



# Pluto 0006X CMOS Detector

## Introduction:

Pluto 0006X series apply to digital X-ray imaging in veterinary practices and industrial NDT areas. The integrated CMOS sensor chip is with  $18.5\mu\text{m} \times 18.5\mu\text{m}$  pixel size and total 23 Mega pixels ( $3646 \times 6268$ ), coupled with  $6\mu\text{m}$  FOP is an optional in design to improve the image resolution and to prevent the X-ray radiation on the CMOS chip and peripheral circuit so as to prolong the product life. Select appropriate scintillator as needed in different applications, enable image output with a better balance in high sensitivity vs high resolution. Equipped with USB readout circuit and corresponding cables, the CMOS chip has been embedded with 14bit ADC circuit.

The SDK could be provided for customer's further development. A variety of OEM/ODM customization options are available

## Pictures:



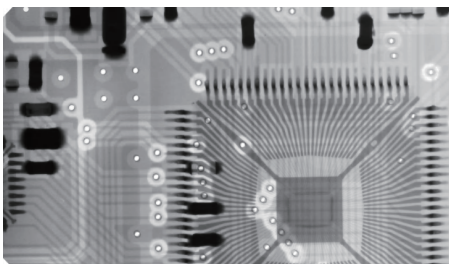
## Features:

- Pixel size:  $18.5\mu\text{m} \times 18.5\mu\text{m}$
- Limiting Resolution: 27 lp/mm
- Pixels: 3646x6268 pixels
- Frame Rate: 0.25fps@2x2
- Digital Bit: 14-bit, 16-bit (for optional)
- AED alone pixel trigger region and independent output
- USB2.0 connectivity
- Cross-platform Drivers: Windows, MAC\Linux for optional
- Customizable application software for different fields

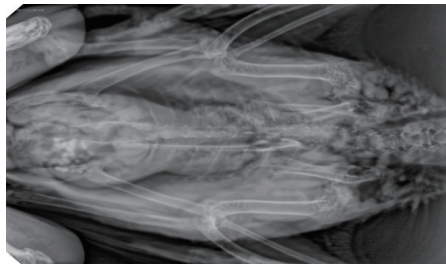
## Applications:

- Radiography in veterinary practices
- NDT inspection

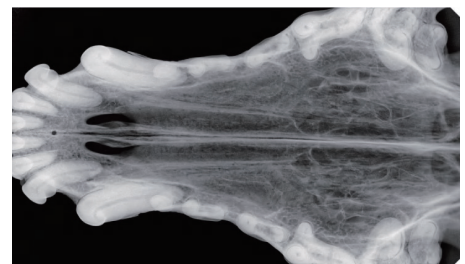
## Image Samples:



PCB



Parrot



Occlusal maxillary (dog)



## CMOS Detector

### Specifications:

| Items                 | Value                                         | Unit     |
|-----------------------|-----------------------------------------------|----------|
| Pixel size            | 18.5x18.5                                     | μm       |
| Pixels                | 3646x6276                                     | pixels   |
| Active Pixels         | 3646x6268                                     | pixels   |
| Active Area           | 67.5x116.0                                    | mm       |
| Digitization          | 14                                            | bit      |
| Spatial Resolution    | Csl: 12-16                                    | lp/mm    |
| Shutter Type          | Rolling shutter and global reset              |          |
| Dynamic Range         | 84                                            | dB       |
| Dark Current @25°C    | 900                                           | e-/sec   |
| Full Well             | 3600                                          | ke-      |
| Radiation Hardness    | 30                                            | kRad     |
| Interface             | USB2.0                                        |          |
| Frame Rate            | 0.25@2x2                                      | Frames/s |
| MCLK                  | <=200                                         | MHz      |
| Built-in AED AED      | 8 lines (4 lines on top and 4lines on bottom) |          |
| Power Supply          | 0.7、2.3、3.3、4.3                               | V        |
| Power                 | 750                                           | mW       |
| ESD                   | 8                                             | kV       |
| Substrate             | Aluminium Oxide Ceramics                      |          |
| Operating temperature | 0~40                                          | °C       |

### Optional Models:

| Model         | Scintillator               | Remarks      |
|---------------|----------------------------|--------------|
| Pluto 0006X-G | GOS / High-resolution      | Image Sensor |
| Pluto 0006X-C | Csl-HL / High-light-output | Image Sensor |
| Pluto 0006X-H | Csl-HR / High-resolution   | Image Sensor |

### Dimension (unit:mm) :

