



KONICA MINOLTA



WIRELESS DIGITAL RADIOGRAPHY SYSTEM

**AeroDR**



**AeroDR**



green products

- World's Lightest Weight (including battery)  
14"x17": 2.9kg / 17"x17": 3.6kg
- Energy Conservation Design: 16hr Stand-by time

Distributed by :

Empty box for distributor information



KONICA MINOLTA

**KONICA MINOLTA  
MEDICAL & GRAPHIC, INC.**

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Giving Shape to Ideas

*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**

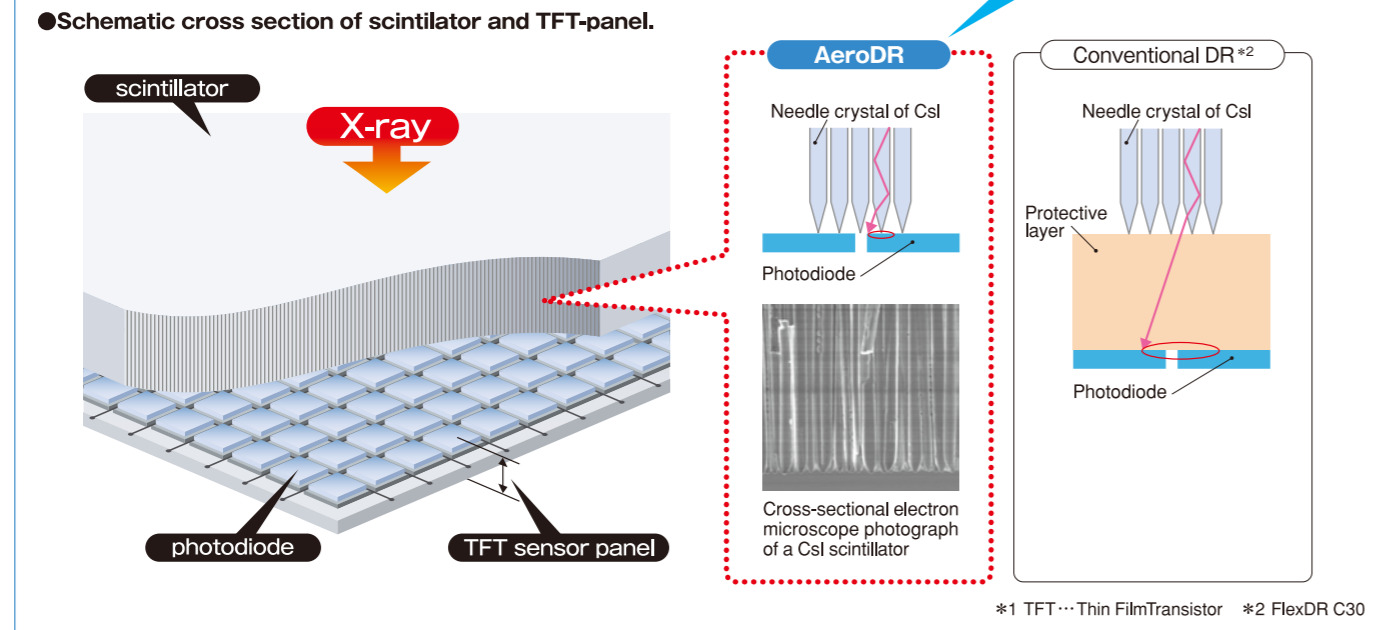
W I R E L E S S C A S S E T T E

# 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!**



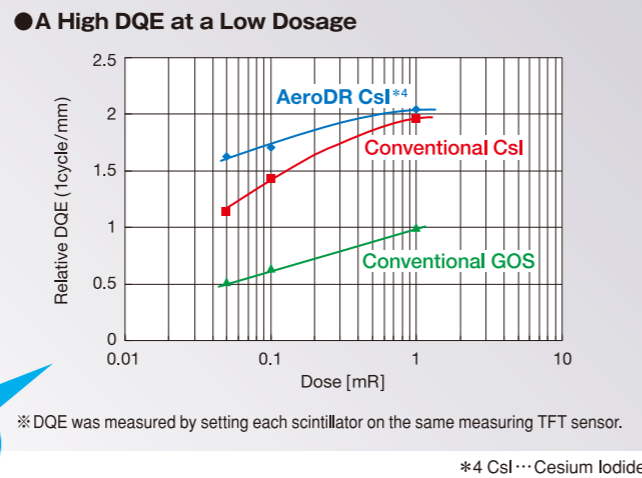
## High Image Quality and Lower Doses

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!**



# 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

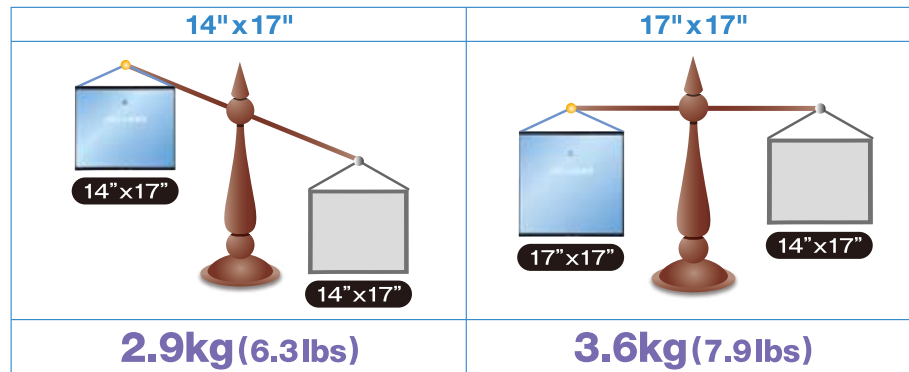
Battery expected life time	Above the AeroDR detector product life time
