

# Saturn 8000 F Series

Simple, but Robust. Every FINEST Quality for Your Need.

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Saturn 8000 F series is the finest DR detectors with best-in-class features you have never experienced before. Its cutting-edge imaging technology and sophisticated design offer you superior diagnostic images and streamline your daily workflow. Cassette-sized DR detectors are presented in 3 sizes – 25x30cm, 36x43cm, and 43x43cm.

As competition in the DR imaging market is getting furious, the market is overflowing with similar detectors in terms of specifications and prices. But is that the best possible choice for you? To meet your high expectations, NMI's refreshes the DR detector lineup to provide the finest solution that fits you perfectly.

Saturn 8000 F series is the new premium line for NMI's Saturn 8000 series, which already gained a renowned reputation in general radiology industry. On top of NMI's market-proven technology, newly launched Saturn 8000 F series offers an industry leading solution to those seeking to improve their high-quality patient care in the rapidly changing medical environment.

**Simple, but Robust. Every FINEST Quality for Your Need.**



# FINEST Image Quality

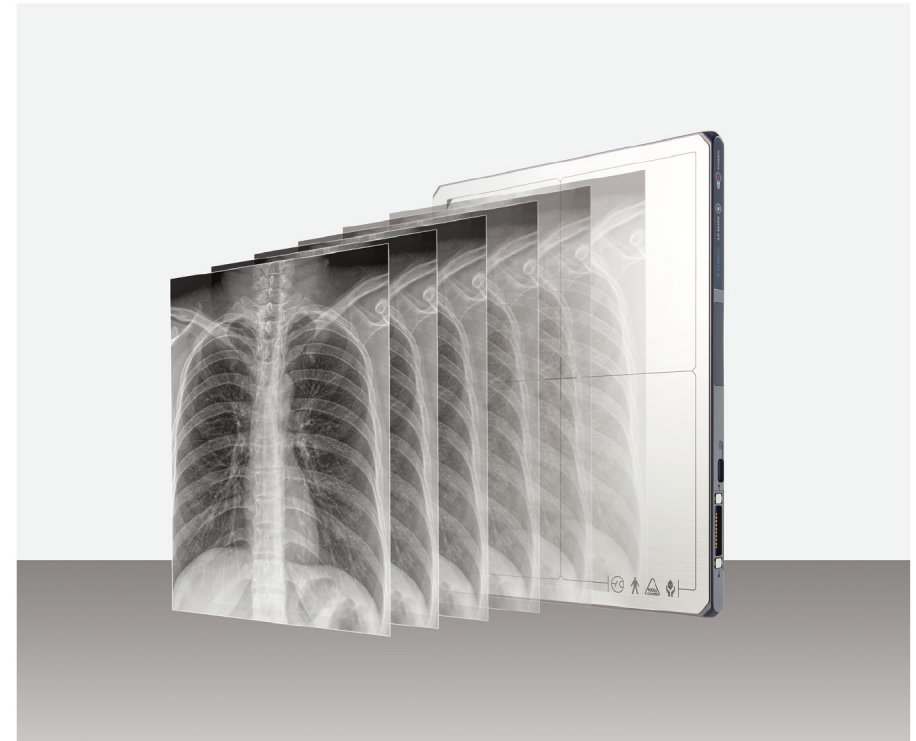
Experience the FINEST image quality with **Saturn 8000 F** series for your confident diagnostic decisions. The series displays smaller pixel pitch at 99 $\mu$ m, offers semi-dynamic function, and provides the most advanced in-class software solution for imaging processing technology.

