RADON
MEDICAL IMAGING

ImageWorks
Panoura

Imageworks Panoramic Digital

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Panoura 18S

3-In-1 Panoramic System
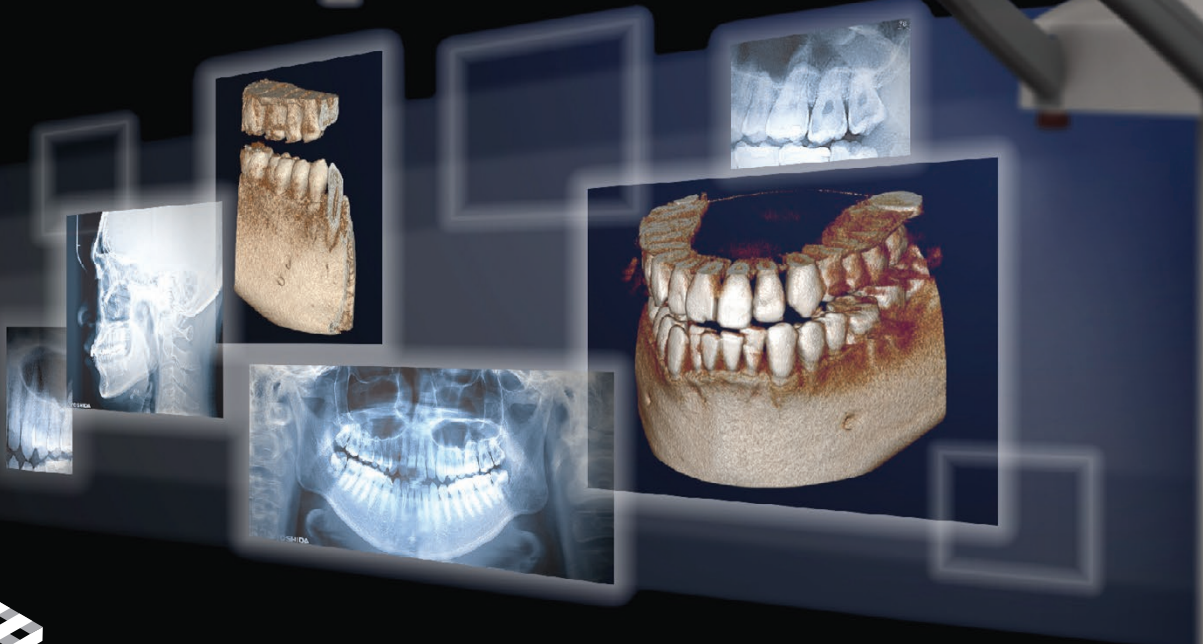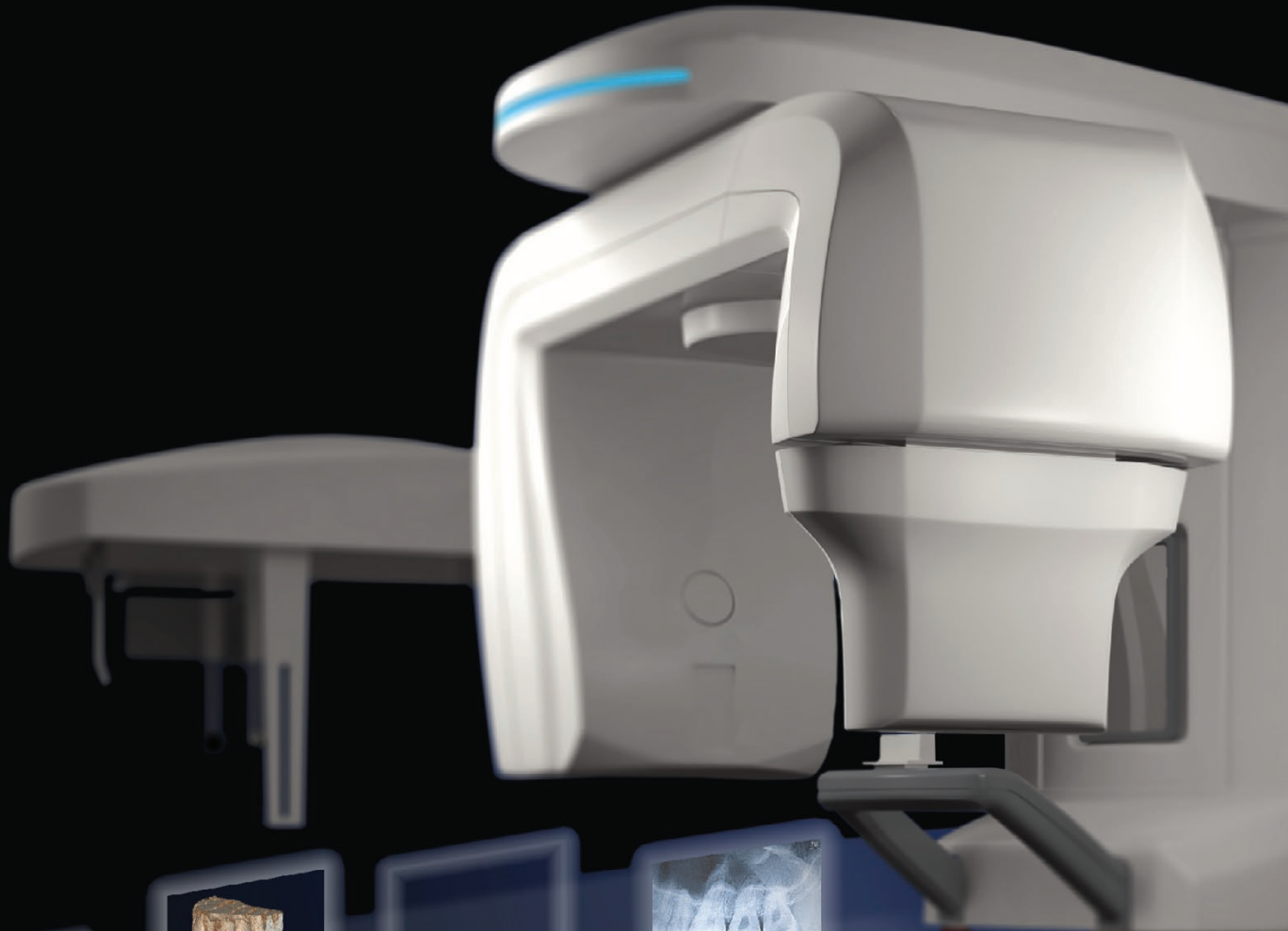
ImageWorks
Generations of Imaging

WWW.ImageWorksCorporation.com/Panoura18S

Next Generation 3D Imaging

Confidence built by precision.