Battery charging time empty to full	Within 30 minutes (when using the AeroDR Battery Charger) Within 60 minutes (when using the dedicated wired cable)
Number of exposable images	14" x 17" : 200 images / 5.5 hours 17" x 17" : 173 images / 4.8 hours <small>*Under conditions that the interval between studies is five minutes and three images are captured in each study, assuming 20 seconds for each exposure to position a patient.</small>



# Light-weight & Durable

## World's Lightest Weight Wireless FPD (14"x17" and 17"x17")

The AeroDR Detector is the lightest FPD in the world weighing as little as 2.9kg (14" x 17" panel) / 3.6kg (17" x 17" panel) 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.

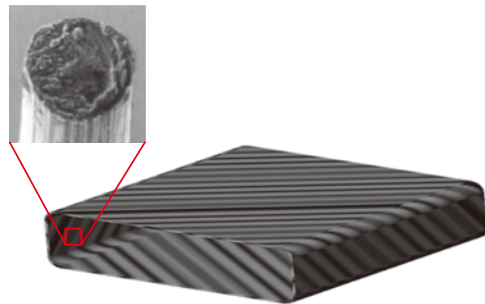


## Durable Monocoque Structured Cassette

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.

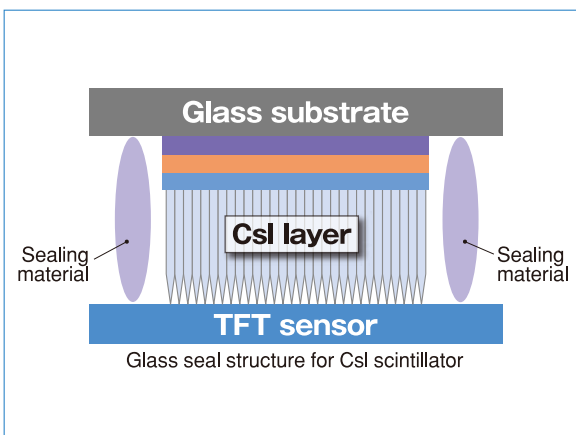
### ● Monocoque case made out of carbon fiber