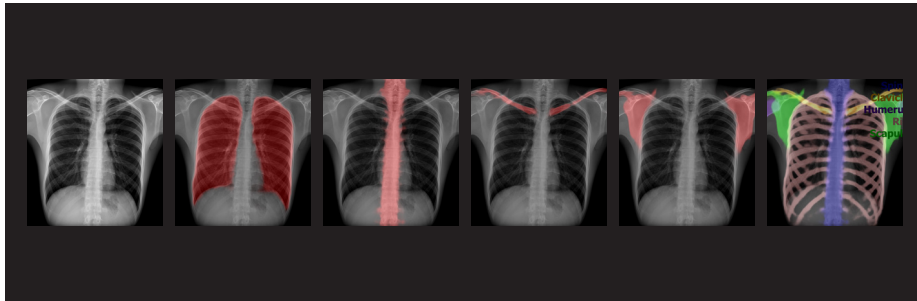
## High Resolution Images with 99 $\mu$ m Pixel Pitch

You can now detect even the smallest bone structures using NMI's Saturn 8000 F series that features the smallest pixel pitch in the market at 99 $\mu$ m. Spatial resolution also guarantees minimum of 5 lp/mm which enables users to see the most detailed clinical images. The series also provides the highest DQE for high-quality diagnostic images; Saturn 8000 3643FW supports DQE 75% at 0 lp/mm.

## Semi-dynamic Feature (multi-frame mode)

Saturn 8000 F series' semi-dynamic feature is a powerful solution for situations in which capturing multiple images simultaneously is needed such as for tomosynthesis. In multi-frame mode, users can look into multiple layers of a body part and create 3-D like images by combining multiple shots in one picture. The feature can be used for any other situations for continuous shooting of x-ray clinical images. With Saturn 8000 3643FW model, users can take 6fps at 10 seconds in full image. Saturn 8000 4343FW model supports 6fps at 8 seconds in full image.

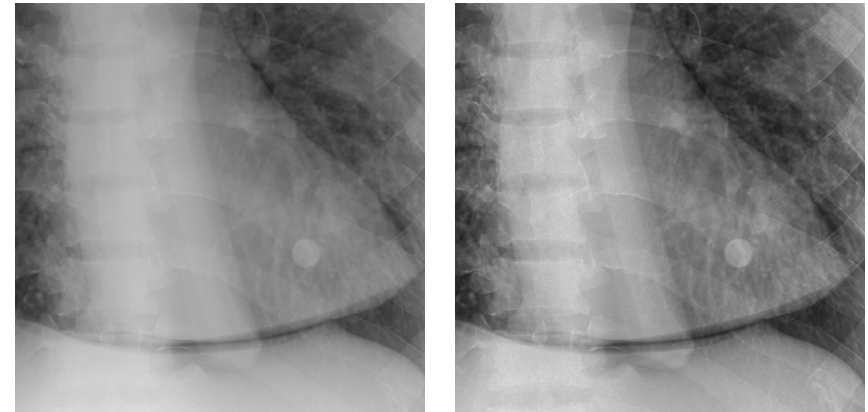




[Photon-understanding AI solution]

## Anatomy-based Image Enhancement with Photon-understanding AI Solution

NMI's newly adopted AI solution known as semantic segmentation classifies photon on each pixel from a clinical image into a certain label, or class. This can be a useful tool for tone mapping, an image enhancement technique. The performance of tone mapping algorithm depends on the software's ability to classify the labeling of your interest. As our AI solution classifies the body part of your interest, this information can be used to improve the visibility of the x-ray image.



[Non-Grid]

[SBSC]

## Advanced Image Processing Technology

NMI's post image processing algorithm provides supreme image quality. This image processing technology is specialized for Saturn 8000 detectors and is applied to the DxWorks software. Various preset parameters are optimized for each target examination, thereby shows fine details according to each examination.

NMI's SBSC (Software-Based Scatter Correction) is a software-based algorithm that eliminates the scattering effect of x-rays to produce clearer images. This amazing feature is optimized for environments where hardware grids are difficult to use. SBSC can also provide high contrast images at low-dose condition. It can be purchased as an option.

# FINEST Durability

Feel the FINEST durability of **Saturn 8000 F** series that secures longer product lifetime. The elegance of the new design combined with the robustness of the series creates a sophisticated, powerful, and practical detector for even the harshest hospital environment.