Panoura 18S 3D is designed to be an ideal model for 3D panoramic systems. Slim, compact and highly functional.
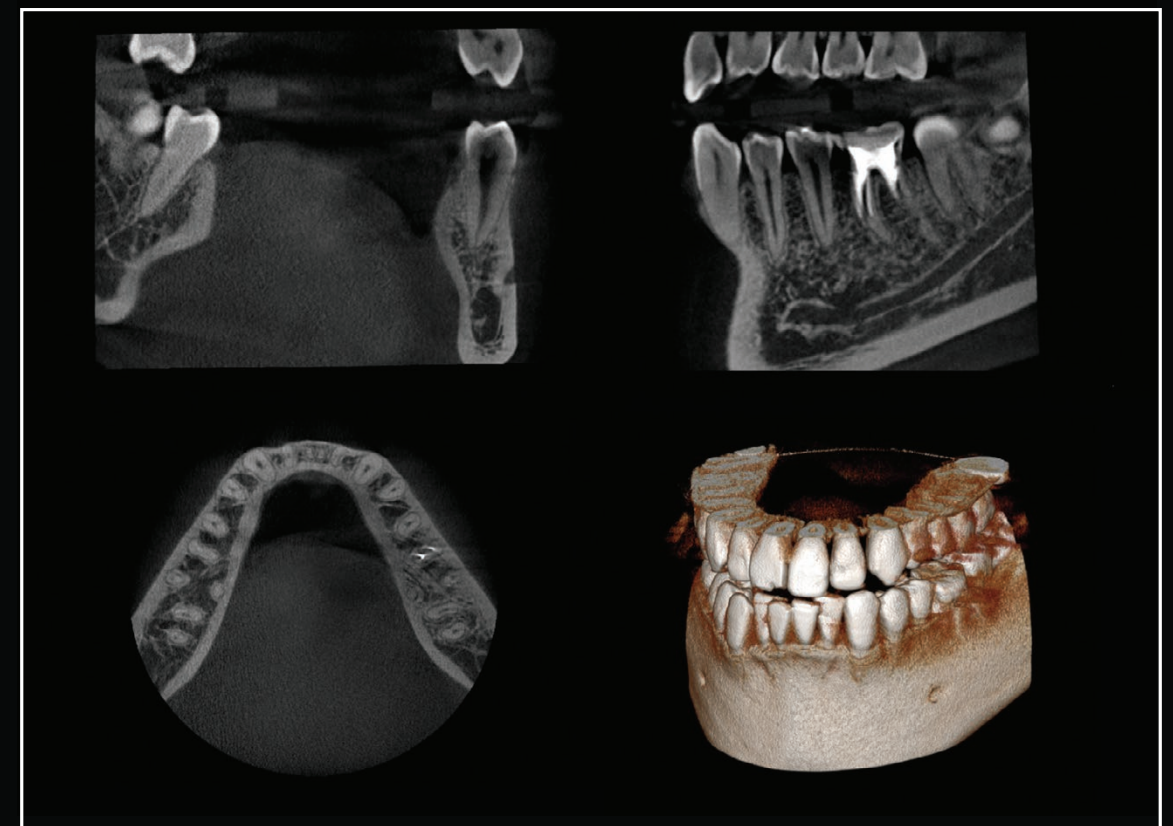
Adult Pan, Child Pan, Bite Wing, FMX, TMJ, Ceph, 3D imaging for every dental practice.