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



<b>Model name</b>	AeroDR P-11 (AeroDR 1417HQ) / AeroDR P-12 (AeroDR 1417S) / AeroDR P-21 (AeroDR 1717HQ)
<b>Detection method</b>	Indirect conversion method
<b>Scintillator</b>	CsI (Cesium Iodide)
<b>Dimensions (W x D x H)</b>	14"x17" : 383.7 x 460.2 x 15.9 mm / 17"x17" : 459.8 x 460.2 x 15.9 mm
<b>Weight</b>	14"x17" : 2.9 kg / 17"x17" : 3.6 kg
<b>Pixel size</b>	175µm
<b>Image area size</b>	14"x17" : 348.95x425.25mm (1,994 x 2,430 pixels) / 17"x17" : 424.9x424.9mm (2,428 x 2,428 pixels)
<b>AD conversion</b>	16 bit (65,536 gradients)
<b>Communication</b>	Dedicated wired ethernet connection / Wireless LAN (IEEE802.11a compliant)
<b>WLAN encryption</b>	Wireless encryption method : AES / Authentication method : WPA2-PSK
<b>Cycle time</b>	14"x17" : Approx. 9.2 seconds when connected with the dedicated wired connection / Approx. 13.3 seconds when connected with wireless LAN connection 17"x17" : Approx. 9.9 seconds when connected with the dedicated wired connection / Approx. 15.5 seconds when connected with wireless LAN connection
<b>Dynamic range</b>	4 digits
<b>Battery charging time empty to full</b>	Within 30 minutes (when using the AeroDR battery charger) Within 60 minutes (when using the dedicated wired cable)
<b>Battery duration in standby status</b>	Approx. 16 hours
<b>Number of exposable images</b>	14"x17" : 200 images / 5.5 hours    17"x17" : 173 images / 4.8 hours * Under conditions that the interval between studies is five minutes and three images are captured in each study, assuming 20 seconds for each exposure to position a patient.
<b>Battery expected life time</b>	Above the AeroDR detector product life time
<b>Recommended storage and usage environment conditions</b>	When operating : 10 to 30°C / 35 to 80% RH(ensure no water condensation) When not operating : -10 to 40°C / 20 to 90% RH(ensure no water condensation) In storage : -20 to 60°C* / 20 to 90% RH(ensure no water condensation) * However, performance warranty period when storing at 60°C is 6 months after packing.

• The described performance may change depending on the environment and frequency of use. (This is not a guarantee of performance.)  
• The performance of battery is all performance after fully charged.

## AeroDR Battery Charger

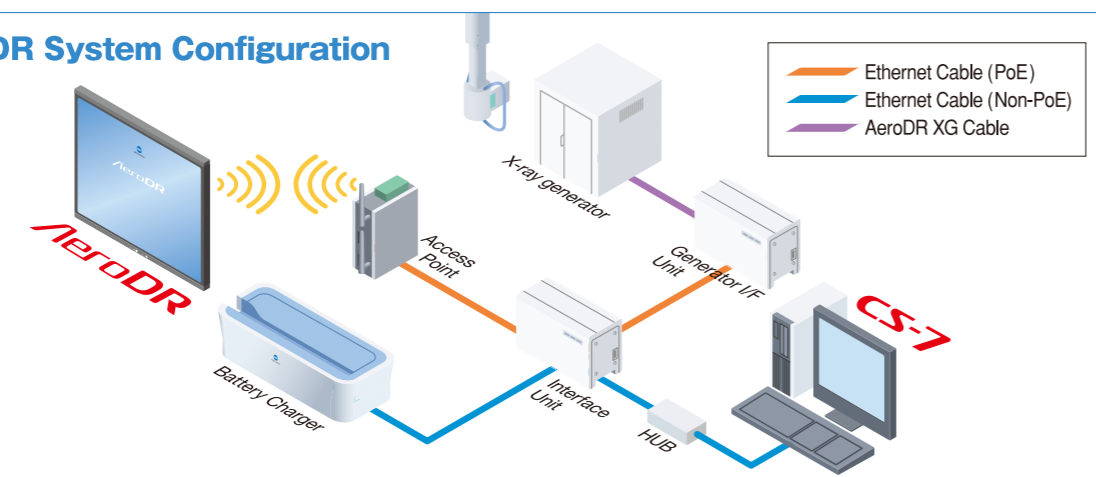


<b>Power</b>	100 / 110 / 115 / 120 / 200 / 230 / 240 VAC
<b>Weight</b>	7.2 kg
<b>Dimensions (W x D x H)</b>	560 x 250 x 153mm

## Control Station CS-7

<b>Image processing</b>	Automatic gradation processing (G processing) , Frequency processing (F processing) , Equalization processing (E processing) , Hybrid processing (H processing) , Hybrid smoth processing (HS processing)				
<b>Image output</b>	Host : Up to 4 channels / Printer : Up to 2 channels				
<b>DICOM support</b>	Basic greyscale print management (SCU) , Storage (SCU) , Modality worklist management , Modality performed procedure step , Greyscale standard display function (Print output)				
<b>CR / DR connections</b>	AeroDR : Up to 4 simultaneous active detectors REGIUS cassette reader : Up to 15 units				
<b>Main Options</b>	<table border="0"> <tr> <td><b>Hardware options</b></td> <td>Bar-code reader for REGIUS cassette registration , In-room sub monitor</td> </tr> <tr> <td><b>Software options</b></td> <td>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</td> </tr> </table>	<b>Hardware options</b>	Bar-code reader for REGIUS cassette registration , In-room sub monitor	<b>Software options</b>	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
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## AeroDR System Configuration



★Specifications are subject to change without prior notice.