## Unbreakable Glass-free TFT

Saturn 8000 F series has significantly increased durability of a detector with glass-free TFT. By removing the most fragile layer inside, the series gained more flexibility on the physical panel. This reduces the possibility of breaks in unexpected situations like dropping, loading heavy weight, or imposing pressure on the detector.

## IP67 – Water and Dust Resistance

Achieving IP67 in water and dust resistance test has freed users from having to worry about poor operation caused by water or dust. IP67 indicates that the series can operate stably in the water for up to 30 minutes at depths of less than 1 meter.

## Enhanced Robustness

Users are now free from having to worry about accidental detector drops or putting too much weight on detectors. Saturn 8000 F series passed 150cm drop test, the highest drop height among all available detectors in the market. The series also endures up to 400 kg under uniform load.

## Wider Operating Temperature

Saturn 8000 F series works reliably even when taking images outside typical room temperature. The series can maintain the same image quality in hotter and colder environments. Saturn 8000 F series operates from 0°C to 40°C, making it also suitable for outdoor and emergency usages.



# FINEST Usability

Experience the FINEST usability of **Saturn 8000 F series** that streamlines your workflow even in the busiest hospital environment. Greater portability is achieved with much lighter weight compared to previous detector models. Batteries run for longer time and are easily exchangeable. Variety of intuitive and user-friendly functions offer premium user-experience.

## Lighter Weight for Greater Portability

Saturn 8000 F series is a perfect solution for users who have ever thought that a detector is too heavy to hold with one hand. Our glass-free TFT maximizes portability by reducing the weight significantly, achieving the lightest weight among Saturn 8000 series detectors. The ergonomic design improves grips, making it easier to pick up and prevent accidental drops.



## Convenient Charging: Variety of Charging Methods

Portable detectors should be simply charged under any circumstances. Saturn 8000 F series adds a new charging method of wireless charging to improve convenience. A cradle is also offered for safe-storing and easy-charging of detectors. Standard charging methods are still offered with USB-C interfaces and magnetic tether connectors.





## Improved Battery Usage

Medical professionals are busy all day and need a detector that can cover long working hours. Saturn 8000 F series comes with two batteries, bringing up the operating hour to 16 hours. Hot-swap mode enhances user experience as detectors can still be used while exchanging batteries.



## Easy Usage with User-friendly Functions

### OLED Status Screen

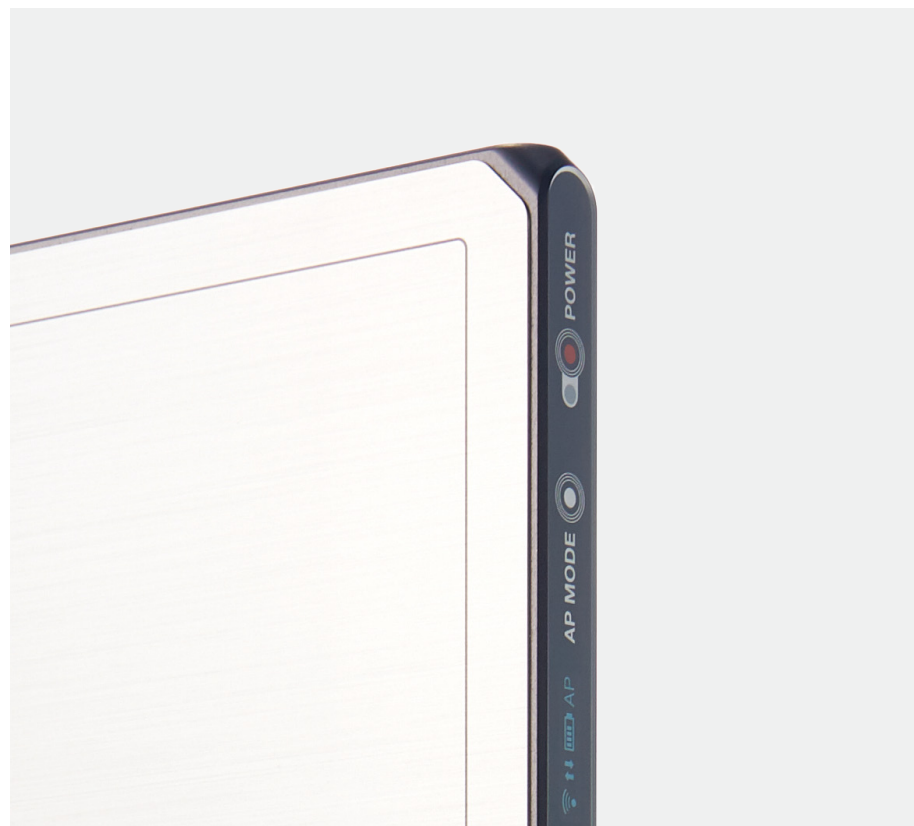
The exterior OLED display provides information about battery charge level, wired/wireless connection mode, and direction of the image. Users can understand the detector status quickly and prepare for the diagnostic procedure accordingly.