Low Dose

High Definition

3D

Precise Positioning

Optimal FOV

Space Efficient
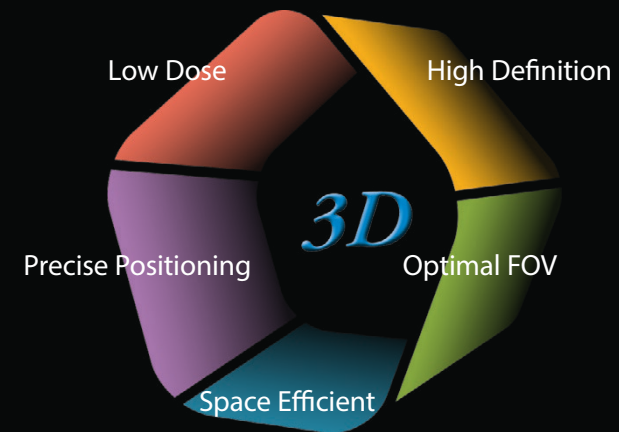
Five benefits essential to an ideal imaging system
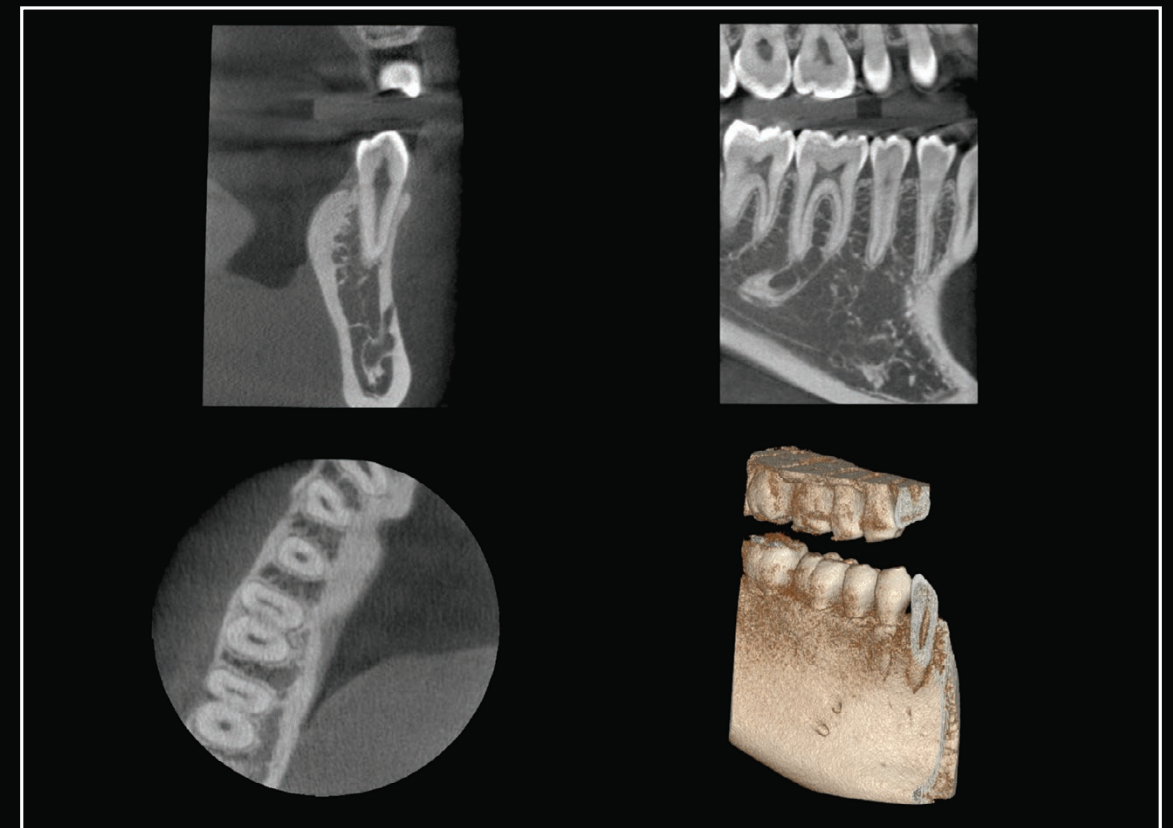
Dent Mode: Half Arch
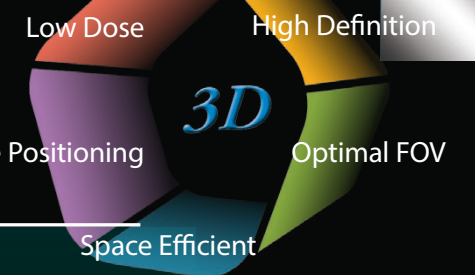
ES
EVAsoft
Dental Imaging Software

EVAsoft – Our dental imaging software supplied with the unit, is a powerful image management tool to acquire, process, print and store your images in a simple and effective way. Easy to learn and simple to operate, EVAsoft has all of the advanced features necessary to deliver rapid, effective diagnosis. From the simplicity of tab navigation to the outstanding value it offers, EVAsoft Dental Image Management software is the choice for any practice. EVAsoft interfaces easily with all popular dental imaging software suites.

OnDemand3D

OnDemand3D - Cybermed's 3D reconstruction software, OnDemand3D, comes included with 3D versions of the Panoura 18S. OnDemand3D is a sophisticated 3D imaging software with many elements. Highlights are implant placements with a full implant library, tour of the root canal, and complete cross sectional and measuring capabilities. OnDemand3D is a software used worldwide that can import DICOM studies and send DICOM studies to refering practices complete with notes.

Oral Mode: Full Arch

5 Benefits essential to an ideal 3D Imaging System

Low Dose High Definition

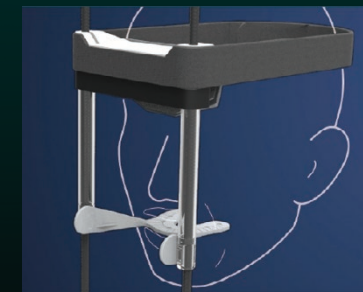Precise Positioning **3D** Optimal FOV

Space Efficient

1 High definition
80 µm voxels meet precise requirements

High definition images comprised of 80µm voxels are so clear they display the precise shape of the root canal and the apical direction. This high level of sharpness can be utilized not only in endodontics, but in a wide array of treatments

Voxel size 80 µm

Reference image

2 Optimal fields of view
Innovative sliding sensor system

By adopting the sliding sensor system, the correct field of view can be selected from two exposure modes

■ Dent Mode
Captures a sharp image in a precise area. Suitable for endodontic and implant treatments

FOV

5.7 cm

(Dia) 4 cm

■ Oral Mode
Captures the entire maxillary and/or mandibular arch in one shot Suitable for periodontic and multiple tooth implant treatments

FOV

5.4 cm

(Dia) 7.7 cm

Orbit of sensor at the time of oral mode exposure

Sensor

Starting Point 0° FOV 190° ① ② Sliding

Ending Point 0° 190° ③

① Exposure begins from the starting point, and the rotation arm rotates 190 degrees while scanning.

② Sensor slides in the direction of arrow.

③ The rotation arm returns to the original position as scanning completes.

