DRTECH

DRTECH
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DRTECH

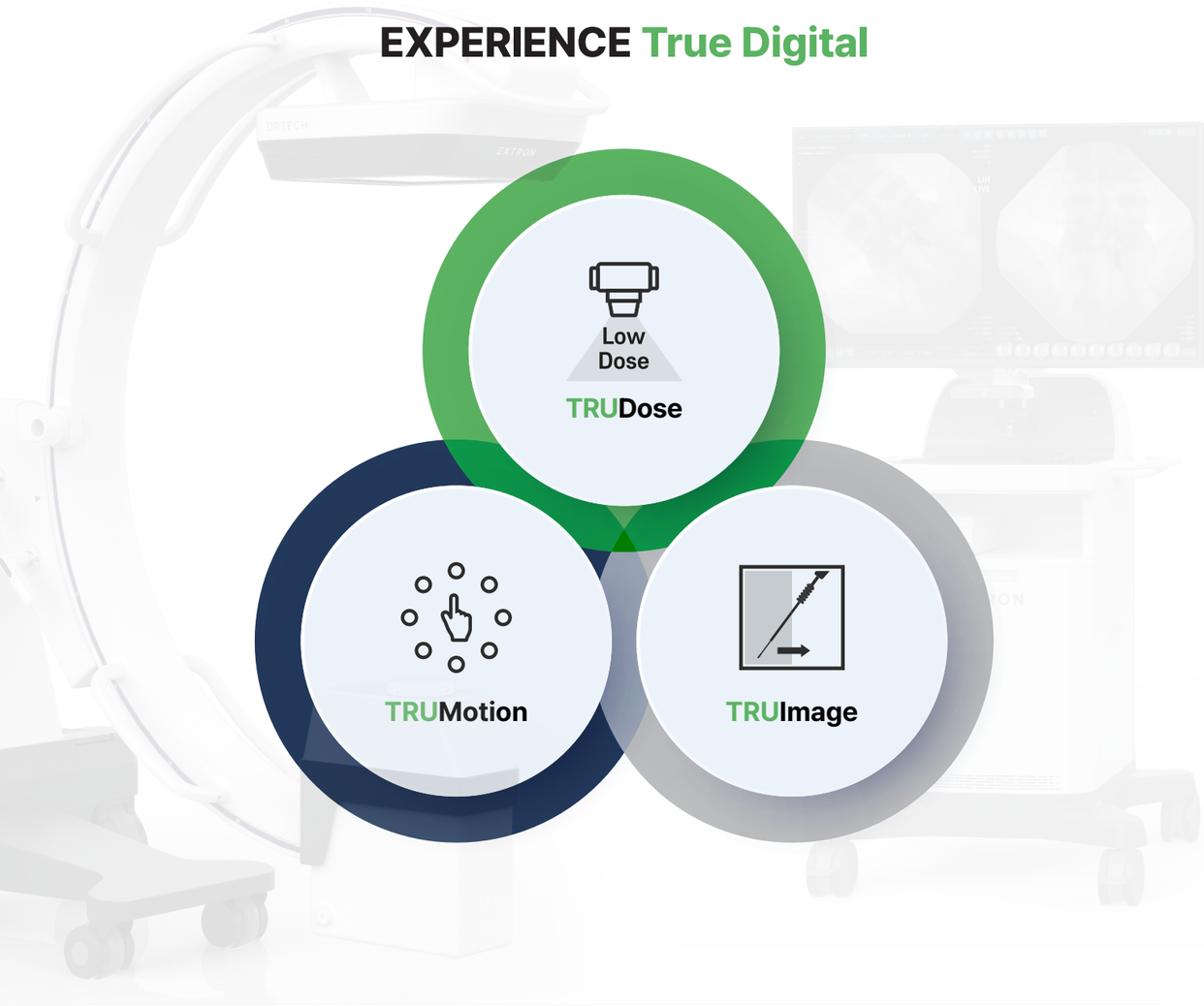
EXTRON

Experience True Digital for
Low Dose Imaging

www.drtech.com

EXTRON

EXPERIENCE True Digital



Powered by TRUDigital Architecture

Premium imaging platform TRUDigital Architecture provides flawless low dose imaging to meet the high imaging standards of any challenging surgical procedures. TRUDigital powered by DRTECH's premium grade EXPEED surgical detector and state-of-the-art image processing technology provides faster and more accurate data processing resulting in superior image resolution and low-noise dynamic imaging performance.

