



## Product specification

### X-ray High-Resolution Imaging System

Model: CRYCAM macro 4.1

#### Features:

- boxed camera head including control unit and cooling
- optical tube with 45° mirror
- motorized focus adjusting with controller and SW
- lens relay 1:1 (magnification adjustable to 2:1)
- scintillator holder fixing (allows changing screens)
- LuAG:Ce/YAG:Ce scintillator (optional)
- support mechanics and camera shielding
- power supply unit
- software (image acquisition and processing)
  - background subtracting
  - flat field correction
- technical documentation



#### CCD Camera KF-8300

CCD Type: Kodak full frame KAF-8300  
Pixel resolution: 3358 x 2536  
Pixel size: 5.4  $\mu\text{m}$  x 5.4  $\mu\text{m}$   
Quantum efficiency: 55%  
CCD size: 18.1 x 13.7 mm  
Full well capacity: 25 000  $e^-$

Shortest exposure: 85 ms  
Binning: 1x1 – 4x4  
CCD signal processing: correlated double sampling (CDS) + 16 bit A/D converter  
Gain: 0.4  $e^-/\text{ADU}$  (1 x 1 binning), 0.8  $e^-/\text{ADU}$  (other binnings)

Dark current @ 0°C: 0.15  $e^-/\text{s/pixel}$   
Read: Standard read (STD)  
Low-noise read (LN read)