Sliding Sensor System

By having the sensor slide, the sensor area is virtually widened so a larger field of view can be obtained. (Patented)

3 Precise patient positioning
Bite plate positioning with impression material

To capture a clear image a bite plate with silicon impression material is added to the head support so a patient's head is held securely in place. The bite plate also ensures an exact replica for future scans of that patient.
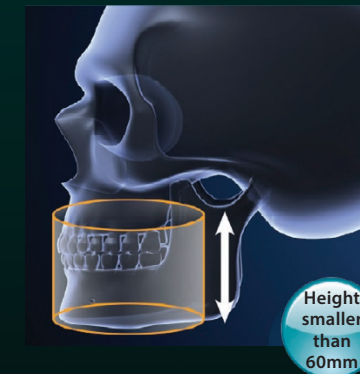
Precise patient positioning every time

In a follow-up treatment, using the same bite plate allows scanning exactly the same area making the observation easier
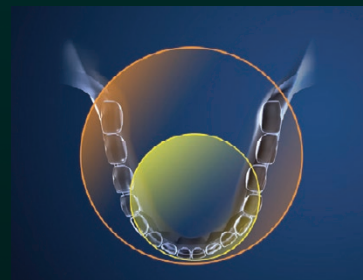
4 Low patient dose
Scanning only the necessary area is accomplished with an FOV smaller than a height of 60mm

An FOV with a height of approximately 60mm enables scanning an area large enough to include the opposing teeth while avoiding the lenses of the patients eyes which are highly sensitive to radiation. Panoura 18S 3D protects patients from radiation exposure while capturing the desired area.
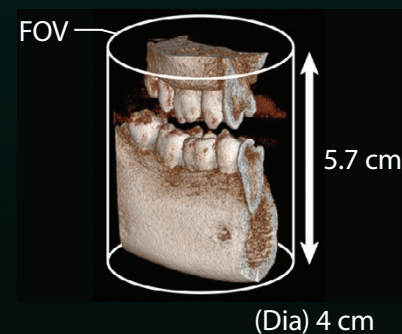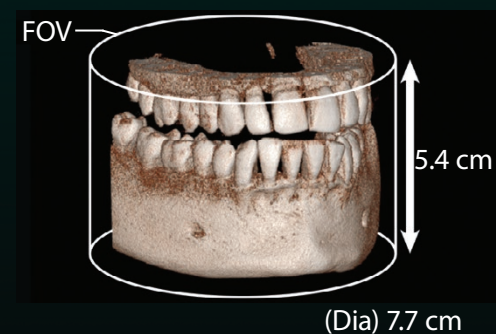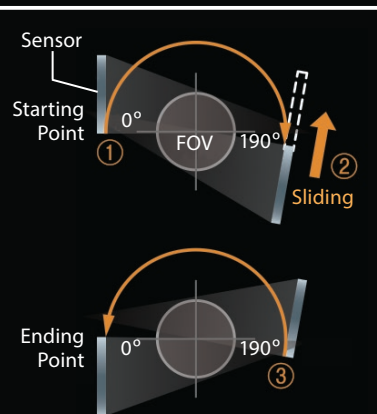
Height smaller than 60mm

5 Space-efficient design
Compact body to fit even in the smallest of spaces

As a 3D imaging system with an optional cephalometric arm, the Panoura 18S 3D has a small footprint to fit into tight spaces

5 Ft

6 1/2 Ft
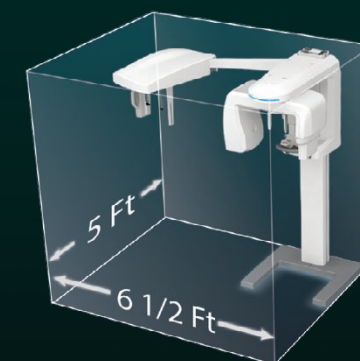
3 Features produce high quality panoramic images

