CBCT HiRes3D Series Professional

ArgeV Instrument Corp.Ltd.

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Dental X-ray Tomographic System



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LARGEV The Leading Dental CBCT Provider

LargeV Instrument Corp.Ltd.

LargeV Instrument Corp. Ltd. (LargeV for short) is a provider of medical imaging equipment and the related services. As China's pioneer in Dental Cone Beam CT, LargeV have developed and manufactured equipment and bundled software with high quality, low dose radiation, high-reliability, easy-maintenance and excellent end-user experience. The core team of LargeV comes from Tsinghua University, they have rich experiences in CT imaging, dose control and radiation protection. Combined with laws, regulations as well as requirements on medical equipment, clinical feedback and professional knowledge, LargeV self-owned intellectual properties equipment have earned high recognition from customers.



HiRes3D Series

HiRes3D Series is a high-end and international first-class level professional dental Cone Beam CT, with world-leading specifications, HiRes3D Series meets a variety of clinical requirements.

- HiRes3D: A classical one with the flexible FOV in the Implant Dentistry and ENT.

Features of HiRes3D Series

Large Field-of-view 3D Imaging

Acquires high accurate 3D image after one single scan. Fusion mode covers the entire maxillofacial region.

Super-fast Speed

High-definition 3D image reconstruction can be finished in short time the fastest in the world. High-resolution 3D image can be seen instantly after scan.

•• Super-high Resolution

The image resolution is as high as 2.6lp/mm, the best in the world. Such a high resolution makes the equipment able to display clearly microscopic structures of dental anatomies in 3D.

• Unique Metal Artifact Removal

Image quality won't be affected by implants, metal materials or other highdensity materials.

•• Powerful Data Sharing Function

No matter whether you have installed the PACS system or not, HiRes3D Series can effectively guarantee the data storage and sharing.

***** Patient positioning system

It minimizes patient movement and prevents artifacts.

HiRes3D-Plus: An amazing one with the larger FOV and the 3D Face Scan system in the Orthodontics and plastic surgery. HiRes3D-Max: An ideal one with the largest FOV to meet the full oral diagnostics needs in oral and maxillofacial surgery.



Better Quality in Shorter Time

HiRes3D Series is able to get high-accurate 3D image of anatomical structures within 13 seconds of scanning time.

HiRes3D Series has a resolution as high as 2.6lp/mm, which is able to clearly display the microscopic structures, effectively meeting the requirements of various dental applications, such as dental implant, impacted teeth positioning, oral surgery evaluation, and dental disease diagnosis, etc.











Flexible FOV

All kinds of dental clinical requirements would be solved accordingly by the flexible FOV. The large FOV of HiRes3D Series can cover the whole maxillofacial region.









16×5cm

16×15cm





8×8cm



16×10cm



5×8cm

Metal Artifact Removal





Before Correction

After Correction

3D Face Scan System (Option)

3D Face Scan System provides the realistic facial 3D data, which can combine with CBCT data, and be used for orthodontic treatment and pre- and post-operative comparison of edentulous full-mouth implants.



Data Sharing with Build-in Mini PACS

HiRes3D Series' built-in MINI PACS module can ensure effective storage, use and share of images in different sites.



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The unique metal artifact removal function of HiRes3D Series can reduce the influence of the metal or other high density materials, and significantly improve the image quality.







SmartV – Powerful Dental Application Software

Multiple Planar Reconstruction

Axial, coronal and sagittal slices can be observed simultaneously. Besides, the slice in any direction is available.





Slices in Near-end, Middle and Far-end

Side Buccolingual Slices

New Cephalometric PA & LAT

SmartV is able to reconstruct new cephalometric image, which is helpful for orthodontic treatment.



New Panoramic Image

The new panoramic image can be reconstructed from the 3D image data in 1:1 scale. Thus, it can overcome the inherent problems of the traditional panoramic images, such as overlap and distortion.

Implant Simulation

With the assistance by the 3D image of maxillofacial region generated by HiRes3D Series, the implants' position, length and diameter can be determined.















New Panoramic Image

Temporomandibular Joint (TMJ) Image

SmartV can display the left and right TMJ on one screen, providing more information for the diagnosis and treatment of TMJ disorders.



Traditional Panoramic Image

Professional Cephalometric Measurement Software



CephPro[™] is the China's very first 2D/3D professional cephalometric software that enables five functional modules which collectively provide a reliable basis for orthodontic diagnosis. (Patient Information Managements/ Adjustment/Diagnosis/Cephalometric/Report etc.)

- Assist to complete cephalometric measurement.
- Various measurement methods are easy for choosing.
- Compatible with Windows System and the 3rd party

Multiple Cephalometric Measurement Support

CephPro[™] provides Downs, Tweed, Wits, Wylie, Ricketts and common measurement methods.

Case Management

CephPro[™] supports the case management function for patients with different treatment stages, and orthodontic picture input.(lateral position, front position, face photos, etc.)

Image Management

CephPro[™] supports image brightness, contrast adjustment, and image inversion function.