TRUImage : High Resolution, Low Noise Imaging

Advanced Real-time image processing technology
with distortion-free FPD technology, highest image quality is guaranteed.

- **FPD Large FOV**
- **RNR** Real-time Noise Reduction
- **Needle Enhancement**
- **Metal Detection**

TRUDose : Ultimate Low Dose Imaging

Low-dose, high-performance surgical imaging system with proven detector & dose reduction technology minimizing dose exposure for physicians, operators and patients.

- **Dynamic Pulse Mode**
- **Beam Filter Technology**
- **ABC & ABM**
- **RNR** Real-time Noise Reduction

TRUMotion : Flawless Dynamic Imaging

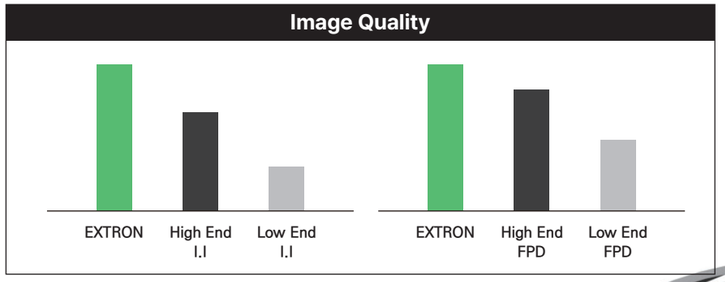
User-friendly and usability-focused design for increased efficiency & convenience that help reduce surgery time and maximize surgical accuracy in any surgical environment.

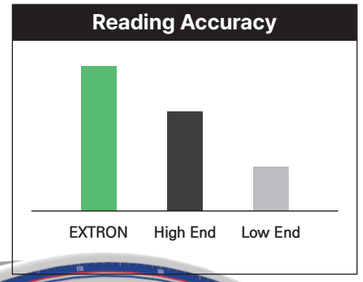
- **Smart Memory Position**
- **Touch OP Console**
- **Wide C-arc**
- **Auto Drag Collimation**

TRUImage

: High Resolution, Low Noise & Afterimage Free

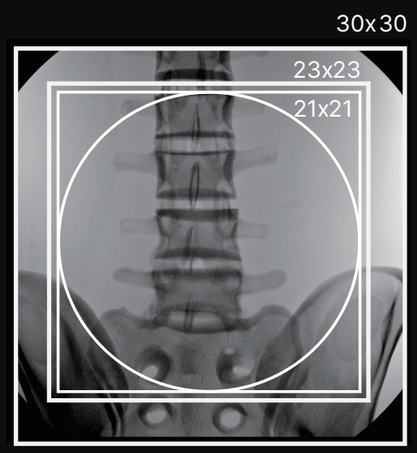
EXTRON, with its flat panel detector technology and proprietary image processing technology, delivers superb image quality that enhances accuracy and surgical confidence, even in the most demanding surgical environments. Experience advanced solutions for high-quality images.