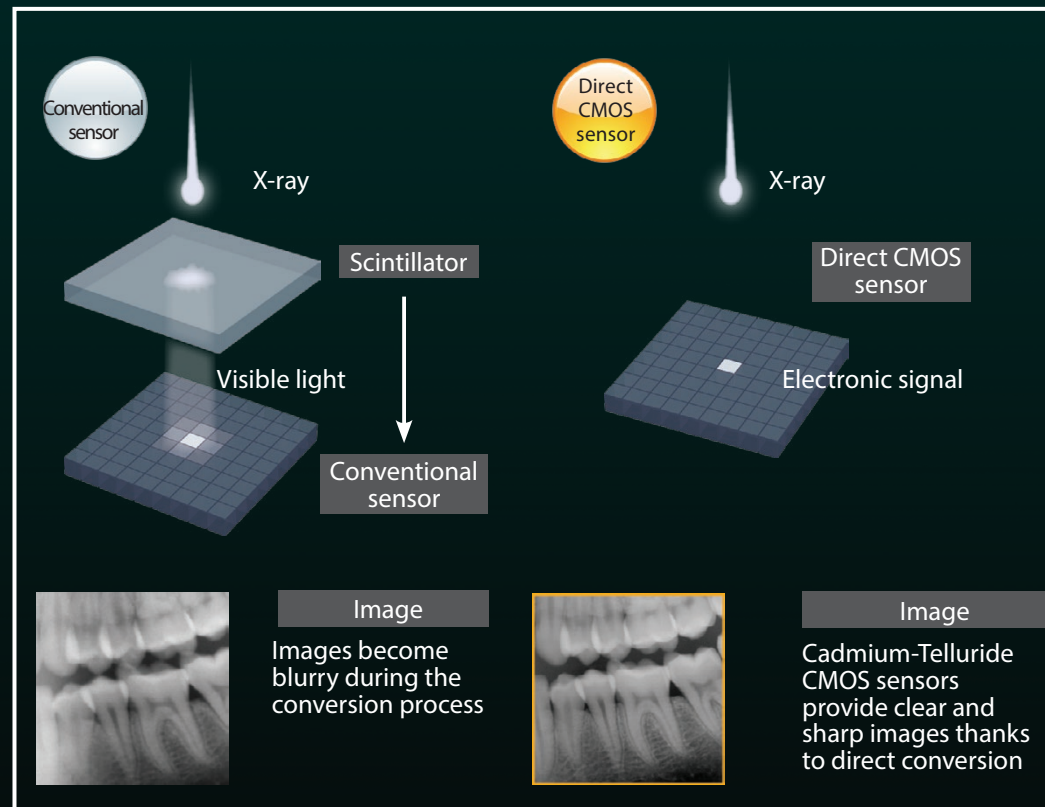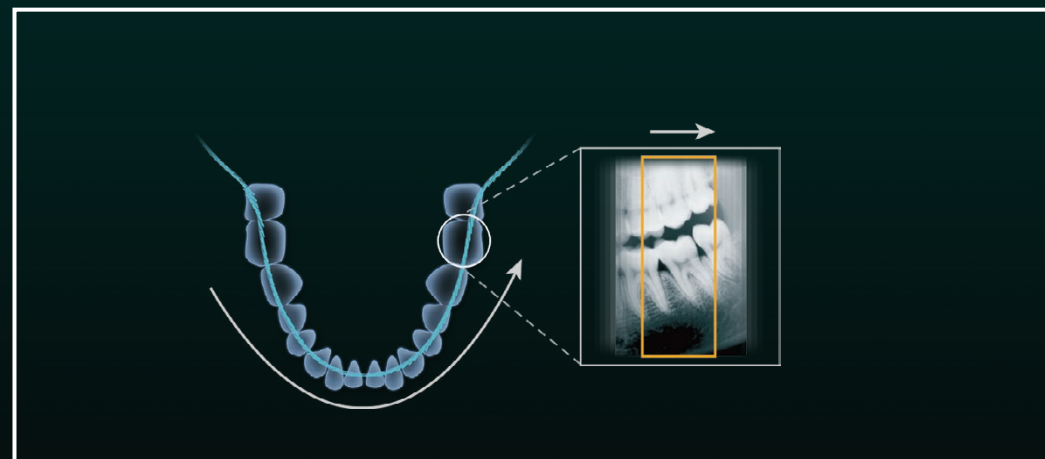## 1 Super high definition image quality for a precise diagnosis
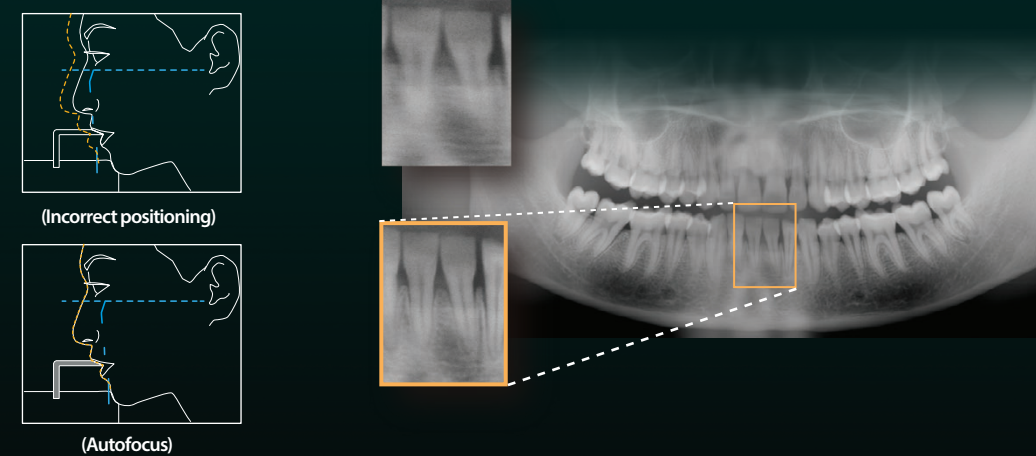
Direct Cadmium-Telluride CMOS sensor

Semiconductor that is used for photon counting directly converts X-rays to electronic signals and creates blur-free images.

Conventional sensor

Conventional sensors convert X-rays to visible light through scintillation, then the CCD element transforms the light into electronic signals. In that process, the scintillator cause the electrons to diffuse, resulting in blurred images.

■ A Cadmium-Telluride CMOS sensor and a unique image construction technology produces sharp images that are free of spinal artifacts.

Conventional sensor

X-ray

Scintillator

Visible light

Conventional sensor

Direct CMOS sensor

X-ray

Direct CMOS sensor

Electronic signal

Image

Images become blurry during the conversion process

Image

Cadmium-Telluride CMOS sensors provide clear and sharp images thanks to direct conversion

■ This process compiles more than 4,500 single high resolution images into one sharp, high-definition panoramic X-ray. (16-bit = 65,536 gray levels)

2 AutoFocus: A multi focal layer technology

■ The unique panoramic image construction technology (Image Creator) automatically selects the best focal layer position as the exposure completes. Re-focusing on any spot is also possible after image acquisition is completed.

(Incorrect positioning)

(Autofocus)

Image Creator

The focal layer position and shape can be adjusted to show the dentition optimally.

■ Active tomography allows a reconstruction of the image corresponding to the anatomical shape and size of each patient, even after the exposure.
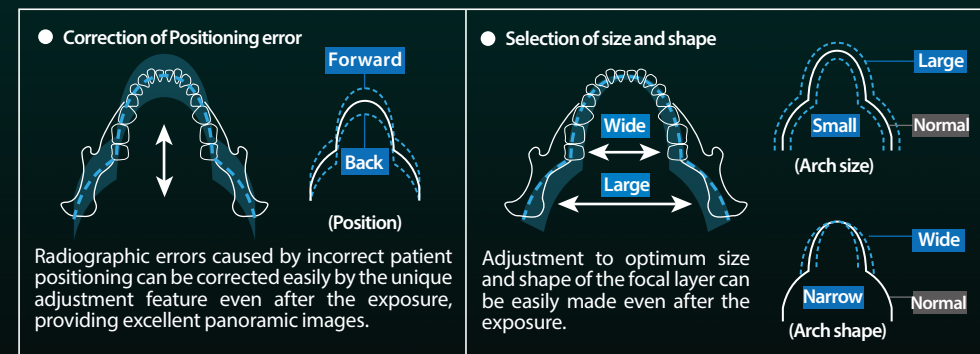
● Correction of Positioning error

Forward

Back

(Position)

Radiographic errors caused by incorrect patient positioning can be corrected easily by the unique adjustment feature even after the exposure, providing excellent panoramic images.

● Selection of size and shape

Wide

Large

Large

Small

Normal

(Arch size)

Wide

Narrow

Normal

(Arch shape)

Adjustment to optimum size and shape of the focal layer can be easily made even after the exposure.