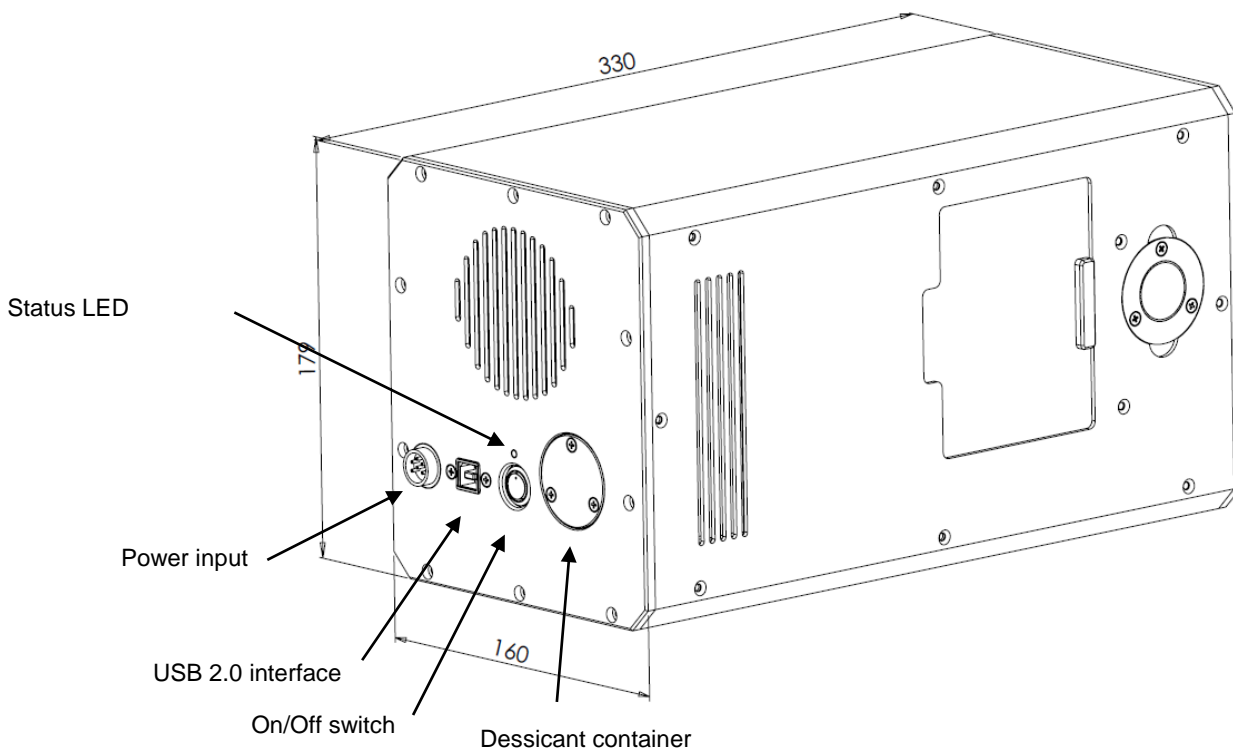
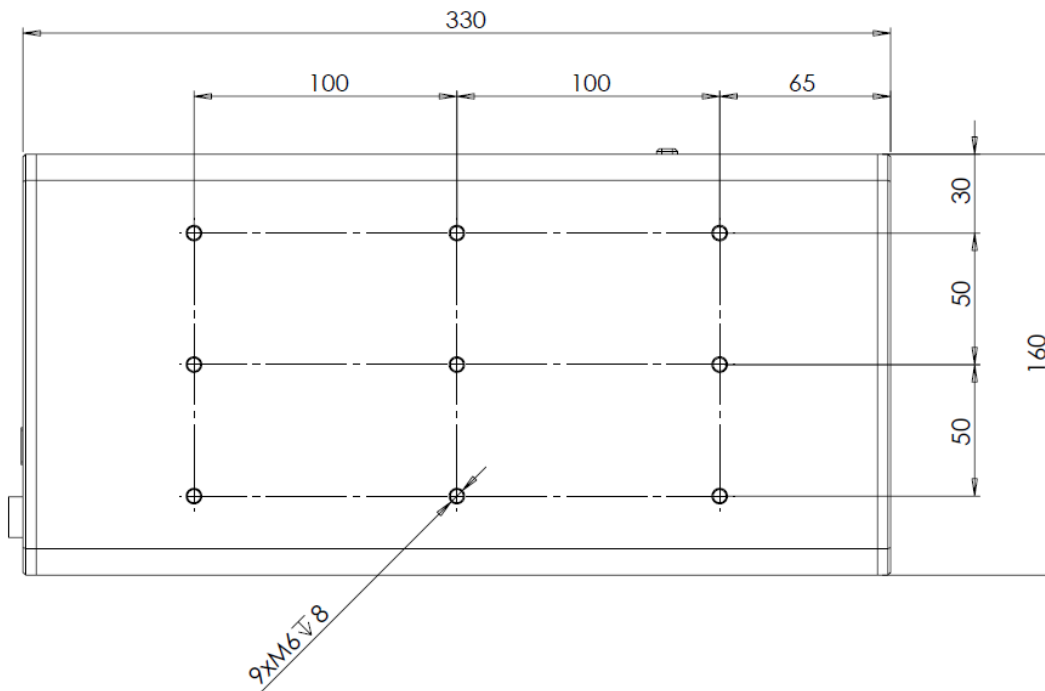
System read noise:	8 e <sup>-</sup> RMS (LN read) 9 e <sup>-</sup> RMS (STD read)
Full frame download:	14.4 s (LN read) 12.2 s (STD read)
Interface:	USB 2.0
Cooling:	Peltier-driven, 40 °C below the ambient laboratory temperature (FAN cooling)
Power source:	input 100-240V AC/50-60 Hz/1.4 A output 20 V DC/6A/120 W
Software:	XIMS
Weight:	10.3 kg
Dimensions (L x H x W):	330 x 179 x 160 mm

## Optics

Lens-relay optics:	magnification 1x, mechanically adjustable to mag. 2x (effective pixel size: 5.4 μm, 2.7 μm respectively)
Focus:	stepper motor, 1 step: (5.00±0.16) μm

## Scintillator (replaceable)

YAG:Ce, dia. 25.4 x 0.050 mm, both sides polished, mounted in a scintillator holder  
Al reflection and anti-reflection coatings



**Note:** All dimensions in millimeters