



KONICA MINOLTA



WIRELESS DIGITAL RADIOGRAPHY SYSTEM

AeroDR



KONICA MINOLTA

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The essentials of imaging

*This is the cassette DR
you've dreamed of...*



WIRELESS DIGITAL RADIOGRAPHY SYSTEM
AeroDR

**To achieve the high quality of DR and good operability
of CR, Konica Minolta's answer is AeroDR.**

**High Image Quality
& Lower Doses**

**Easy Workflow
& Reliability**

**Light-weight
& Durable**

W I R E L E S S C A S S E T T E

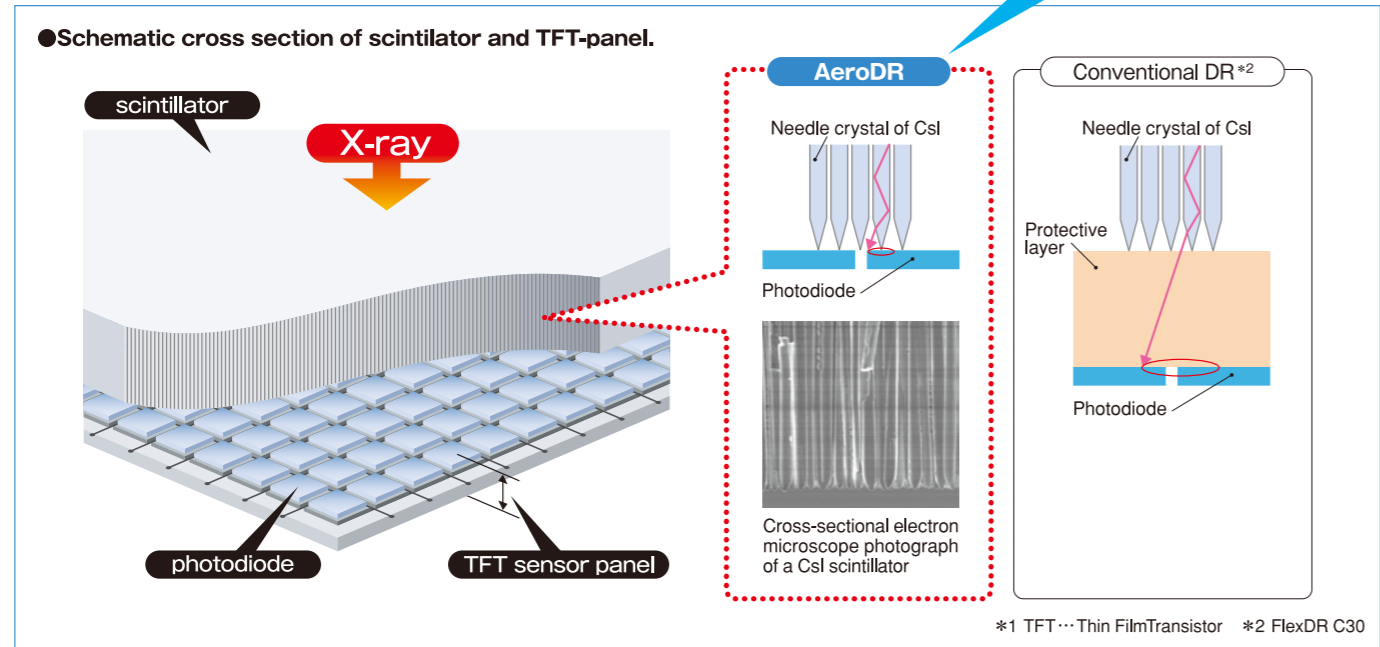


High Image Quality & Lower Doses

Scintillator Direct-Contact Technology

We succeeded in creating a new technology whereby a CsI scintillator is made to contact directly over a TFT*1 sensor panel without any protective layer in between them. This technology has made it possible to guide the light emitted from the scintillator to the photodiode without causing the light to be dispersed at the interface with the TFT sensor.

Original CsI!



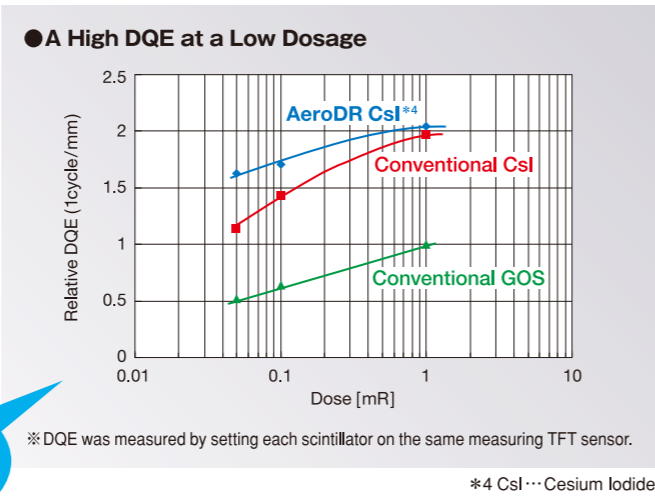
High Image Quality and Lower Doses

The optimal combination of the AeroDR detector using a Konica Minolta CsI scintillator combined with the newly developed low noise readout ICs delivers a high DQE*3 even at a low dose. It is considered therefore that the AeroDR is effective to reduce the amount of radiation exposure.

