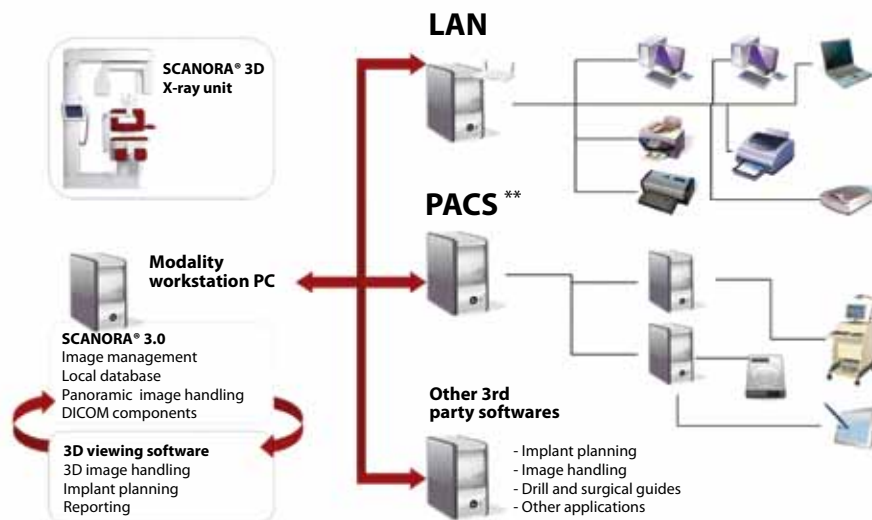
For third party drill guide systems the volume data can be exported in DICOM format.

Open software architecture

The SCANORA® 3D produces image data in DICOM* format. This facilitates the open architecture that allows versatile and optimized software solutions to be tailored for your practice. The local area network (LAN) with several viewing stations is the solution for most practice applications allowing the system to be linked with the network and system server.

The SCANORA® 3.0 software is the main platform, including the local patient image database and panoramic image handling. 3D visualization software provides 3D image handling, diagnostics and implant planning. This system forms an effective means for solving diagnostic problems, planning surgical procedures and making patient education and case acceptance.

Freely distribute clinical cases on CD to referring clinicians. The referring clinician can utilize the free viewer without investing in special software or import the images in DICOM format into their own 3D software.



In addition to the standard 3D visualization software that comes with the unit, most other software offerings supporting the DICOM format can also be used. So the system is open and flexible, ready for globally rapid software development, and offers you the possibility to selectively take advantage of most third party diagnostic and surgical guide applications, now and in the future.

* Digital Imaging and Communication in Medicine

** Picture Archiving and Communication System

SOREDEX

SCANORA 3D



Low dose 3D imaging



X-ray imaging is a compromise between image quality and x-ray dose. In SCANORA® 3D this dilemma has been successfully resolved by combining high image quality with low dose. The key factors in achieving this are sophisticated pulsed x-ray generation, selectable imaging modes and the innovative ART image reconstruction method.

ART needs less dose than conventional algorithms. And further, because the system is less sensitive to patient movement and metal artifacts, the image quality is consistent and the success rate is very high, minimizing retakes.

The x-ray dose in all the fields of view of the SCANORA® 3D is low. The minimum effective dose can be compared to one digital panoramic exposure and, at maximum, to a few panoramic exposures in a larger field of view and higher resolution.