3 Patient dose reduced by 50%

Direct CMOS sensor enables high quality images while reducing the patient dose by up to 50%.
Patient dose is also minimized by shorter exposure times, reducing the risk of retakes caused by patient movement.

High speed 8 sec.

Next generation premium high definition

Premium high-definition
Standard panoramic: 14 seconds
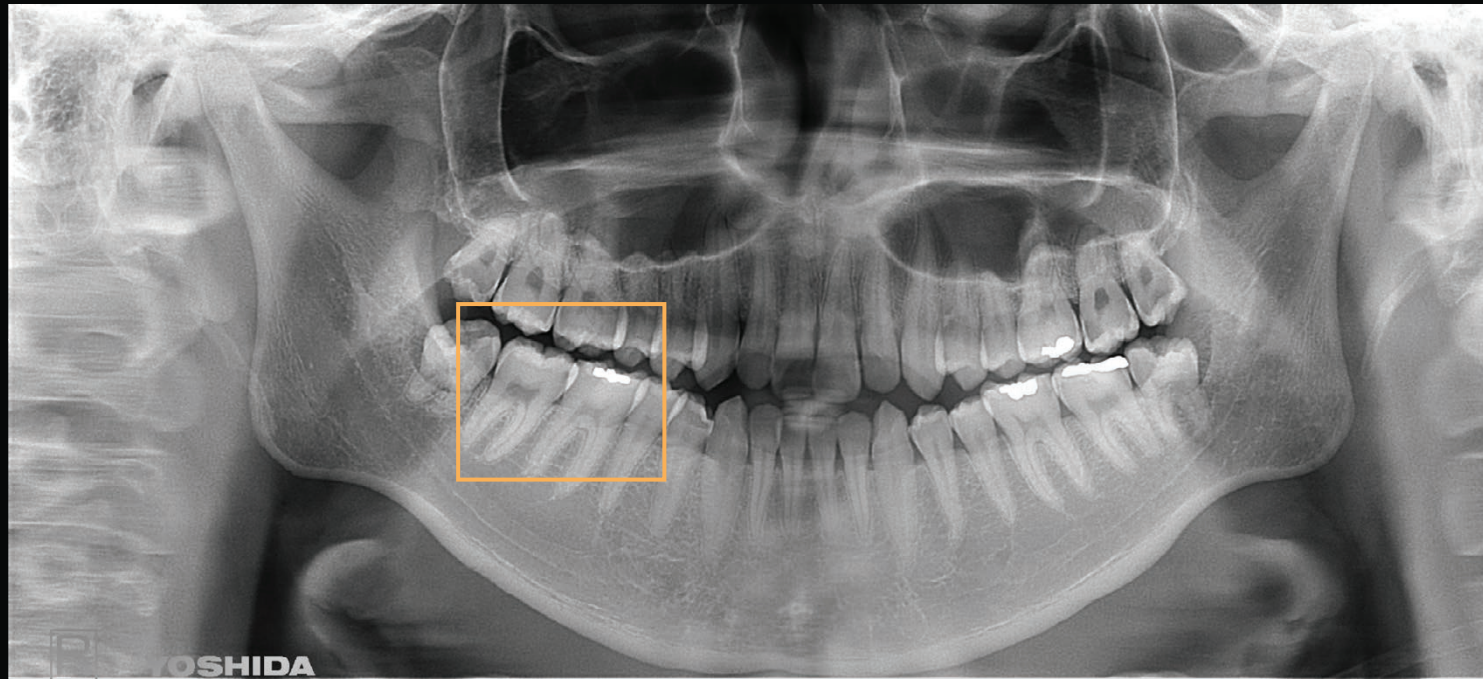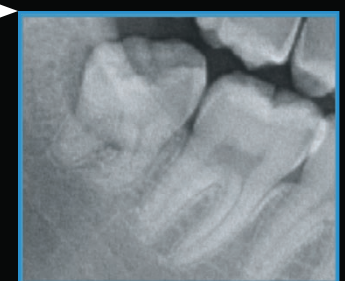
Direct CMOS sensor · High definition 14 sec.

A high-definition Cadmium-Telluride CMOS sensor and a unique panoramic construction algorithm actualize the direct conversion from X-ray to electronic signals, creating high-definition images with lower noise.

Various exposure times can be selected based upon patient and clinical needs
High speed exposure mode: 8 seconds

Direct CMOS sensor · High speed 8 sec.

Even an 8 second exposure provides high image quality optimal for accurate clinical diagnosis.

Image comparison

Panoura 18S
Standard panoramic

Direct CMOS sensor · High definition 14 sec.

