I AM DEMANDING

X MIND trium

3D technology that facilitates implant planning with instant bone density assessment
The design of the X-MIND® Trium has taken into account all the possible factors influencing image quality and image consistency, including (but not limited to): stability, geometry, X-ray beam generation and processing, and SW and HW based filter kernels.

With our experience in medical imaging we have reached outstanding results to provide advanced clinical outcomes and indicators for the dental practice of the future.

The evolution of dental technology is such that we can now perform procedures which were unimaginable 10 years ago.

For example, in the field of implantology, the success rate for implant placements has progressed notably due to pre-implant procedures.

Although the implant is the key element in this revolution, it is essential to also have high quality bone support. X-MIND Trium® identifies this support and makes it possible to immediately measure volume and assess bone density. As dental gaps are sometimes old and associated with bone loss, a graft is often necessary to reconstruct the support which will receive the implant.

The use of PIEZOTOME® CUBE is particularly safe and atraumatic. Its fine, precise cuts offer fast healing with a dramatic drop in post-operative pain.

These ACTEON® innovations result from the research of 5 design offices which collaborate daily with international dental surgeons to offer patients faster, more natural results while minimizing post-operative sequelae.

**MORE INVENTIVE**

The X-MIND® Trium implementation of therapy from the diagnosis is:

- safer
- quick
- less traumatic and stressful
- with minimized surgical effects

**LESS INVASIVE**

By combining high quality spatial resolution with a significant reduction in X-ray doses, ACTEON® has made X-MIND® Trium the most powerful and comprehensive Cone Beam Computed Tomography system on the market.

Bone density information, obtained using X-MIND® Trium, supports the diagnosis based on other clinical data, under the expertise and supervision of the clinician.
Instantly Assess Bone Density and Volume

Easy-to-use software
A precise and detailed analysis of the existing bone volume is highly recommended in order to reduce complications associated with implant placement.

The ACTEON® Imaging Suite 3D software displays the assessment of bone density all around the implant with just one click.

Communicate with the patient
If bone volume is low, the images and information supplied by the ACTEON® Imaging Suite 3D software can help you clearly explain your therapeutic recommendation to your patient.

This explanation is particularly helpful if surgery and/or bone grafting is necessary.

A Reliable Assessment of Bone Quality Will Help You Improve Your Success Rate

Indicator colors
Bone density information is clearly represented by the colors red and green.

High density
Low density

3D mapping
This completes the color indicators.
SIMPLIFIED IMPLANT PLANNING

CARRY OUT IMPLANT PLANNING USING JUST ONE PIECE OF SOFTWARE

1. Locating and precisely tracing the mandibular canal is the first step in the implant planning procedure. It also measures the distance between the canal boundary and the implant.

2. 3D modelling can then be used to choose the size and shape of the implants in proportion to the patient's morphology, based on a substantial and scalable implant library. Better still, you start by putting the crown in place, which serves as a guide for better positioning of the implant.

3. ACTEON® Imaging Suite gives useful information to assess volume and bone density for implant placement, which can effectively be used to guide the diagnosis and surgical treatment.

4. ACTEON® Imaging Suite exports imaging data generated by X-MIND® Trium scans in STL format. This data can be imported into a surgical guide design software.

5. In less than a minute, you can produce and print a full implant report to illustrate your written report (required). This illustrated report can also help you better communicate with your patient or a referring dental surgeon.

Combined with ACTEON® Imaging Suite software, X-MIND® Trium is an essential tool for planning treatment and post-procedure follow-up. Its 3D imaging offers high precision of the anatomy from a single scan and provides a full understanding of the patient’s jaw. Results are quick and accurate, thereby streamlining your workflow.
A THREE-DIMENSIONAL IMAGE FOR A MORE ACCURATE DIAGNOSIS

The multiple slices obtained with X-MIND® Trium allow navigation from the outside to the core of the tooth, and beyond.

Indispensable for endodontics, the metallic artifact reduction filter allows differentiation of non-organic and organic tissue with high levels of precision.