At the same time, we achieved the wider dynamic range of DR comparable to CR. This means that in radiography of shoulder joints, for example, the AeroDR permits describing the skin line accurately even when the radiographic conditions change along the way.

*3 DQE... Detective Quantum Efficiency

High DQE!



* DQE was measured by setting each scintillator on the same measuring TFT sensor.

Easy Workflow & Reliability

Universal Solution for the Existing X-ray Room

The AeroDR detector is the same as an ISO 4090 compliant film cassette in size so that it will fit any existing wall-stand or table bucky tray.



Shared FPD Solution

AeroDR can be used anywhere with "the Shared FPD Solution". As soon as AeroDR is registered to any X-ray room, AeroDR will be ready to use in the X-ray room immediately.



Integrated Control Station CS-7

CS-7 can control not only the AeroDR detectors but also X-ray generators and Konica Minolta existing CR family. No need to operate the X-ray console to adjust X-ray exposure conditions.*5



*5 Please contact your Konica Minolta sales representative for more details regarding connections between a X-ray generator and CS-7.

Quick Preview and Smart GUI

After exposure, a preview image immediately appears on the display of the new CS-7 console in less than two seconds. The CS-7 has a user-friendly graphic interface adding new and powerful proprietary functions. GUI design can be modified to customer preferences flexibly, succeeding the conventional console design.

Screen Sequence



Power-saving Technology

Patient safety is of primary importance, therefore the lithium ion capacitor, the world newest technology, was adopted as a battery technology which has many advantages despite of demanding a lower power consuming panel design, which has been overcome by employing low power ICs and a power-saving control.



New Battery Technology Achieves Light-weight yet Rigid Body

The lithium ion capacitor has a charge and discharge cycle life that is tremendously longer than that of the lithium ion battery and does not markedly decrease in capacity even after it has continuously been used for many years. Therefore, it is possible to be built in to AeroDR and also friendly to the environment. In this case, the structure of the cassette case has become so simple that it is possible to significantly reduce the weight of the cassette and increase the mechanical strength of the cassette.



Reliable, Rapidly Rechargeable and Long-Life Battery

The lithium ion capacitor, which charges quickly in a battery charger or through a tethered connection, has a long charge and discharge cycle life that does not need to be replaced during the expected life cycle of the detector. If the capacitor gets exhausted in emergency, AeroDR gets over 10 images by the capacitor being recharged for only three minutes.

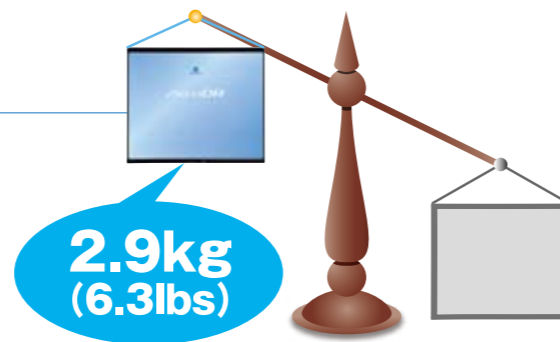
Characteristics

Battery Life Cycle	Same as the product life cycle
Charging Time Empty to Full	30 minutes with battery charger
Operating Time	2 hours typ. at 60 images/ hour

Light-weight & Durable

World's Lightest Weight Wireless FPD

The AeroDR Detector is the lightest FPD in the world weighing as little as 2.9 kg (6.3 lbs) and supports wireless networking which transmits captured images to the console. Technologists can easily perform non bucky exams such as table top or cross table projections.

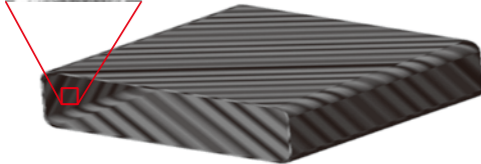
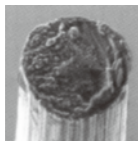


Durable Monocoque Structured Cassette

We adopted the "Monocoque case" to ensure trouble-free operation even under substantial shock or load. Since the battery is incorporated in the cassette (it need not be replaced), it is unnecessary to provide the case with a notch for battery replacement which reduces the rigidity of the case. Because of this, the cassette case that is appreciably light in weight has sufficient rigidity. Thanks in part to the buffer effect of the built-in battery, the load bearing performance of the cassette is the same as that of our CR cassette.

