# CRANEX™ 3Dx

# Easy imaging for expanded vision

**SOREDEX**

soredex.com

# Benefits at a glance

## CRANEX™ 3Dx combines top performance, ease of use and value

CRANEX™ 3Dx has 5 fields-of-view for accurate 3D imaging from single tooth to entire maxillofacial region.

Clinics can benefit from the top performance of CRANEX™ 3Dx with excellent panoramic and cephalometric imaging, as well as advanced 3D imaging supporting multiple application areas.

Clinics with dynamic 3-in-1 point-of-care imaging can provide faster treatment paths and flexible workflows with high diagnostic accuracy.

CRANEX™ 3Dx provides extremely easy and fast imaging with fresh ClearTouch™ Control panel, free FOV positioning with EasyScout™ and AES hybrid – combined Automatic Exposure Setting in panoramic, cephalometric imaging, as well as in 3D – a world first.

# Dynamic 3-in-1

Clinics offering multiple treatments may also face a variety of diagnostic challenges in their daily work. These clinics benefit most from the CRANEX™ 3Dx solution:

- Multi-specialty dental clinics; implant, perio, endo, general dentistry
- Imaging centres and radiology centres
- Oral and maxillofacial radiology departments
- Oral surgeries; trauma, plastic surgery, orthodontics
- Orthodontic treatment facilities
- Hospitals

## A solution to multiple diagnostics tasks:

- Panoramic and cephalometric examinations
- Dental implant planning and follow-up
- Endodontics
- Wisdom teeth
- Impacted teeth
- Temporo-Mandibular-Joint (TMJ) studies
- Oral surgery
- Airway studies
- Sinuses
- ENT (*
- Cervical spine studies
- Temporal bone studies
- Cysts and tumors
- Trauma

(*Countries approving CE marking, Not in US, Canada

Adult panoramic



Child panoramic



Bitewing program

# Outstanding image quality

Adult panoramic



# Panoramic imaging

CRANEX™ 3Dx has a RealPAN™ dedicated panoramic CMOS sensor enabling full panoramic image size and accuracy in each panoramic program. This can be seen as a perfect and clear image.

CRANEX™ 3Dx has AES - automatic exposure setting function adjusting dose based on individual patient size reducing radiation with children and small patients.

The SOREDEX™ famous patient positioning system enables fast and accurate patient positioning with:

- Rigid 5-point positioning system
- Easily adjustable, self-locking temple supports
- Three laser lights for accurate positioning
- Large, hinged mirror