### AP Button

AP Button for setting change is placed on a side of a detector. With this button, you can easily control detector's AP ON/OFF status, AP switching when detector is in station, and change the OLED display mode.

### Detector Sharing

Detector sharing is a preset switching function which can be easily done with NFC or AP button. With a simple scan of NFC card or pressing the AP button, your detectors turn into shareable detectors that can be used from a number of imaging systems.



	Saturn 8000 2530FW	Saturn 8000 3643FW	Saturn 8000 4343FW
Model Name	FXRD-2530FAW	FXRD-3643FAW	FXRD-4343FAW
Technology	a-Si Flexible TFT	a-Si Flexible TFT	a-Si Flexible TFT
Scintillator	Flexible CsI	Flexible CsI	Flexible CsI
Pixel Pitch	99µm	99µm	99µm
Spatial Resolution	5.0 lp/mm	5.0 lp/mm	5.0 lp/mm
Pixel Matrix	2524 x 3036 pixels	3548 x 4316 pixels	4316 x 4316 pixels
Image Size	25 cm × 30 cm	36 cm × 43 cm	43 cm × 43 cm
Grayscale	16 bit	16 bit	16 bit
Image Acquisition Time	3 s	4 s	4 s
Recommended Cycle Time	5 s	7 s	7 s
Multi-frame Mode	-	6 fps (full image, 10 s)	6 fps (full image, 8 s)
Data Interface	Gigabit Ethernet (wired) IEEE802.11n/ac (wireless)	Gigabit Ethernet (wired) IEEE802.11n/ac (wireless)	Gigabit Ethernet (wired) IEEE802.11n/ac (wireless)
X-ray Generator Interface	DR Trigger Mode AED Mode Software Trigger	DR Trigger Mode AED Mode Software Trigger	DR Trigger Mode AED Mode Software Trigger
Dimensions	28.3 cm × 33.3 cm × 1.5 cm	38.4 cm × 46.0 cm × 1.5 cm	46.0 cm × 46.0 cm × 1.5 cm
Weight	1.7 kg (1 battery)	2.4 kg (1 battery)	2.95 kg (1 battery)
		2.6 kg (2 batteries)	3.15 kg (2 batteries)
Battery	Lithium Ion 3,400mAh x 1 8 h (standby) * 1,500 images at a 15-second cycle	Lithium Ion 3,400mAh x 2 16 h (standby) * 3,000 images at a 15-second cycle	Lithium Ion 3,400mAh x 2 16 h (standby) * 3,000 images at a 15-second cycle
Dust and Water Resistant	IP67	IP67	IP67
X-ray Voltage Range	40 - 150kVp	40 - 150kVp	40 - 150kVp
Operating Environment	0°C to 40°C 5 % to 90 % RH (Non-condensing)	0°C to 40°C 5 % to 90 % RH (Non-condensing)	0°C to 40°C 5 % to 90 % RH (Non-condensing)
Power Consumption	Normal: Max. 24W Charging: Max. 50W	Normal: Max. 24W Charging: Max. 80W	Normal: Max. 24W Charging: Max. 80W

\* Specifications are subject to change without prior notice.