DOSE COMPARISON

SCANORA® 3D



PANORAMIC



AVERAGE CBCT



MEDICAL CT

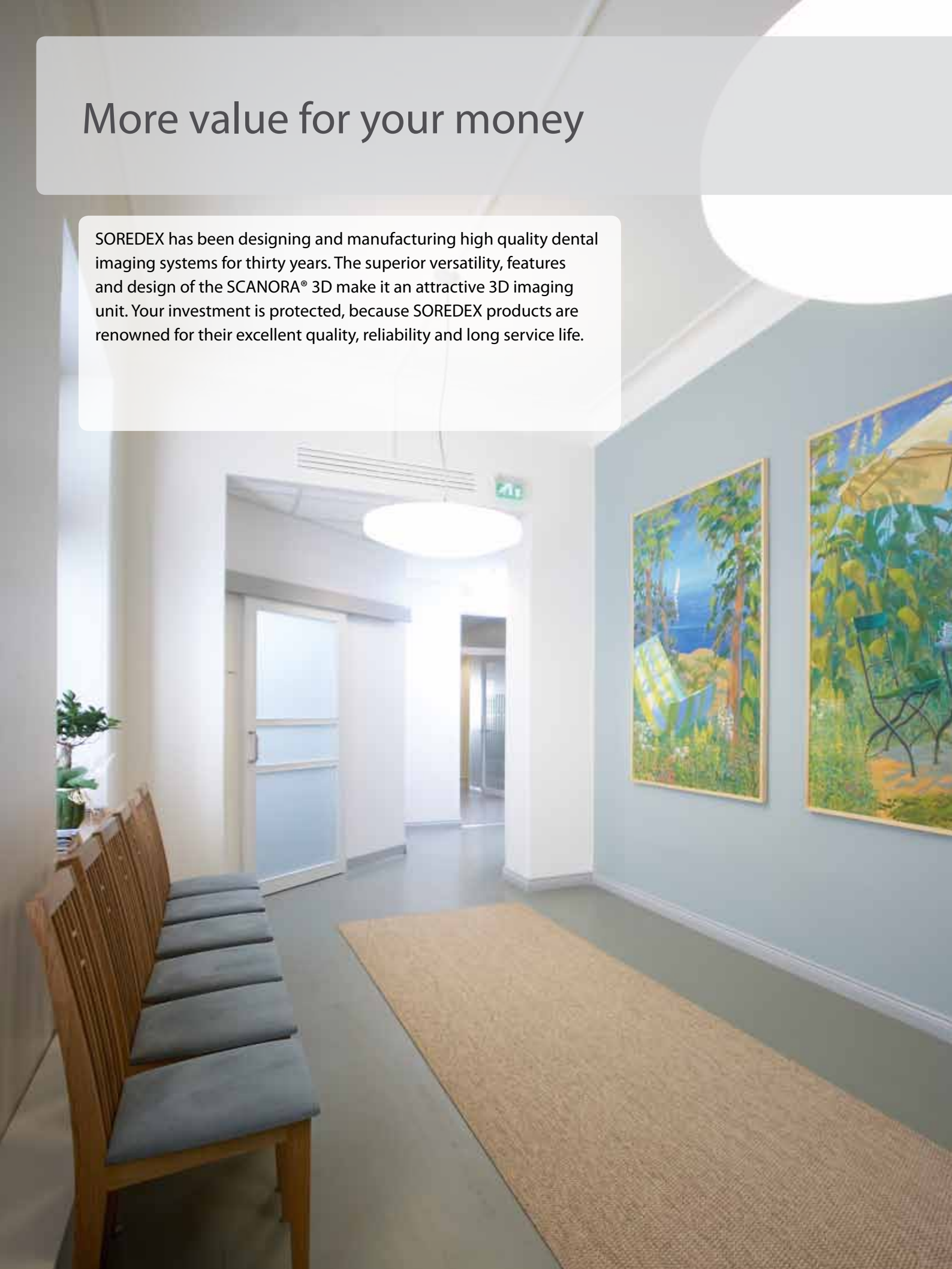


SCANORA® 3D gives you the ability to carefully minimize the dose according to the diagnostic task, whether it is a question of detailed primary diagnostics or a follow-up study.

SCANORA® 3D is a safe and efficient diagnostic tool for your clinic.

More value for your money

SOREDEX has been designing and manufacturing high quality dental imaging systems for thirty years. The superior versatility, features and design of the SCANORA® 3D make it an attractive 3D imaging unit. Your investment is protected, because SOREDEX products are renowned for their excellent quality, reliability and long service life.