Reduced Width Lateral Program
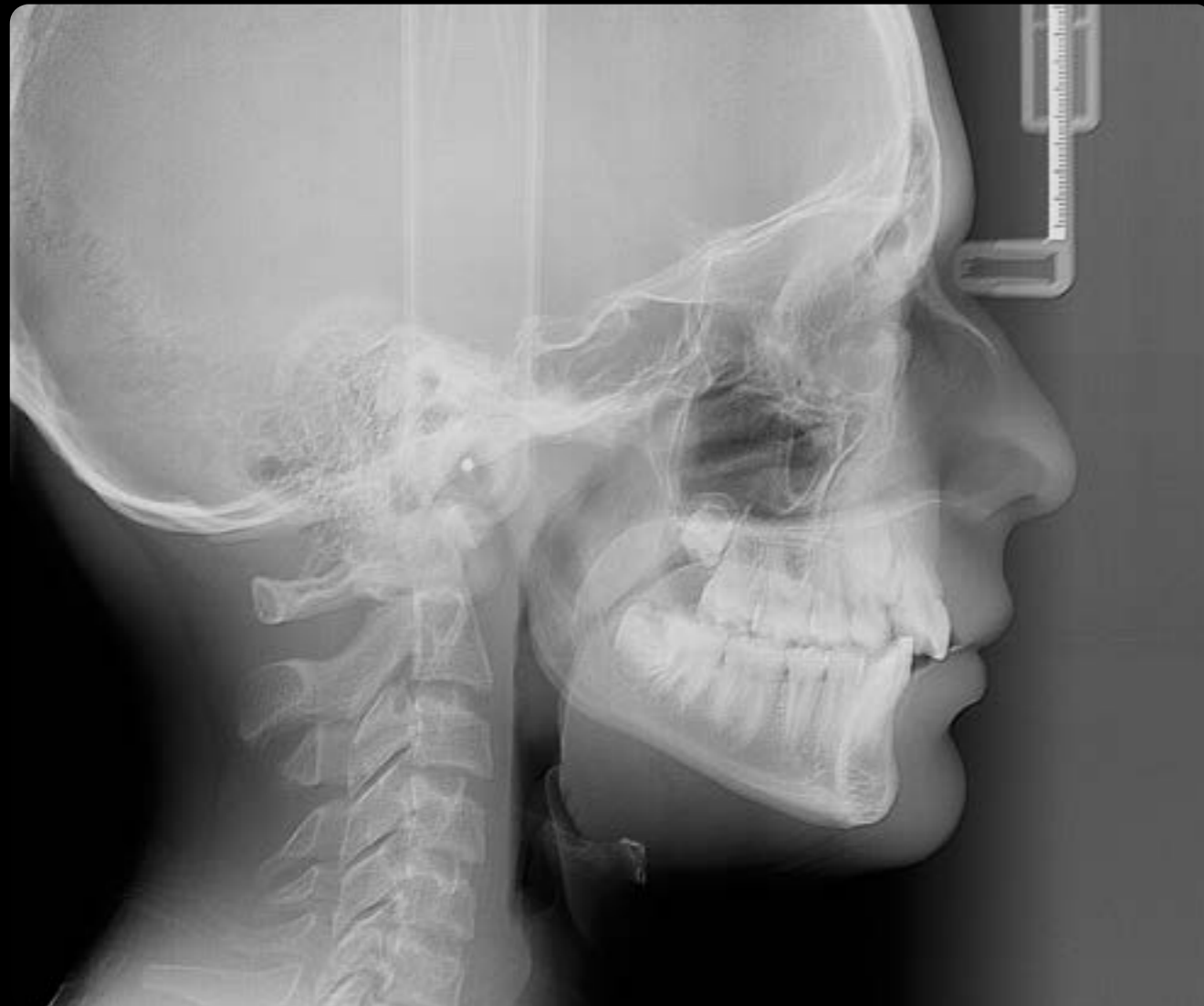
Posterior Anterior Program

**Carpus Program**

(Not available in US and Canada). Carpus Program requires a carpus holder (separate option)

# Visualization with clarity

Full Width Lateral Program

# Cephalometric imaging

For orthodontic treatments, CRANEX™ 3Dx provides superior image quality with the latest CMOS sensor technology and fast workflow.

CRANEX™ 3Dx provides many functions to reduce radiation for children. Automatic soft tissue adjustment in cephalometric images visualizes facial profiles with improved clarity and reduces doses. Panoramic images have autocollimated programs with lower doses and faster imaging time.
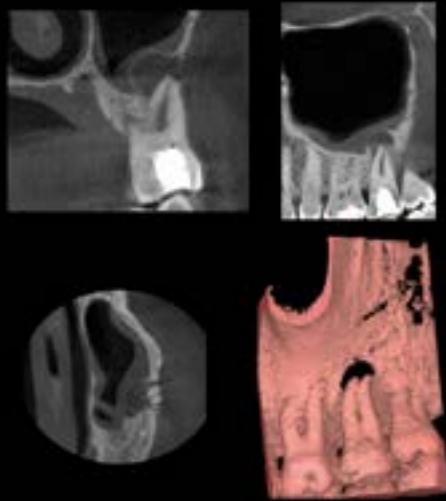
AES in orthodontics treatment reduces imaging values with children and helps optimize patient doses – AES hybrid functions in panoramic and cephalometric imaging and 3D.

In 3D imaging, all FOV sizes have Minidose™ programs that can be used with orthodontic treatments to reduce doses.