Panoura 18S
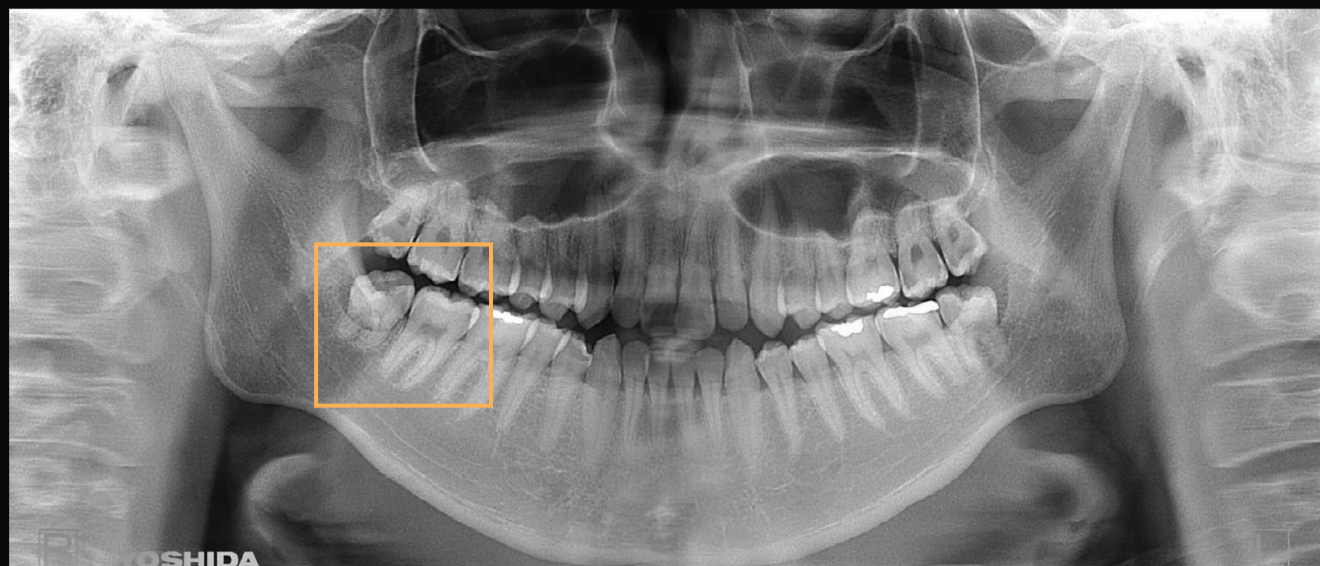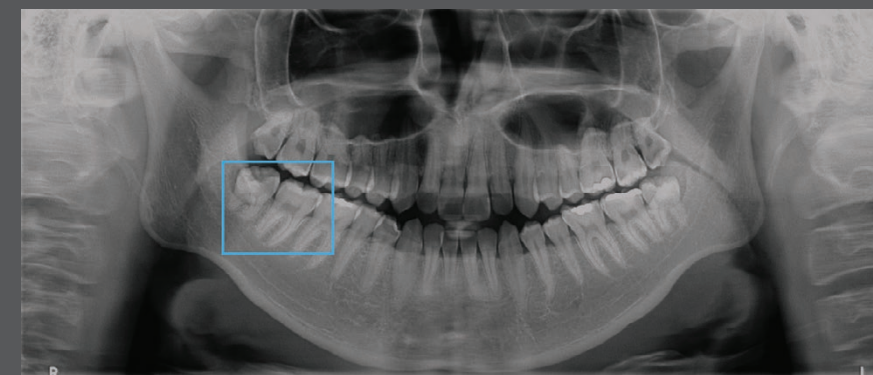High speed exposure mode

Direct CMOS sensor · High speed 8 sec.

Conventional sensor image

Conventional sensor · 16 sec.

Conventional sensor image

Conventional sensor · 16 sec.

Exposure modes

Panoramic exposure mode

(Standard Panoramic)

(TMJ 2 Views)

(Child Panoramic)

Bitewing and FMX exposure modes are also included.

3D exposure mode
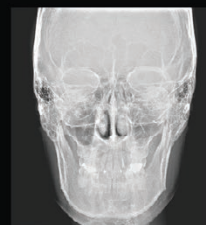
(Dent Mode)

(Oral Mode)

Cephalometric exposure mode
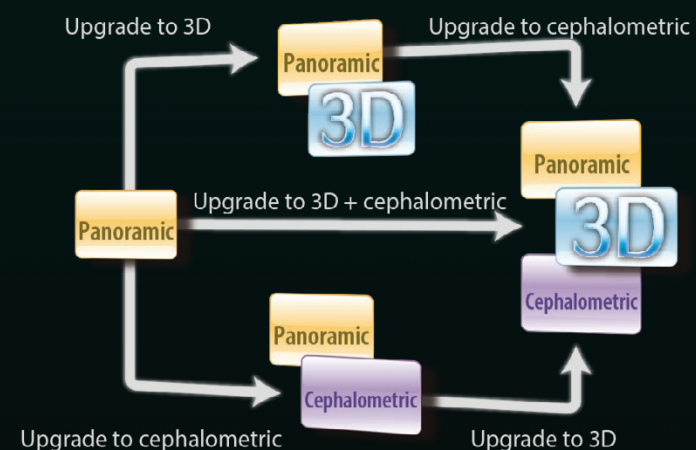
(PA View)

(Lateral View)

(Carpus View)

Easy upgrade to 3D & Cephalometric

With the same simple operability and compact body, it can be easily upgraded to 3D and/or cephalometric as needed.

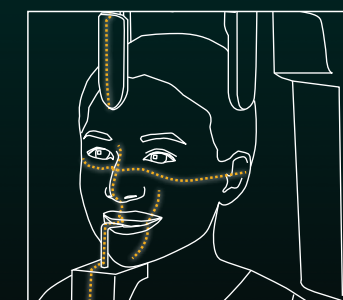*Sensor corresponding to 3D cephalometric is needed.