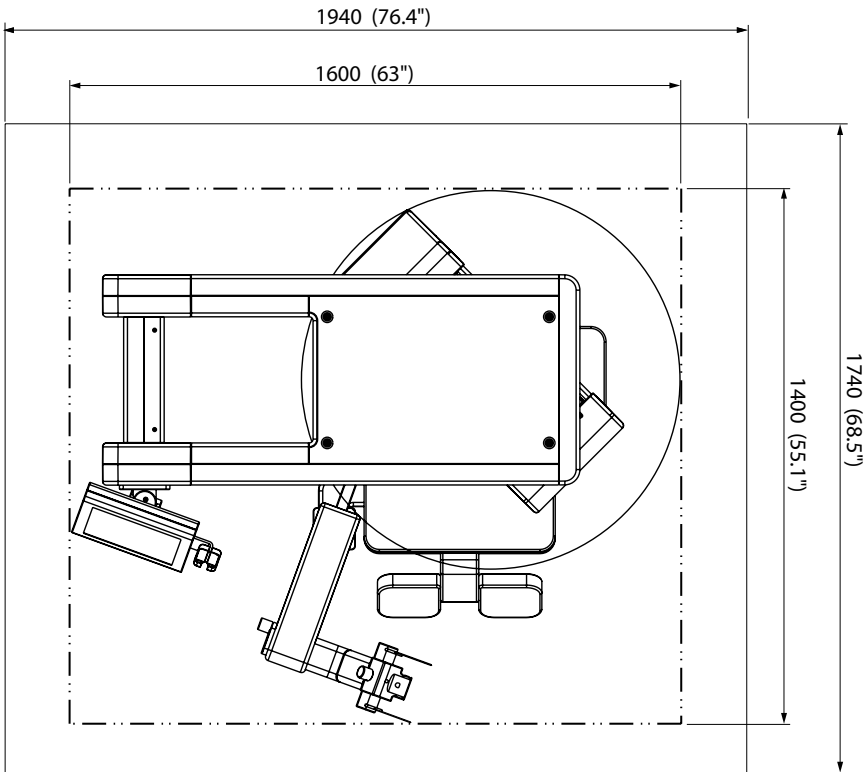
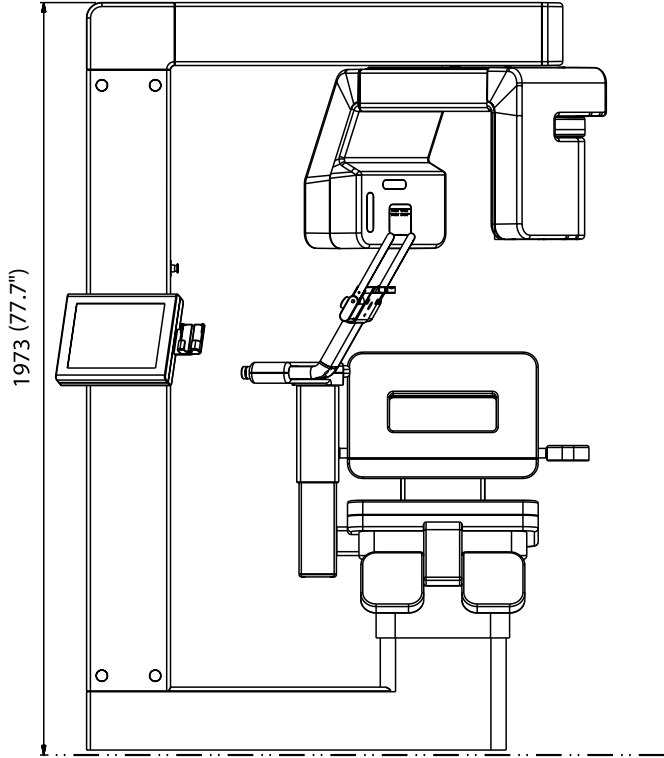
With SCANORA® 3D, the advanced dental imaging required for diagnostics, implant treatment planning and oral surgery can now be done in your practice. More advanced procedures can be performed efficiently and safely. Diagnostic information can be obtained without delay and with fewer referrals to outside facilities, for procedures such as medical CT examinations. The whole treatment planning process, from the first contact through radiological examinations, case planning, treatment acceptance, and follow-up, can be handled in one practice – yours.