The SOREDEX™ patient positioning system includes stable head support, exact geometry and lateral image calibration in each image. In cephalometric imaging the correct head position can be confirmed with Frankfort Horizontal light.
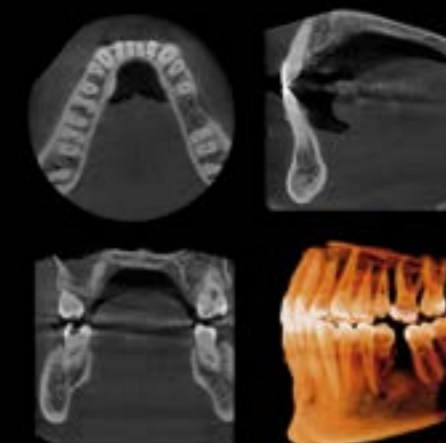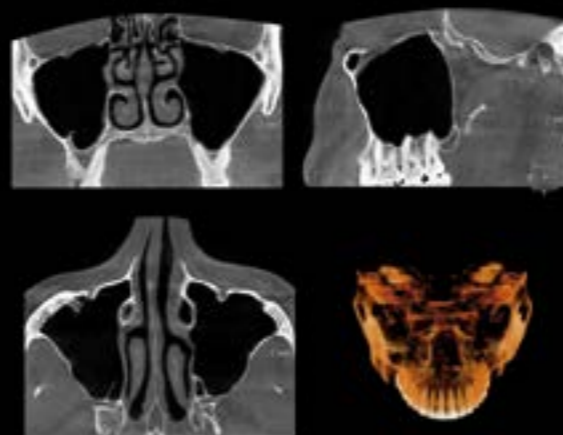
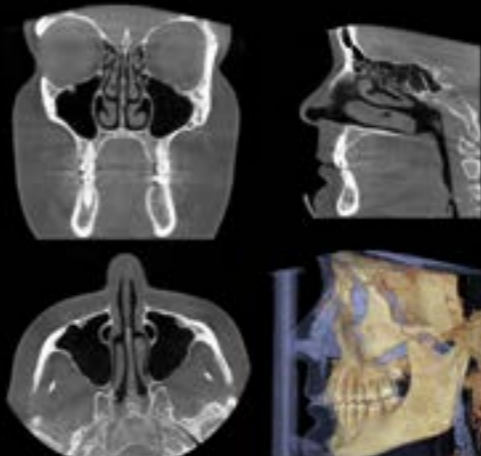# 3D imaging

**Small FOV 5×5 cm**



**Midi FOV 6×8 cm**



**Medium FOV 8×8 cm**



**Large FOV 8×15 cm**



**XL FOV 13×15 cm**





**30**      mGycm²

# Diagnostic challenges met with ease

- Free FOV positioning: PickPoint™ and EasyScout™
- AES Hybrid – Automatic Exposure Setting in pan, ceph and 3D
- Fresh ClearTouch™ Control Panel
- SARA™ (Soredex Advance Reconstruction Algorithm)
- SMAR™ (Soredex Metal Artifact Reduction)
- Open software architecture with DICOM and PACS compatibility

The starting configuration includes 5 x 5, 6 x 8 and 8 x 8, which can be enlarged with 8 x 15 and 13 x 15 FOVs.

The CRANEX™ 3Dx system can be easily integrated with leading navigated surgery and drill guide systems having comprehensive DICOM/PACS compatibility.
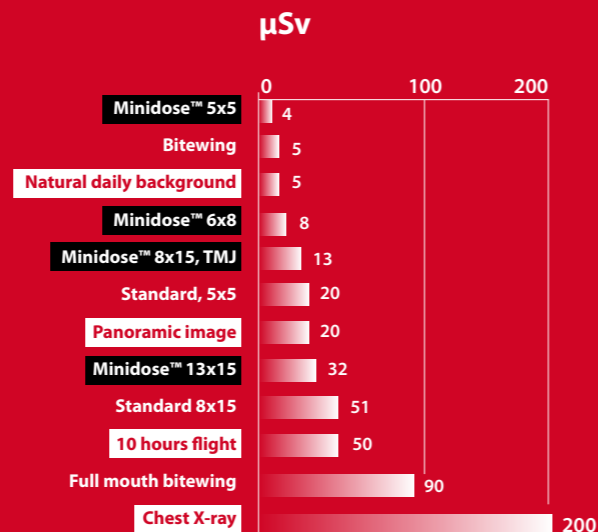
**Making imaging easy**

# Minidose™

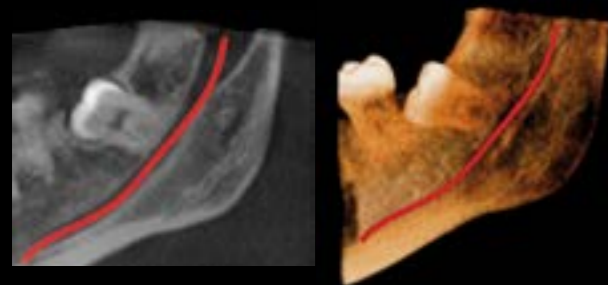The SOREDEX™ Minidose™ solution (MDS) provides fast low dose imaging for CRANEX™ 3Dx.