Upgrade to 3D

Panoramic

3D

Upgrade to cephalometric

Panoramic

3D

Cephalometric

Panoramic

Upgrade to 3D + cephalometric

Panoramic

Cephalometric

Upgrade to cephalometric

Upgrade to 3D

3-point head support

Patient's head is supported at 3 positions to keep it in place during exposure.
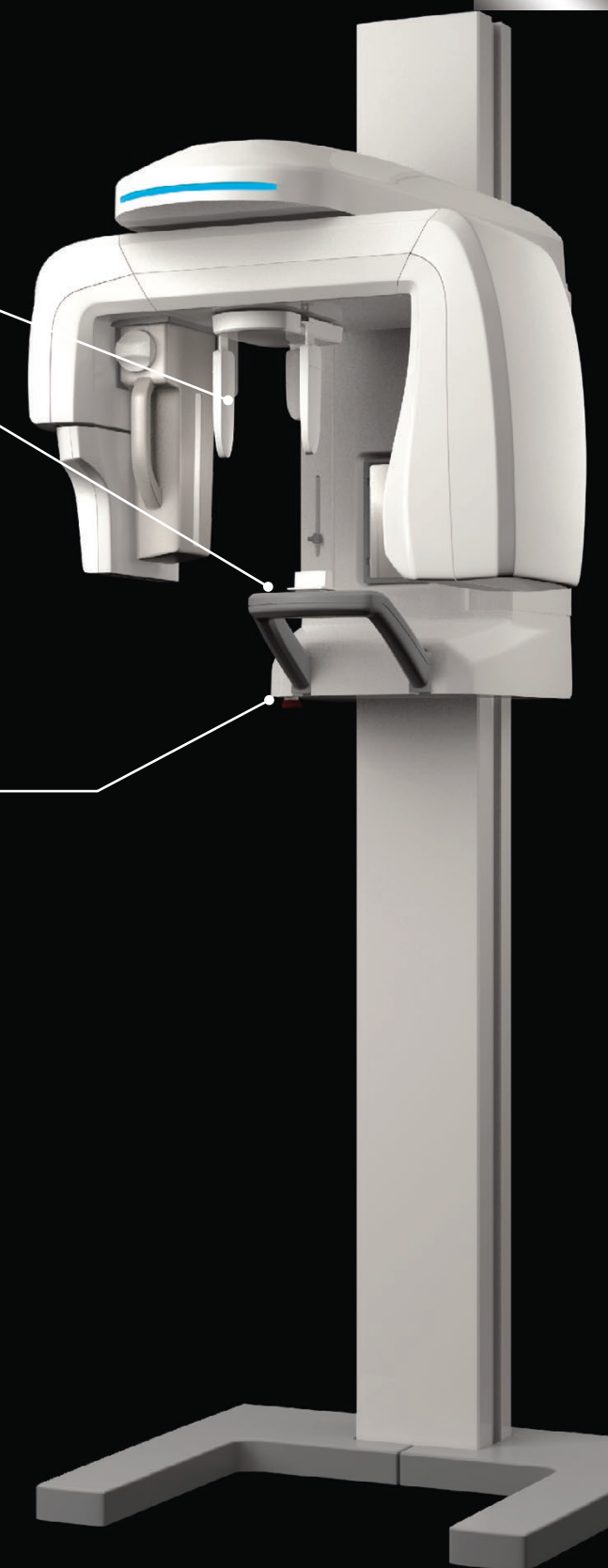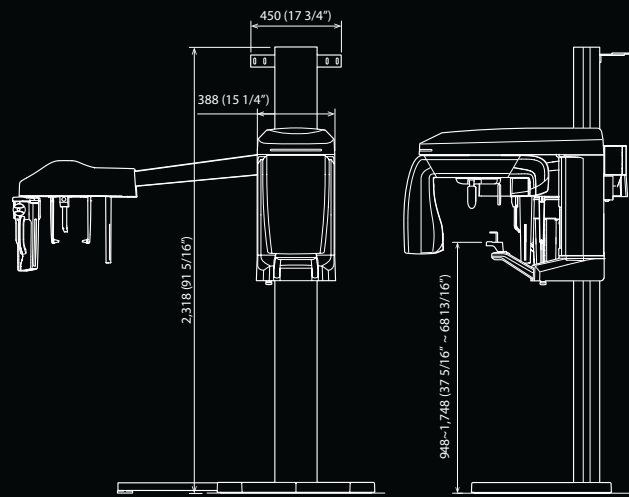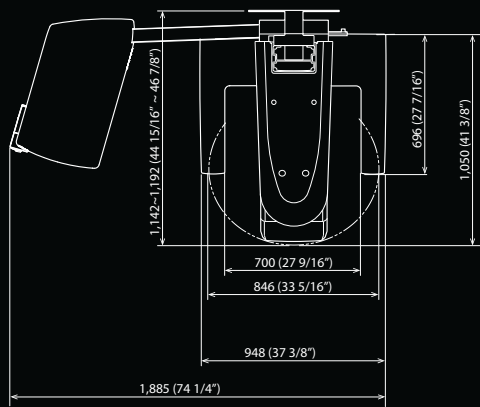
Simple positioning

Elevation range of 800mm

The chinrest height is adjustable in an 800mm range to adapt to all patient types, from child to adult, to a patient in a wheelchair.

Panoura 18S System Specifications

450 (17 3/4")

388 (15 1/4")

696 (27 7/16")

1,050 (41 3/8")

1,142–1,192 (44 15/16" ~ 46 7/8")

700 (27 9/16")

846 (33 5/16")

948 (37 3/8")

1,885 (74 1/4")

2,318 (91 5/16")

948–1,748 (37 5/16" ~ 68 13/16")

These dimensions include the wide base, long type (tall) and cephalometric attachment. Units = mm (inches)
Clearances have been rounded up to nearest 1/16"
Ranges have been rounded down to nearest 1/16"

Technical Specifications:

Sensor:	Cadmium Telluride direct CMOS	Tube Voltage:	58 - 82 kVp
Levels of Gray:	16-bit (65,536 or 64K)	Tube Current:	2 - 10 mA
Exposure Times (Sec):	8, 14, 16 (Panoramic Adult)	Power Supply:	120 VAC +/- 10% (20A)
	6, 11, 13 (Panoramic Child)	Input:	2 kVa
	4 x 2 (TMJ)	Total Filtration:	2.5mm Aluminum
	8, 10 (Cephalometric)	Software Apps:	EVAsoft (Pan/Ceph)
	11.5 (3D Dent Mode)		OnDemand3D (3D Modes)
	11.5 x 2 (3D Oral Mode)	Weight:	(Pan wall mounted) 287 lbs
Magnification:	1.2 - 1.29 (Panoramic, TMJ)		(Pan/3D wall mounted) 309 lbs
Pixel/Voxel Size:	100 μm square pixel (2D Modes)		(Pan/Ceph wall mounted) 375 lbs
	80 μm cubic voxel (3D Dent Mode)		(Pan/Ceph/3D wall mounted) 397 lbs
	100 μm cubic voxel (3D Oral Mode)		(Pan floor stand) 342 lbs
3D F.O.V.:	4cm x 5.7cm (3D Dent Mode)		(Pan/3D floor stand) 364 lbs
	7.7cm x 5.4 cm (3D Oral Mode)		(Pan/Ceph floor stand) 430 lbs
Focal Spot:	0.5mm x 0.5mm		(Pan/Ceph/3D floor stand) 452 lbs

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