Experience 130% More, Distortion Free Images

* 2323 vs 9" I.I



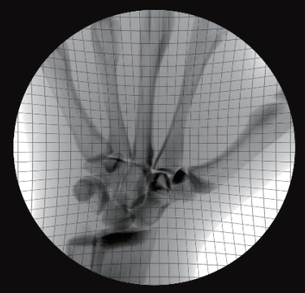
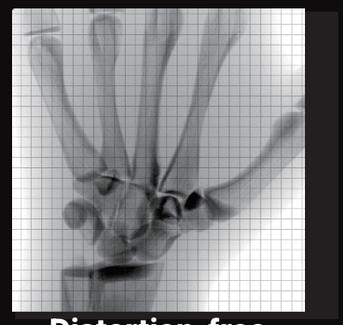
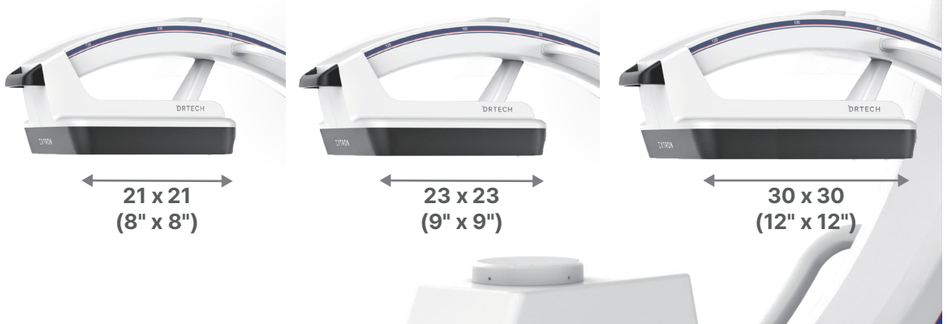


Image Distortion with I.I



Distortion-free FPD Image

High-Performance **EXPEED** FPDs with three size options

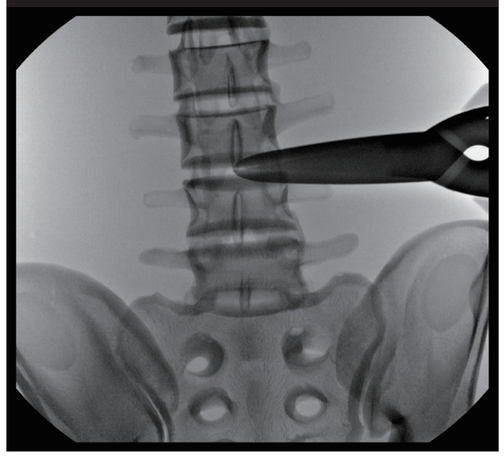


Increase Surgical Accuracy with High-contrast, High-Resolution, Low Noise Images

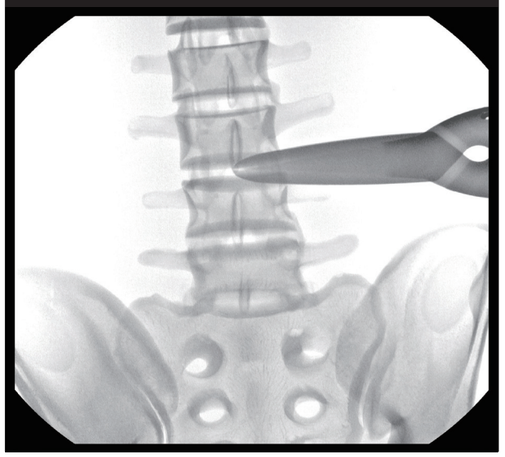
Metal Detection

Metal Detection technology maintains the image brightness even when a surgical tool (metal) enters the imaging area during surgery, preventing excessive radiation exposure or degradation of image quality. This ensures a constant and excellent image quality throughout the surgery.