5 REASONS TO USE DETAILED IMAGING

• Provide additional examination to 2D imaging in high-risk situations
• Highlight the list of potential risks prior to surgery
• Obtain very precise information about anatomical relationships
• Provide the most accurate data to make better decisions and improve surgical outcomes
• Accurately determine the working length of the tooth when resuming treatment

Through its performance, X-MIND® Trium contributes significantly to the accuracy of endodontic analyses, such as:

- The determination of the anatomy of dental roots
- The diagnosis of apical lesions and fractures
- The apex/sinus relationship
MORE CLINICAL BENEFITS THAN YOU CAN IMAGINE

HUGE VARIATION OF APPLICATIONS

In addition to applications designed exclusively for implantology or endodontology, X-MIND® Trium responds directly to the needs of specialists and general practitioners in the diagnosis of pathologies related to periodontics, orthodontics and maxillofacial surgery. Benefits include:

- Helping to diagnose temporomandibular joint disorders
- Exploring the maxillary sinuses
- Evaluating a detailed morphology of the bone tissue
- Helping to diagnose infectious diseases
- Examining maxillofacial fractures
- Determining the protocol for extracting impacted teeth
- Conducting an orthodontic assessment
- Detecting dental anomalies

X-MIND® Trium offers you a broad selection of field of view, letting you focus on the region of interest for the target diagnosis while reducing the patient’s exposure to X-rays:

<table>
<thead>
<tr>
<th>Field of View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ø 110x80 mm*</td>
<td>Full view of the dentition, mandibular canal and lower sinuses.</td>
</tr>
<tr>
<td>ø 80x80 mm</td>
<td>Optimal for defining the positioning of one or more implants or for diagnosing periodontal problems.</td>
</tr>
<tr>
<td>ø 60x60 mm</td>
<td>For diagnosis and endodontic treatment.</td>
</tr>
<tr>
<td>ø 40x40 mm</td>
<td>For diagnosis and endodontic treatment.</td>
</tr>
</tbody>
</table>

*Specific restrictions apply for a 110x80mm FOV in Ontario, Canada. Contact ACTEON North America for more information.
EXCEPTIONAL IMAGE QUALITY

A HIGHER RESOLUTION 75 µm

The quality of the diagnosis and endodontic treatments improves significantly with resolution at 75 µm on the X-MIND® Trium.

In addition to obtaining a perfect view through adapted spatial resolution, pulsed mode scanning, high sensitivity CMOS sensor, and the use of small fields of view allow for a notable reduction in X-ray radiation.

X-MIND® Trium has a scanning and reconstruction algorithm that produces a high quality 3D image. The representation of bone material in the maxillofacial skeleton is accurate and perfectly uniform, regardless of the viewing axis.

360° ROTATION FROM 18 TO 29 SECONDS DEPENDING ON THE SELECTED FIELD OF VIEW

X-MIND® Trium offers a broad selection of FOV, letting you focus on the region of interest for the target diagnosis while reducing the patient's exposure to X-rays.
**ARTIFACT REDUCTION FILTERS**

**AN OPTIMAL FILTER FOR REDUCING METAL ARTIFACTS**

X-MIND® Trium is equipped with a dynamic artifact reduction filter to eliminate streaks and dark bands caused by the presence of metal.

The image can be freely reconstructed with adjustable filter levels based on the target level of information and the need to cut out artifacts.

The goal is to best isolate the desired information during the examination.
**PANORAMIC & CEPhALOMETRIC MODES**

**PANORAMIC RADIOGRAPHY**

Whether raw or filtered to optimize detail, panoramic X-MIND® Trium images support a fast and easy diagnosis.

**DENTAL PANORAMIC**

**PANORAMIC WITH IMPROVED ORTHOGONALITY**

X-ray beam perpendicular to the jaw for better orthogonality and to reduce the overlapping of crowns.

**CHILD PANORAMIC**

**BITEWING**

A quick bitewing image in one shot.

**TMJ SECTIONS**

Both open and closed mouth images

**MAXILLARY SINUS**

Frontal views of the lower portion of the maxillary sinus and paranasal area

**CEPHALOMETRIC RADIOGRAPHY**

Due to its patented and cinematic collimation, patient positioning is easier on X-MIND® Trium. Install the cephalometric arm on the right or left, depending on the configuration of the office.

**FULL SKULL LATERAL**

**POSTERIOR ANTERIOR**

**CARPUS**
The ACTEON® Imaging Suite software includes intuitive navigation with the mouse and advanced functionality. It alone lets you manage all of your images, from scanning to viewing images from all ACTEON® imaging devices (CBCT, Panoramic, intraoral digital X-ray system, intraoral camera, etc.) and much more.