The SOREDEX™ Minidose™ solution (MDS) is a 3D imaging program with low radiation doses and good image quality thanks to SARA™ technology.

Minidose™ can be used with multiple clinical tasks when dose sensitivity is needed – implant planning and control, children, wisdom teeth, location of impacted teeth, general follow-up and nose bone fractures.

The SOREDEX™ WiseDose™ scaler visualizes relative dose for each program settings. It guides to use optimal dose settings especially in 3D with Dose Care Control assistance.
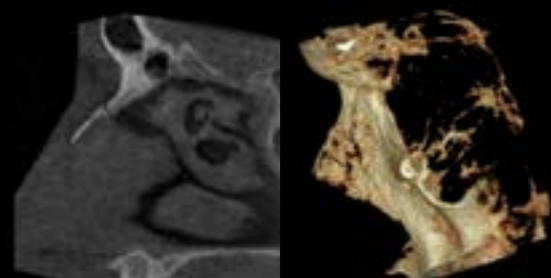
## µSv

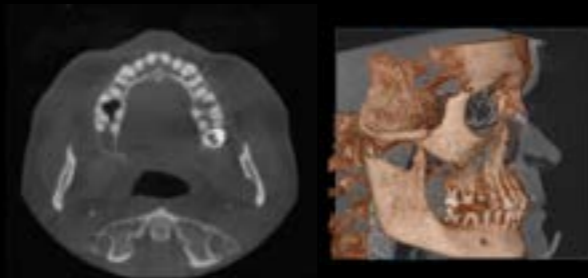| Program | Value |
|---|---|
| Minidose™ 5x5 | 4 |
| Bitewing | 5 |
| Natural daily background | 5 |
| Minidose™ 6x8 | 8 |
| Minidose™ 8x15, TMJ | 13 |
| Standard, 5x5 | 20 |
| Panoramic image | 20 |
| Minidose™ 13x15 | 32 |
| Standard 8x15 | 51 |
| 10 hours flight | 50 |
| Full mouth bitewing | 90 |
| Chest X-ray | 200 |

Scale: 0 — 100 — 200

*Dose study, Ludlow 2014

Small FOV 5 × 5 cm Minidose™

## Minidose™ 5 × 5
## ⅕ Panoramic image

Medium FOV 8 × 8 cm Minidose™

XL FOV 13 × 15 cm Minidose™

# Technical data

## Panoramic imaging

| | |
|---|---|
| Sensor type | CMOS |
| Detector pixel size | 100 µm |
| Active area height | 5.8"/148 mm/1480 pixels |
| Resolution | spatial 6.5 lp/mm, image 5 lp/mm |
| Scanning time | 8-16 s |

### Imaging programs

Adult panoramic, child panoramic, bitewing, sectional, TMJ lateral, TMJ/PA and sinus

## Cephalometric imaging

| | |
|---|---|
| Sensor type | CMOS |
| Detector pixel size | 100 µm |
| Active area height | 223,2 mm/2232 pixels |
| Image field width in lateral view | 10.2"/260 mm, max 6.7"/170 mm, min |
| Resolution | spatial 6.5 lp/mm, image 4 lp/mm |
| Scanning time | 6-20 s |

### Imaging programs

Full width and child lateral, PA/AP and carpus projection (* (* Not available in US

## 3D imaging

| | | |
|---|---|---|
| Sensor type | | CMOS Flat Panel |
| Projections | | 234 - 900 slices |
| Voxel resolutions (µm) | | 85,125, 200, 250, 280, 300, 320, 350, 380, 400, 420 |
| Small FOV | std | 50 x 50 mm |
| Midi FOV | std | 61 x 78 mm |
| Medium FOV | std | 78 x 78 mm |
| L FOV | option | 78 x 150 mm |
| XL FOV | option | 130 x 150 mm |
| Scanning time | | 10-40 s |
| Exposure time (pulsed) | | 1-9 s |