Metal Detection On



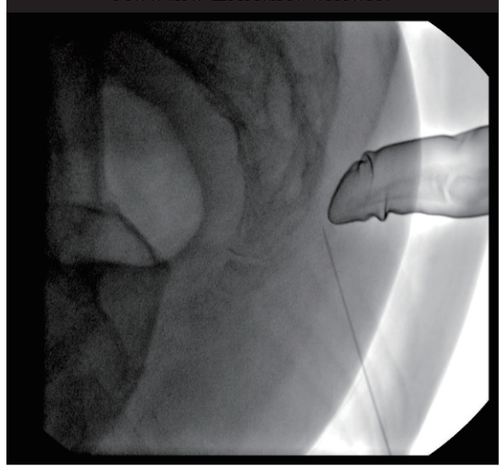
Metal Detection Off



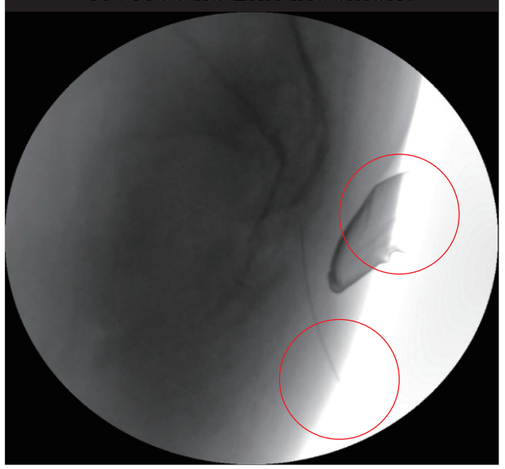
Needle Enhancement

Needle Enhancement technology prevents the disappearance of the needle even under high-dose conditions, ensuring safe and accurate surgical procedures

Needle Enhancement



No Needle Enhancement



TRUDose : Ultimate Low Dose Imaging

Consistent Image Quality at Significantly Reduced Dose

RNR (Real-time Noise Reduction)

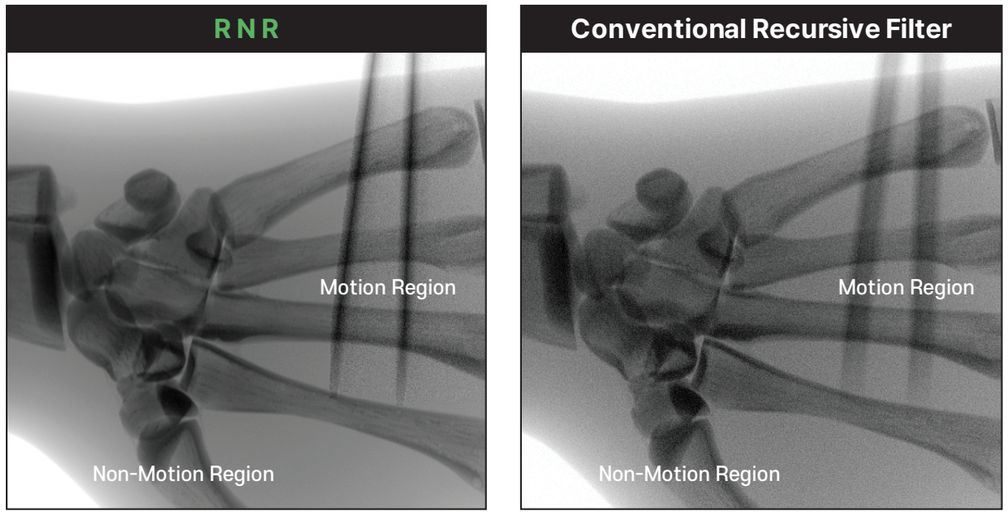
RNR (Real-time Noise Reduction) is DRTECH's cutting-edge technology that utilizes recursive filtration based on motion detection. Unlike conventional systems that apply recursive filters to the entire image, resulting in image lag and noise, RNR detects object movement and applies different recursive depths to motion and non-motion areas. This real-time and real-place noise reduction technique results in outstanding image quality with reduced lag and noise in dynamic surgical images.

Fast & Accurate Noise Reduction: Real-time, Real Place

Fast Noise Stabilization within 0.2 Sec.

