

VetiPad M1 Plus/VetiPad M1

## Veterinary Digital Detector and Imaging System

### Specification



# 1 General Description

It is clinically indicated for digital radiography of the chest, abdomen, bone and soft tissue for animals.

## 2 Flat panel detector

### 2.1 Overview

Light and thin design, reliable performance

### 2.2 Parameters

#### 2.2.1 VetiPad M1 Plus

- Scintillator fluorescent material: CsI
- Detection unit array material: a-Si
- Valid FPD dimensions: 43 cm x 43 cm
- Collection matrix: 3072 x 3072 pixels
- Pixel size: 140  $\mu$ m
- A/D conversion (number of valid data bits): 16 bits
- MTF: Under the condition of RQA5 and when spatial frequencies are 1.0 lp/mm and 2.0 lp/mm, the MTF typical values are 0.55 and 0.3. The deviation does not exceed -0.04 and there is no upper limit.
- DQE: Under the dose condition of RQA5 and 10  $\mu$ Gy and when the spatial frequencies are 0 lp/mm, 0.5 lp/mm, 1.0 lp/mm, 1.5 lp/mm, 2.0 lp/mm, 2.5 lp/mm, 3.0 lp/mm and 3.5 lp/mm, the DQE typical values are 0.7, 0.53, 0.43, 0.36, 0.32, 0.27, 0.21, and 0.14 respectively. The deviation does not exceed -0.06 and there is no upper limit.
- Spatial resolution: 3.6 LP/mm

- Weight: 4 kg (deviation  $\leq$  +15%)
- Dimensions: 460 mm x 460 mm x 15.5 mm
- Lithium battery: 3800 mAh
- 500 charge-discharge cycles
- kV range: 40 kVp to 150 kVp
- Protection class: IP54
- Weight-bearing: 200 kg on the surface of the whole plate and 100 kg within a diameter of 40 mm from the center
- Drop:  $\leq$  1 m
- AED: Supported

#### 2.2.2 VetiPad M1

- Scintillator fluorescent material: CsI
- Detection unit array material: a-Si
- Valid FPD dimensions: 35 cm x 43 cm
- Collection matrix: 2560 x 3072 pixels
- Pixel size: 140  $\mu$ m
- A/D conversion (number of valid data bits): 16 bits
- MTF: Under the condition of RQA5 and when spatial frequencies are 1.0lp/mm and 2.0lp/mm, the MTF typical values are 0.55 and 0.3. The deviation does not exceed -0.04 and there is no upper limit.

- DQE: Under the dose condition of RQA5 and 10  $\mu$ Gy and when the spatial frequencies are 0 lp/mm, 0.5 lp/mm, 1.0 lp/mm, 1.5 lp/mm, 2.0 lp/mm, 2.5 lp/mm, 3.0 lp/mm and 3.5 lp/mm, the DQE typical values are 0.7, 0.53, 0.43, 0.36, 0.32, 0.27, 0.21, and 0.14 respectively. The deviation does not exceed -0.06 and there is no upper limit.
- Spatial resolution: 3.6 LP/mm
- Weight: 3.3kg (deviation  $\leq$  +15%)
- Dimensions: 460mm x 384 mm x 15.5 mm
- Lithium battery: 3800 mAh
- 500 charge-discharge cycles
- kV range: 40 kVp to 150 kVp
- Protection class: IP54
- Weight-bearing: 200 kg on the surface of the whole plate and 100 kg within a diameter of 40 mm from the center
- Drop:  $\leq$  1 m
- AED: Supported

## 2.3 Operating Environment

- CPU: Intel Core 2/3.0GHz or above
- RAM:  $\geq$ 4GB
- Hard Disk:  $\geq$ 500GB (The partition should contain disk D)
- Software Environment
- Windows 10 64bit (Enterprise LTSC)
- Windows 11 64bit (Home, Professional, Enterprise, Education)
- Monitor Resolution:1920 $\times$ 1080; Zoom Factor: 100%
- Network Condition: Gigabit Ethernet

## 3 Power supply

### 3.1 Router

- Voltage: AC single-phase, 100-240V
- Frequency: 50/60Hz $\pm$ 1Hz
- Current: 1.0A max

### 3.2 Power supply box

- Voltage: AC single-phase, 100-240V
- Frequency: 50/60Hz $\pm$ 1Hz
- Input power: 150VA

## 4 DROC system

### 4.1 Overview

DROC is the operating software system used for animal exam management.

### 4.2 DROC Function

- Animal information entry: emergency treatment, follow-up, Worklist list, Manual registration
- Search multiple exam data of the same animal by one click
- Animal data query, editing and management
- Animal data recycle bin
- Animal data backup reminder and automatic cleaning
- Data backup and recovery: Support U disk and removable hard disk
- Multiple PACS nodes can send data at the same time.
- DICOM Task Manager
- Adjusting exposure parameters
- Common positions are provided and configurable.
- Image Post-processing
- Image Stitch

- Image preview, review and backup
- Image printing, supports connection of multiple printers
- User authority hierarchical management: Administrators and common users
- iShotHelper
- Report editing, comment template and report template can be configured

## 5 Image Review/Key Functions

### 5.1 Overview

Support multi-image post-processing to provide users with convenient image adjustment.

### 5.2 Adjustable function

- WW/WL Adjustment
- Image cutting
- Global Zoom
- Orientation
- Image comment
- Image roaming
- Fixed size cutting
- Magnifier
- Local window
- Rotate at any angle
- Invert
- General measurement and application measurement
- 90 ° rotation
- Image
- Multi-pane display

## 6 Levels algorithm

### 6.1 Overview

- Professional customized image optimization function to provide high-quality images for diagnosis.

### 6.2 Function

- Enhanced style switching
- Lookup Table
- Compress
- Enhance
- Noise suppression
- Auto WL Ratiore
- Simplified enhancement parameters: Brightness, contrast, sharpness, noise reduction

## 7 Network and Data Connection

### 7.1 DICOM

- DICOM 3.0
  - DICOM Verification
  - DICOM Storage
  - DICOM Storage Commitment
  - DICOM Print
  - DICOM MPPS
  - DICOM Q/R
  - DICOM DIR
- To support PACS connection.

### 7.2 u-Link

- The u-Link can be used to connect to software that supports the u-Link protocol (such as the MiCO+ Remote Imaging System).

## 8 Environment

### 8.1 Operating Environment

- Relative humidity: 20% - 75%
- Atmospheric pressure: 62 kPa to 106 kPa
- Ambient temperature: 10°C to 38°C

### 8.2 Storage and transportation environment

- Relative humidity: 20% to 90%
- Atmospheric pressure: 62 kPa to 106 kPa
- Ambient temperature: -20 °C to 55°C

## 9 Safety and Conformance

### 9.1 Quality standards

- ISO 9001

### 9.2 Design standards

- EN 60601-1 and IEC 60601-1
- EN 60601-1-2 and IEC 60601-1-2

### 9.3 CE declaration

The device is fully in conformance with the EC Low Voltage Directive (2014/35/EU) and EC Directive of Electromagnetic Compatibility (2014/30/EU).

Mindray Animal Medical reserves the right to make changes in specifications and features shown herein, or discontinue the product at any time without notice or obligation. Contact your Representative for the most current information.

## NOTICE:

Not all features or specifications described in this document may be available.