COMPREHENSIVE SOFTWARE

A QUALITY IMAGE WITH A SIMPLE, QUICK & INTUITIVE INTERFACE

ADVANCED FUNCTIONALITY FOR INTUITIVE NAVIGATION

- IMPLANT PLANNING
- CROWN PLACEMENT
- MANDIBULAR NERVE TRACING
- EASY NAVIGATION IN DIFFERENT SECTIONS
- MOUSE CONTROL
- BONE DENSITY ASSESSMENT
- VOLUME MEASUREMENT
- SURFACE, DISTANCE AND ANGLE MEASUREMENT
- SUBSTANTIALL AND SCALABLE IMPLANT LIBRARY
- PRINTED IMPLANT REPORT
- SHARING OF INFORMATION ON A NETWORK
- CASES EXPORTED ON A CD OR USB KEY
- EXPORTED IN STL FORMAT
- METAL ARTIFACT REDUCTION FILTER
- PANORAMIC AND CEPHALOMETRIC IMAGE DETAIL OPTIMIZATION FILTER
- VIRTUAL ENDOSCOPE
- INTEGRATES WITH VARIOUS PATIENT MANAGEMENT SOFTWARE
- DICOM COMPATIBLE

DICOM COMPATIBLE
EXPORTS TO STL FORMAT

• IMPLANT PLANNING
• CROWN PLACEMENT
• MANDIBULAR NERVE TRACING
• EASY NAVIGATION IN DIFFERENT SECTIONS
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• VIRTUAL ENDOSCOPE
• INTEGRATES WITH VARIOUS PATIENT MANAGEMENT SOFTWARE
• DICOM COMPATIBLE
Beyond the simple replacement of missing teeth, increased life expectancy and aesthetic concerns have led to the development of implant procedures.

Patients now have the opportunity to improve their quality of life through the latest restorative techniques and, with the help of CBCT, to obtain a faster and more accurate diagnosis with less exposure to X-rays.

Owning your own ACTEON® 3D extraoral imaging system is a great asset for quick and accurate diagnoses, saving time and improving your patient’s satisfaction.

The three-dimensional image on the screen provides your patient with the necessary up to date information. In addition, this demonstration and its illustrated explanations will be crucial in obtaining the patient’s full involvement and agreement with the proposed treatment plan. Finally, X-MIND® Trium allows you to print a full illustrated implant report in just a few seconds to provide to your patient and/or their referring dental surgeon.

The introduction of 3D medical scanners has provided significant benefits for the diagnosis of complex diseases. Cone Beam Computed Tomography (CBCT) machines have made these exams more common, providing better diagnoses within the dental office.

ACTEON® is fully involved in this technological revolution by providing effective extraoral solutions for diagnosis that are comprehensive in their use and fully meet the expectations of dental surgeons and their patients.
X-MIND® Trium has an extensive range of options. It is upgradable on site.

X-MIND® Trium will adapt to the ever increasing needs of your clinic by adding 3D imaging or digital cephalometric modalities when you decide it is necessary.

Free, ongoing and unlimited service can be reached Monday through Friday during normal business hours.

Your X-MIND® Trium comes with a 10-Year Warranty on parts for the unit and a 5-Year Warranty on sensors and workstation.

Contact your ACTEON® sales representative for more information.
## TECHNICAL SPECIFICATIONS

### X-RAY SOURCE

<table>
<thead>
<tr>
<th></th>
<th>PANORAMIC</th>
<th>CBCT</th>
<th>CEPHALOMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube type</td>
<td>High frequency DC generator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total filtration</td>
<td>2.8 mmAl / 85 kV</td>
<td>7.0 mmAl / 90 kV</td>
<td>2.8 mmAl / 85 kV</td>
</tr>
<tr>
<td>Operation mode</td>
<td>Continuous</td>
<td>Pulsed</td>
<td>Continuous</td>
</tr>
<tr>
<td>Tube voltage</td>
<td>60 - 85 kVp</td>
<td>90 kVp</td>
<td>60 - 85 kVp</td>
</tr>
<tr>
<td>Anodic current</td>
<td>4 - 10 mA</td>
<td>4 - 12 mA</td>
<td>4 - 10 mA</td>
</tr>
<tr>
<td>Focal point</td>
<td>0.5 mm</td>
<td>0.5 mm</td>
<td>0.5 mm</td>
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### DETECTOR