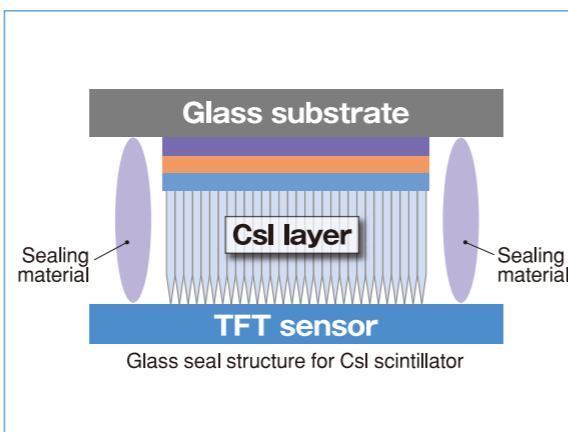
● Monocoque case made out of carbon fiber

Carbon fiber



Sealed and Protected Scintillator

In order to prevent the CsI crystal from being deformed by local concentration of external force, a double-glass structure in which the CsI scintillator glass plate and the TFT panel glass plate are overlapped and sealed together is adopted for AeroDR. The double-glass structure not only enhances the load-bearing performance but also prevents the scintillator edge from being deformed by a mechanical shock (e.g., fall or striking of the cassette) and the TFT sensor panel glass plate from being broken.



S P E C I F I C A T I O N S

WIRELESS DIGITAL RADIOGRAPHY SYSTEM AeroDR



■ Type

Portable flat panel detector based on amorphous silicon (a-Si)

■ Scintillator

CsI (Cesium Iodide)

■ Weight

2.9 kg

■ Pixel Size

175 μ m

■ Image Field

1,994 x 2,430 (4.8 million pixels)

■ Power/Communications Tether

Possible

■ WLAN Standard

WLAN standard IEEE 802.11a

■ Dynamic Range

4 digits

■ Dimensions (W x D x H)

383.7 x 460.2 x 15.9 mm
※Equivalent to standard 14 x 17" cassette

■ Charging Time Empty to Full

30 minutes with battery charger

■ Operating Time

2 hours typ. at 60 images/ hour

■ Battery Life Cycle

Same as the product life cycle



AeroDR Battery Charger

■ Power

100/110/115/120/200/230/240 VAC

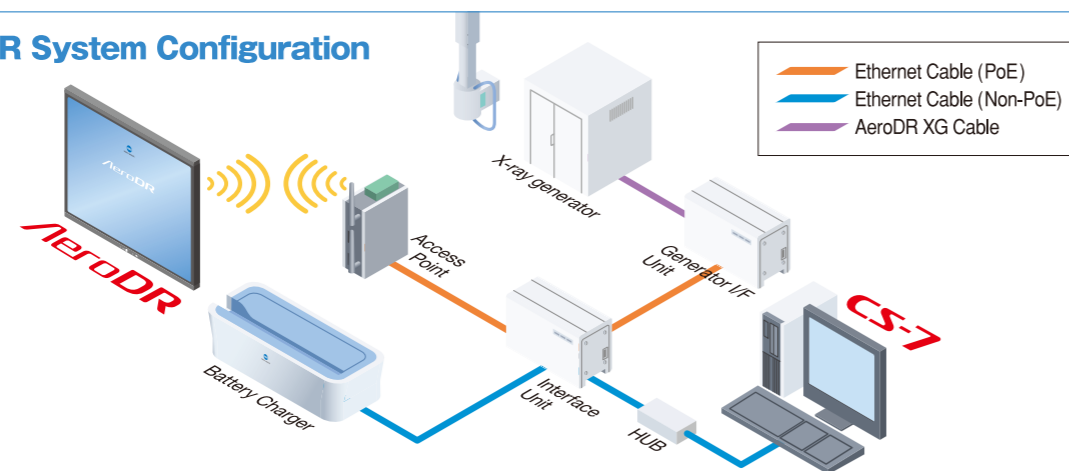
■ Weight

7.2 kg

■ Dimensions (W x D x H)

560 x 250 x 153mm

AeroDR System Configuration



Control Station CS-7



■ Image Processing

Automatic Gradation Processing (G Processing)
Frequency Processing (F Processing)
Equalization Processing (E Processing)
Hybrid Processing (H Processing)
Hybrid Smoth Processing (HS Processing)

■ Image Output

Host : Up to 4 channels
Printer : Up to 2 channels

■ DICOM Support

Basic Greyscale Print Management (SCU)
Storage (SCU)
Modality Worklist Management
Modality Performed Procedure Step
Greyscale Standard Display Function (print output)

■ CR / DR Connections

AeroDR : Up to 4 simultaneous active detectors
REGIUS Cassette Reader : Up to 15 units

■ Main Options

- Hardware options
 - Bar-code Reader for REGIUS Cassette Registration
 - In-room Sub Monitor
- Software options
 - DICOM MWM/ MPPS/ DETACHED, FTP
 - DICOM Storage Output
 - DICOM Print
 - X-ray Generator Connection
 - Media Storage
 - Text Annotation
 - Automatic Body Part Recognition
 - Automatic Processing Parameter Study