## Configuration options

| | |
|---|---|
| 3D + Panoramic (ceph upgradable) | |
| 3D + Panoramic + Ceph (left/right) | |

| | |
|---|---|
| File format | 16 bit PNG |
| PAN | 2-4 MB |
| Ceph | 3-5 MB |
| 3D | 25-300 MB |

## X-ray generator

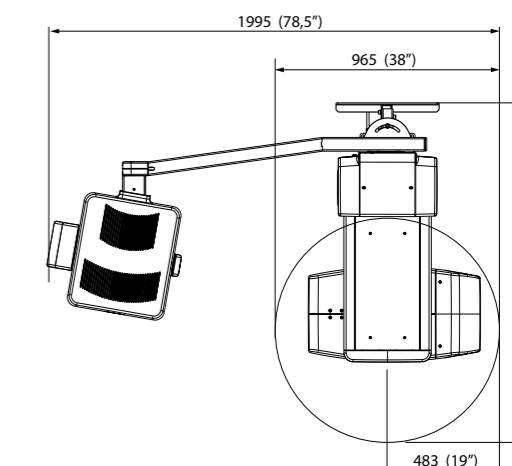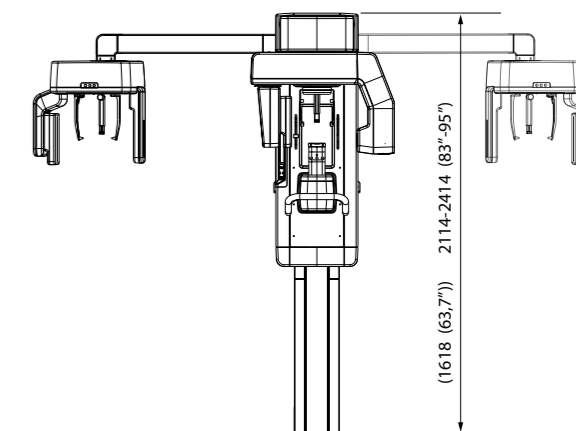| | |
|---|---|
| Generator | High frequency DC generator |
| Focal spot | 0.5mm |
| Minimum total filtration | 3.2 mm Al |
| Anode voltage | 57-90 kV |
| Anode current | 4-16 mA |

## General

| | |
|---|---|
| Weight | 200 kg (440 lbs) |
| Weight with Ceph | 250 kg (551 lbs) |
| Dimensions (HxWxD) | 2414 x 965 x 1405 mm |
| Dimensions with Ceph | 2414 x 1995 x 1405 mm |

## Power requirements

| | |
|---|---|
| Line voltage | 220-240V / 100-120V (50/60Hz) |
| Warranty | 2 years |

2114-2414 (83"-95")
(1618 (63,7"))
1995 (78,5")
965 (38")
1405 (55,4")
483 (19")

SCANORA™ SW with 3D viewing and diagnostic software offers a comprehensive set of imaging tools to assist you with your daily imaging needs. Flexible software options include standard single-user and optional network multi-user versions.

Optional DICOM services integrate CRANEX™ 3Dx seamlessly into a PACS/DICOM environment. SOREDEX™ TWAIN connects CRANEX™ 3Dx with 3rd party software supporting the TWAIN standard.

In addition to SOREDEX™ software, CRANEX™ 3Dx can be integrated with many practice management and 3rd party imaging software.

The CRANEX™ 3Dx system can be easily integrated with leading navigated surgery and drill guide systems having comprehensive DICOM/PACS compatibility.

It should be noted that CBCT images are not adequate for sthe analysis of oft tissue.

# CRANEX™
# 3Dx

Digital imaging
**made easy™**

Soredex designs, manufactures and markets easy to use and innovative imaging solutions for dental and maxillofacial professionals. SOREDEX™ portfolio covers wide range of applications from intraoral, panoramic, cephalometric extending to large field-of-view cone beam CT for demanding ENT and CMF diagnostics. Close co-operation with imaging professionals give us deep insight of how to incorporate true diagnostic value to clinical work.

Our products are known for reliability, simplified workflow and excellent image quality.
We are committed to fulfill these promises today and in the future.

**SOREDEX**