<table>
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<tr>
<th></th>
<th>PANORAMIC</th>
<th>CBCT</th>
<th>CEPHALOMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>CMOS</td>
<td>Flat Panel CMOS</td>
<td>CMOS</td>
</tr>
<tr>
<td>FOV and format</td>
<td>260 x 148 mm</td>
<td>Ø 40 x 40 mm, Ø 60 x 60 mm, Ø 80 x 80 mm, Ø 110 x 80 mm</td>
<td>240 x 180 mm</td>
</tr>
<tr>
<td>Pixel size/Voxel size</td>
<td>Pixel: 100 µm</td>
<td>Voxel: 75 µm</td>
<td>Pixel: 100 µm</td>
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</table>

### ACQUISITION

<table>
<thead>
<tr>
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<th>PANORAMIC</th>
<th>CBCT</th>
<th>CEPHALOMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technique</td>
<td>180° single scan</td>
<td>360° single scan</td>
<td>Single scan</td>
</tr>
<tr>
<td>Exposure time</td>
<td>3.3 - 16.8 sec</td>
<td>4 - 12 sec</td>
<td>18 sec</td>
</tr>
<tr>
<td>Scanning time</td>
<td>16.8 - 25 sec</td>
<td>12 - 30 sec</td>
<td>23 sec</td>
</tr>
<tr>
<td>Programs</td>
<td>Standard, child, improved orthogonality panoramic, bitewings, maxillary sinus, TMJ</td>
<td>Semi-arch, arch, full arch, sinus, ear</td>
<td>Frontal PA, Frontal AP, option: Carpus</td>
</tr>
<tr>
<td>Reconstruction time</td>
<td>3 sec</td>
<td>29 sec</td>
<td>4 sec</td>
</tr>
</tbody>
</table>

### IMAGE FORMAT

<table>
<thead>
<tr>
<th></th>
<th>PANORAMIC</th>
<th>CBCT</th>
<th>CEPHALOMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JPEG, BMP, PNG, TIFF, DCM</td>
<td>DCM, STL</td>
<td>JPEG, BMP, PNG, TIFF, DCM</td>
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</tbody>
</table>

### MECHANICAL DATA

<table>
<thead>
<tr>
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<th>PANORAMIC</th>
<th>CBCT</th>
<th>CEPHALOMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max footprint dimensions</td>
<td>L 150 x W 110 cm</td>
<td>L 150 x W 172 cm</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>Max : 235 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>170 kg (PAN)</td>
<td>185 kg (PAN-CBCT)</td>
<td>215 kg (PAN-CEPH)</td>
</tr>
</tbody>
</table>

### IEC

Class and Type: Class I, Type B

### IMAC® OR MACBOOK® PRO

<table>
<thead>
<tr>
<th></th>
<th>PANORAMIC</th>
<th>CBCT</th>
<th>CEPHALOMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel i5</td>
<td>Intel Xeon 2 GHz</td>
<td></td>
</tr>
<tr>
<td>Hard Disk</td>
<td>500 Go</td>
<td>1 TB</td>
<td></td>
</tr>
<tr>
<td>Graphic Processor</td>
<td>NVIDIA or ATI 1 Go</td>
<td>NVIDIA® (CUDA environment GPU family)</td>
<td></td>
</tr>
<tr>
<td>RAM Memory</td>
<td>8 GB</td>
<td>8 GB</td>
<td></td>
</tr>
<tr>
<td>Network card</td>
<td>1 Gb/s</td>
<td>Dedicated GB NIC for X-MIND Trium connection</td>
<td></td>
</tr>
<tr>
<td>Operating System</td>
<td>OS X Mavericks or later</td>
<td>Windows 7 professionnel 64 bits</td>
<td></td>
</tr>
</tbody>
</table>

### TABLET

<table>
<thead>
<tr>
<th></th>
<th>PANORAMIC</th>
<th>CBCT</th>
<th>CEPHALOMETRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>iPad Pro 9.7&quot;, 32 Go, WIFI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### DICOM 3.0 (OPTIONAL)

Supported services: Worklist, Storage, Query/Retrieve, Print, Verify