No Image Lag On Moving Surgical Tools

Optimized Motion Detection for Low Dose Mode



Precision Control for Perfect Image Customization

Extremities Orthopedics — Lv1 — High Noise, Low Ghost

Spine Surgery Neuro Surgery — Lv5 — Low Noise, High Ghost

Multiple Dose Modes for Easy and Safe Dose Management

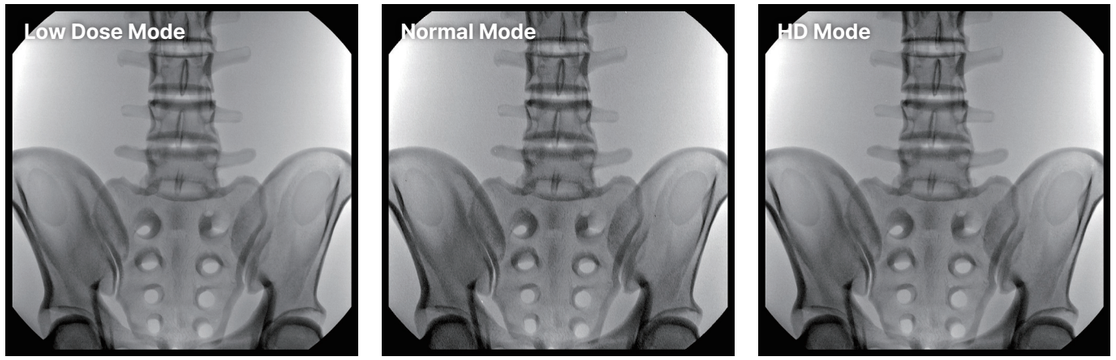
EXTRON Provides Diverse Dose Mode Options for Optimal Low-dose Imaging

Dynamic Pulse Low Dose Mode

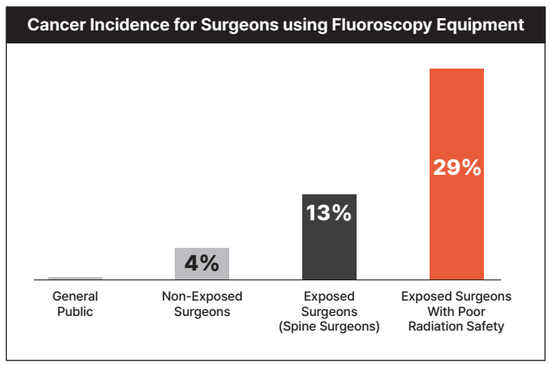
EXTRON detects object motion in real-time and applies the most optimized pulse rate for best image quality and dose. If motion is sensed, EXTRON automatically increases the pulse rate for high image quality and decreases the pulse rate when there is no motion to minimize the dose exposure.

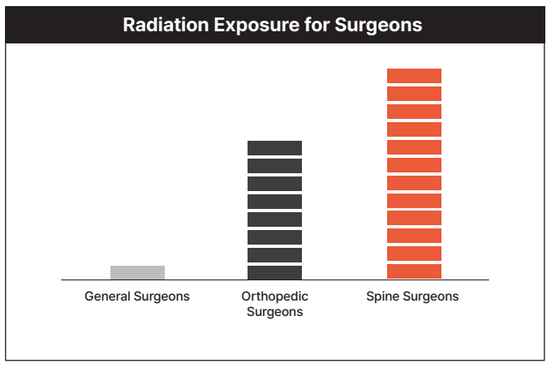
X-ray Mode	Option	Dose
Continuous	High Dose Mode	120%
	Normal Mode	100%
	Low Dose Mode	70%
	Min Dose Mode	40%
Dynamic Pulse Low Dose	Motion: 20pps	
	No Motion: 10pps	
Pulse Low Dose	Quarter Mode	40%
	Half Mode	20%
	Standard Mode	10%

Maintained image quality even at low dose with Real-time Noise reduction (RNR)



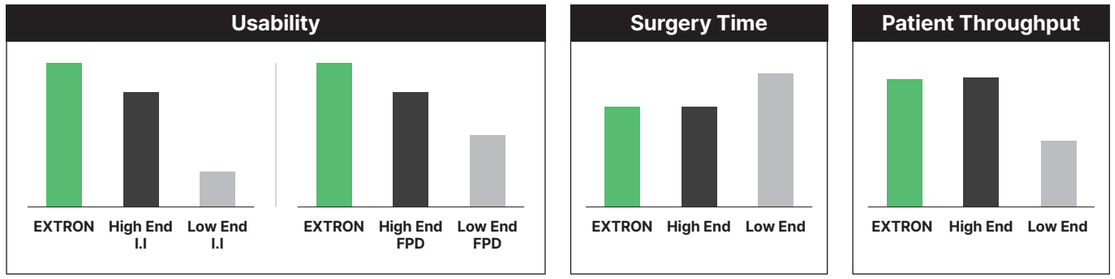
Importance of Dose Awareness!