3D imaging is not just prestigious, it is clinically necessary. It allows you to improve patient care by enhancing diagnostic accuracy and performance. 3D imaging helps you work closely with your patients to plan and implement the best alternatives; all of which differentiates your practice from those using conventional imaging.

The SCANORA® 3D is a total 2D and 3D imaging solution that comes with a complete 3D software package for advanced diagnostics and treatment planning. Through DICOM support, the SCANORA® 3D system integrates with other imaging software and modalities and is compatible with most specialty third party software, drill and surgical guide applications.

The SCANORA® 3D system makes advanced dental imaging fast and easy. We let you concentrate on your most important activity - treating your patient.

Technical data



Minimum space requirements
194 x 174 cm (76.4 x 68.5").
Room height 235 cm (92.5").

Technical data

3D imaging fields of view (height x diameter)

Small field of view	60 mm x 60 mm
Medium field of view	75 mm x 100 mm
Large field of view	75 mm x 145 mm
	All fields of view support both standard and high resolution modes

3D imaging parameters

Voxel size	133 μ m-350 μ m
Scan time	10-20 seconds
Effective exposure time	2-5 seconds
Reconstruction time	1-2 minutes

3D image receptor

Receptor type	CMOS Flat Panel
Receptor active area	124 mm x 124 mm
Pixel size	200 μ m

Panoramic imaging programs (Optional)

	Adult panoramic program
	Pediatric panoramic program
	TMJ programs

Panoramic image receptor (Optional)

Technology	CCD
Detector size (H x W)	146 mm x 6 mm
Detector pixel size	48 μ m

X-ray generator

Tube	Fixed anode tube
Focal spot	0.5 mm IEC 336
Target angle	5 degrees
kV	60-85
Average mA	1.0-8.0

Software

Primary reconstruction	ART (Algebraic Reconstruction Technique)
Workstation software	Image capture, patient and image database, 3D slice views, 3D rendering, implant planning and DICOM connectivity

Minimum system requirements for acquisition server computer

Memory	2 Gb
Hard disk	500 Gb
Processor	2.4 GHz dual core processor
Motherboard	PCI-Express bus for GPU
Operating system	Windows XP or 2000
Local area network	Copper Gigabit Ethernet

General

Weight	310 kg (690 lbs)
Dimensions (H x W x D)	1973 mm x 1600 mm x 1400 mm (77.7" x 63" x 55.1")

Power requirements

Line voltage	230-240 VAC (\pm 10 %), 50/60 Hz
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SOREDEX designs, develops, manufactures, and markets dental imaging systems, with an emphasis on innovative digital solutions. Operating worldwide, SOREDEX offers quality imaging systems of true diagnostic value, based on an in-depth understanding of the dental practice. Applying over three decades of experience in imaging excellence, we offer reliable and easy-to-use solutions that help you focus on patient care.

SOREDEX digital imaging systems are innovative and accurate diagnostic tools that are incorporated seamlessly and easily into your dental practice, enhancing the imaging process and improving workflow. Our systems are designed to be simple and easy to use. They will make your dental practice more efficient and ultimately give you more time to provide better care to your patients.

SOREDEX stands for innovation and value in dental X-ray technology.

SCANORA® is a registered trademark of SOREDEX, PaloDEx Group Oy. Other product names and trademarks are the property of their respective owners. CE-marked, NB (CE) number 0537. Electrical safety meets the IEC 60601-1 standard. Manufacturing complies with ISO 13485:2003, ISO 9001:2008, and ISO 14001:2004.

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