User-friendly Guide

CephPro[™] provides easy-operating interface that ensures the actual size measurements.

Case Report

CephPro[™] can display the line chart, measurement results, print, save and export report as well.













CephPro[™]

The Professional Cephalometric Software



Key Features:

- Head Posture Adjustment
- Ear Point Cablibration
- Self-difined Cephalometric
- Automatic identification Soft tissue profile
- Overlapping Display effect

PROFESSIONAL WITH LARGE FOV

CBCT HIRES3D-PLUS

One-stop meets the needs of Oral and Maxillofical clinical diagnosis and treatment





Clinical Case Studies

Diagnosis and Planning Design before Implantation

Examine the thickness of alveolar bone and the distance to neural tube before implanting, the doctor can choose the most proper implant.





Examination of Temporomandibular Joint

The high-resolution 3D images produced by HiRes3D Series and the cross-section reconstruction of SmartV help to display condylar structure clearly, providing more information for the diagnosis and treatment of temporomandibular joint disorders.





Temporomandibular Joint Disorders

Evaluation after Implantation

Use the cone beam computed tomography to examine the position and orientation of implant after the implanting procedure. The effective metal artifacts removal technique can help the doctor to determine the synosteosis.









Before Metal Artifact Removal

After Metal Artifact Removal

ENT diagnosis

HiRes3D Series with multiple FOVs and high resolution, they cater to not only dental clinical demand but also ENT diagnosis.





Maxillary sinusitis, septal deviation, turbinate adhesion





Tumor or cyst in ear canal

Examination of Endodontic and Periodontal Diseases

The voxel size of reconstructed images of HiRes3D Series can reach 0.075 mm, and the resolution is as high as 2.6 lp/mm, providing rich and accurate information for the examination of endodontic and periodontal diseases. Compared with ordinary X ray image, HiRes3D Series image avoids overlapping of th teeth and the jaw. It is able to show the anatomical structure of tooth root canal, internal and external root resorption, side perforation, omission of root canal, longitudinal crack on root, periapical bone destruction, the location and degree of alveolar bone defect. HiRes3D Series is very effective for preoperative diagnosis and follow-up observation of dental diseases, especially root canal anatomy, complicated periapical periodontitis and periodontitis.



Root Fracture



Periapical Periodontitis

Positioning of Impacted and Supernumerary Tooth

Compared with traditional 2D images, the 3D image of HiRes3D Series has great advantages in the impacted and supernumerary tooth positioning. HiRes3D Series can accurately show the shape and location of teeth, its locative relationship with the adjacent teeth or adjacent important anatomical structures (such as the maxillary and mandibular canal, etc.), and the external resorption of adjacent teeth.All these help dentists make more accurate treatment plan, evaluate the operation risk and prognose.



Supernumerary Teeth

Examination of Crystis and Tumor

The panoramic view and 3D slice view of HiRes3D Series can help the doctor to detect the crystis and tumor more directly, which is important for the diagnosis and treatment planning.



Bone Tumor



Maxillary Sinus

Observation of air passages

It can be observed that the relationship between the structures of maxilla, mandible, soft palate, root of tongue, hyoid and sagittal of skull base. Compared with the traditional cephalometric radiographs, it can provide full information for diagnosis.





Air Passages



Impacted Tooth

Air Passages

Examination of root canal filling

Clearly display the root canal direction, shape and number. For multiple root canals and complex cases, a more accurate observation from any angle can be demonstrated by 3D presentation.



Root canal filling

Jaw fracture

Doctors can view from different angle on coronal, sagittal, and axial. Clearly show the fracture line and its spatial position to guide surgical treatment.



Jaw fracture

Technical Specifications

Model	HiRes3D	HiRes3D-Plus	HiRes3D-Max
Field of View (mm × mm)	160 × 150 160 × 80 80 × 80 50 × 80	200 × 170 160 × 100 160 × 50 80 × 80	230 × 180 160 × 100 160 × 50 80 × 80
Voxel Size(mm)	0.25 0.125 0.1 0.075	0.3 0.25 0.2 0.125 0.1 0.075	0.3 0.25 0.2 0.125 0.1 0.075
Spatial Resolution(lp/mm)	2.6	2.4	2.4
Reconstruction Time(s)	≤30	≤40	≤40
Tube Current(mA)	min: 2 max: 10 (60kV)		
Tube Voltage(kV)	min: 60 max: 100 (6mA)		
Scan Time(s)	13, 15, 18		
Focal Spot Size	• 0.5(IEC336)		
Sensor Type	CMOS Flat Panel Detector	α -Si Flat Panel Detector	
Sensor Size(cm)	► 13x13	16x16	26x21
Weight(kg)	> 340	340	340
Unit Dimensions(mm)	> 1825 (D) × 1077 (W) × 2109 (H)		
Packing Size(mm)	Case 1: 1930×800×1300, 403kg Case 2: 1970×1270×1170, 290kg		
Power	single-phase, AC220V/230V, ±10%, 10A, 50Hz, ±1Hz		

※ The data are subject to change without notice.