TRUMotion : Flawless Dynamic Imaging & Performance

With automated functions, minimal manipulation is required during surgery
(Surgery Duration ↓ Risk of Infection ↓)



15.6′ Touch Screen OP Console

Real-time image monitoring and system control for smooth operation process.

Auto Drag Collimation

Easily designate any region of the image for collimation by simply touching and dragging the desired location on the OP display.

Wide Free Space & Depth

Wider Free space, Depth and Orbital Rotation for easy patient access.

Smart Memory Position

Stores position values for 4 axis simultaneously along with dose and image processing information for fast work flow and dose reduction.

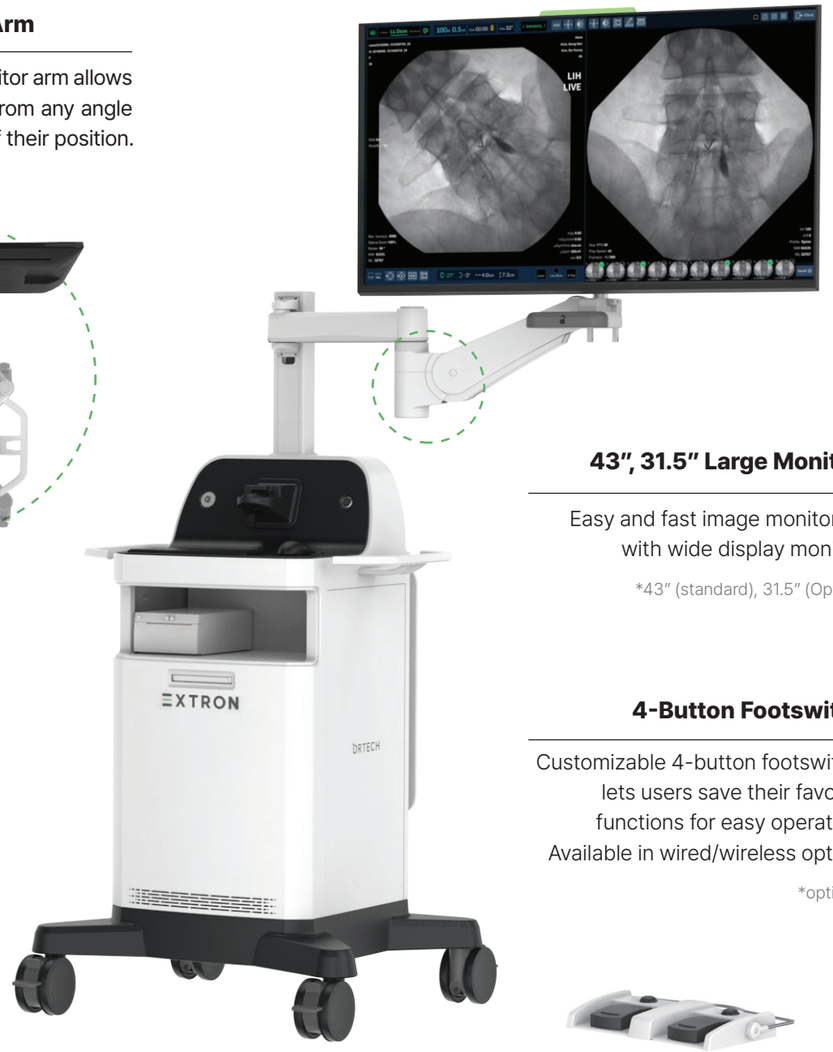
*EXTRON 5 (Option) / EXTRON 7 (Standard)

	Smart Memory Position	Company A	Company B
Position Information	Digitally Recorded	Digitally recorded	Recorded Manually ‘stickers’
Parameter Values	Store X-ray conditions and image parameters for each position	–	–
Automatic Parameter Switching	Parameter is automatically switched when the parameter value matches the stored position value	–	–

Dual Hinge Monitor Arm

360º freely movable monitor arm allows doctors to view images from any angle they desire, regardless of their position.

