

Ultracam7

Intensified Cooled High-Speed Camera



Features:

- ✓ **1280x800 full format**
- ✓ **Low Light Level imaging starting at 7,530 FPS**
- ✓ **25mm Intensifiers**
- ✓ **Response from 300 to 900nm**
- ✓ **Optional UV Response: 200 to 700nm**
- ✓ **Fast exposure (minimum gate) time as short as 50 ns**
- ✓ **Optional exposure (minimum gate) time as short as 3 ns**
- ✓ **No need for external light source**
- ✓ **Save as Cine file or individual images**
- ✓ **Computer control of all functions**

General Description:

The **Ultracam7** is a very high sensitivity high-speed camera capable of acquiring images at 7,530 fps at a light level as slow as 2×10^{-6} fc. Exposure time as low as 50 ns can be achieved. Maximum frame-rate is **>500,000** fps. The **Ultracam7** employs 25mm intensifiers offering photocathode selections covering the UV, visible or solar blind.

The camera can be used for special scientific imaging of rapid events where

only low ambient light is available. Through external control multiple exposures per frame can be achieved. Utilizing the ability to achieve short exposure times the camera can achieve a dynamic range of over 5 million.

The camera is controlled by software through a Gigabit Ethernet connection. The camera software provides full manual control of camera operation and built-in

linear and angular velocity/displacement measurement tools. The intensifier is also computer controlled through a serial (RS-

232) or USB port. The user can manually set intensifier gain, gate and gate delay.

Specifications:

- Image Sensor: **1280 x 800 CMOS**
- Active Area: **25.6 x 16.0 mm (30mm diagonal)**
- Sensitivity: **<2.0 x 10⁻⁶ FC on the faceplate @ 2854K**
- Frame Rate (full frame): **up to 7,530 fps**
- Intensifier Type (Visible): **GEN III GaAsP (300-700 nm with 50% peak QE) or GEN II SuperGEN (300-900 nm with 30% peak QE)**
- Intensifier Type (UV): **GEN II UV (200 to 700nm) with 20-30% QE from 200 to 400nm**
- Input Window: **Standard-Glass
UV-Quartz**
- Input Format: **25 mm**
- Output Format: **Digital Display on a Computer Monitor and Analog Video**
- External trigger: **user defined TTL Pulse** (or use internal trigger)
- Gating Range/Exposure Control: **50ns to 1ms (in 20ns increments)**
- Gating Delay Range: **0ns to 2ms (in 20ns increments)**
- Optional Gating Range: **3ns to DC (in 1ns increments)**
- Input Lens Mount: **C-Mount**
- Control: **Intensifier Gain, Gate and Gate Delay set via Computer (RS-232) control (Windows™ Operating System; Camera controlled via Gigabit Ethernet**
- Image Processing: **Smooth, Sharpen, Negative Image, Edge Detection, Brightness, Contrast & Gamma adjustment;**
- File Management: **Organize, save, compress, and export cines or single images (JPEG/TIFF/BMP)**
- Measurement: **Linear and Angular Velocity/Displacement Calculation**

Mechanical:

Dimensions: **32 x 14 x 13 CM**
Camera Mounting: **1/4-20 (X1) and 10-32 (4) Threaded Holes**
Weight: **10 lbs.**

Electrical:

Input Voltage: 110/220 VAC, 12VDC
Power Supply included
Input Power: < 10 Watts

Many camera options are available. Please contact us with your technical requirements so we can help you select the most suitable camera configuration.

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