*optional



43″, 31.5″ Large Monitor

Easy and fast image monitoring with wide display monitor.

*43″ (standard), 31.5″ (Option)

4-Button Footswitch

Customizable 4-button footswitch, lets users save their favorite functions for easy operation. Available in wired/wireless option.

*optional

Angiography

Faster and Clearer, EXTRON Digital Subtraction Angiography(DSA)

Maximizing procedure and diagnostic efficiency with EXTRON's Digital Subtraction Angiography (DSA).

- Digital Subtraction Angiography
- Road Map
- Max Peak Opacification
- Remask
- Bone Landmark
- Pixel Shift
- DSA to Fluoro scopy

EXTRON Angiography Benefits:

Minimized Procedure Time and Radiation Exposure with Short Masking Time

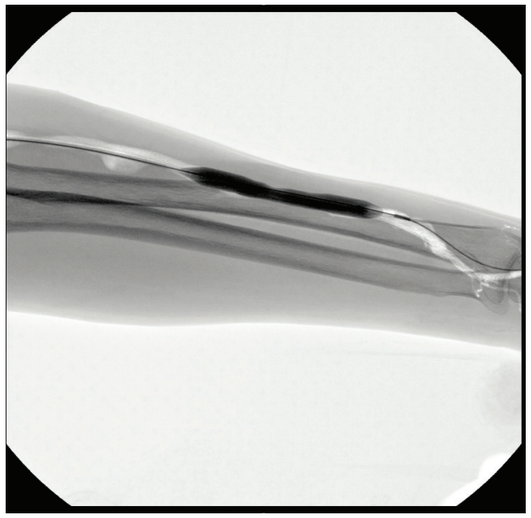
Reduce radiation exposure and further shorten procedure time with a masking time of just 1.3 seconds.

Superior Noise Reduction for Sharper Imaging

With RNR technology, EXTRON reduces noise in static areas, delivering cleaner and more precise images.

Flexible DSA Application Across Various X-ray Modes

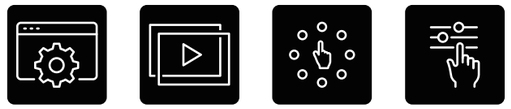
Supports Conti 15 Frames to clearly observe the smooth flow of contrast agents.



UI Software for Maximized Surgical Workflow

Xconsole

UI Software for EXTRON



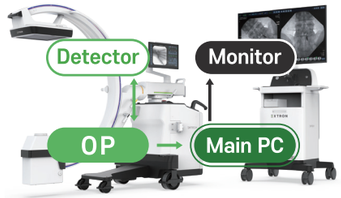
Easy Editing Tool | Unlimited Recording | Intuitive Information | Customizable Setting

Safe EXTRON

EXTRON's Reliable Safety System helping medical staff to focus on their patients

Emergency Fluoroscopy

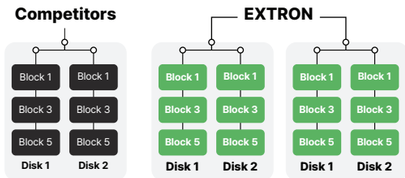
In the event of a main PC failure, the OP console PC takes over the work of the main PC and vice versa. As a result, the surgical procedure can be performed in any environment safely and without any interruptions



Mirroring System

[RAID 1st: EXTRON 7 Standard / EXTRON 5 Option]

EXTRON uses mirrored 4-hard disks in the PC. Even if a hard disk fails suddenly, the surgery can be performed in a stable manner with the help of another mirror hard disk.



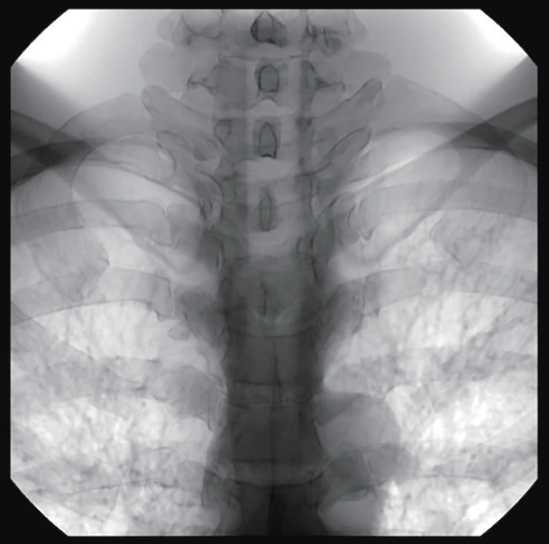
Fast & Easy Recovery

Factory reset can be performed easily and quickly within 7-8 minutes.

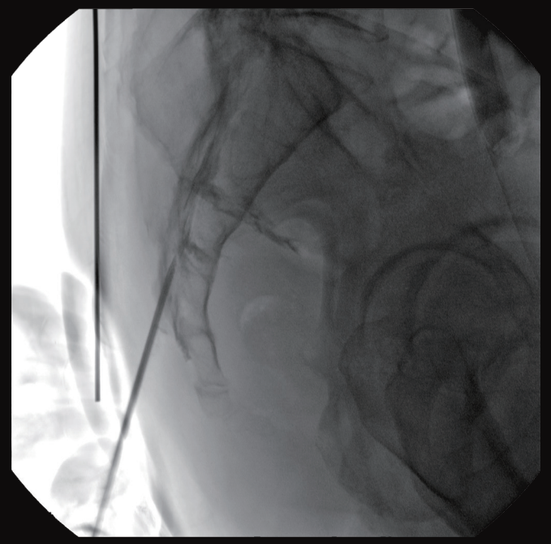
Air-Kerma & DAP [Air-Kerma Standard / DAP Option]

Air-Kerma is installed in EXTRON as a default function.
DAP is provided as an option.

Clinical Images



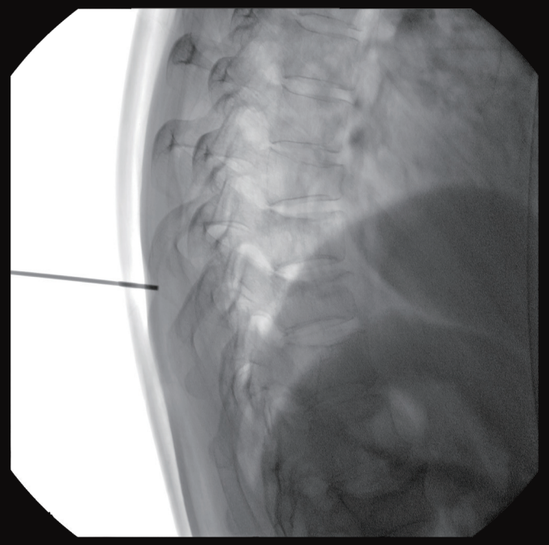
T-Spine AP



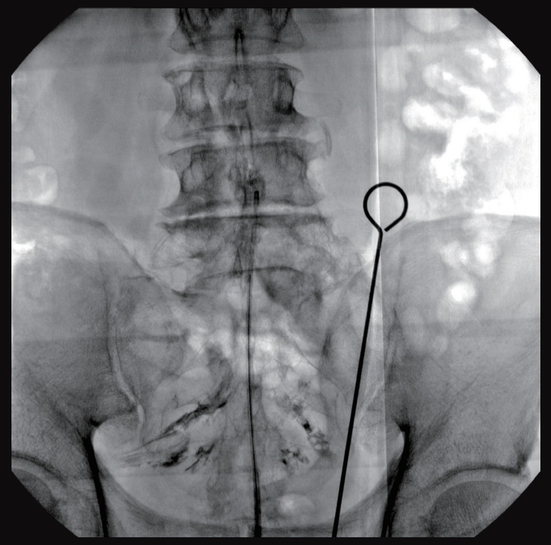
Coccyx LAT

Ankle AP

Ankle LAT



T-Spine LAT



L-Spine AP

Knee

Shoulder