

HAMAMATSU

DATA SHEET

10M-pixels Cooled CCD Digital Camera C9300-124 (4000 × 2672)

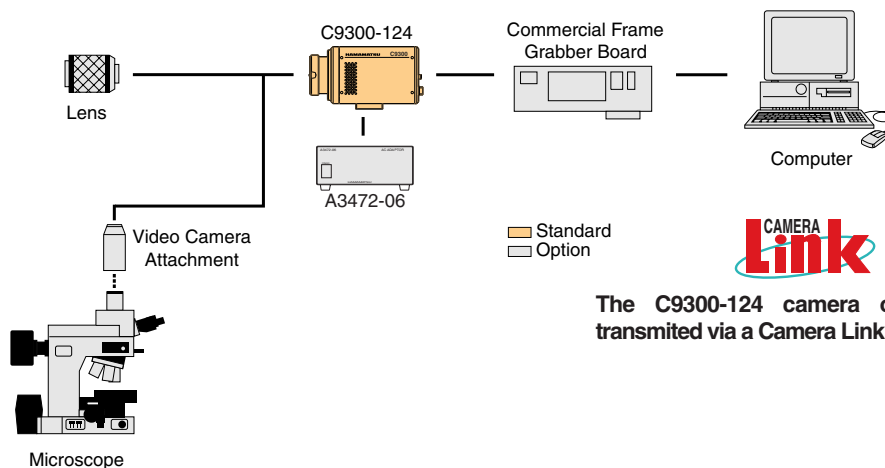


The C9300-124 is a 4k × 2.6k high-resolution digital camera using a high-speed interline transfer CCD chip with on chip micro-lens. In addition to a high resolution of 10 million pixels, low noise performance realizes 12 bit digital output even with 2.5 frames per second. The dual readout mode realize 4.5 frames per second with full resolution. Peltier cooling drastically reduces dark noise and minimizes thermal drift, which makes the camera an ideal choice for demanding scientific and industrial applications.

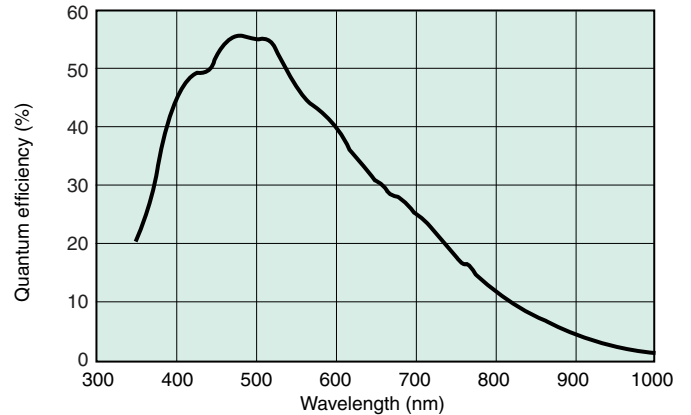
APPLICATIONS

- FPD inspection
- Continuous imaging of high-speed moving objects
- Kinetic changes in light intensity
- Faint light observation under a microscope

SYSTEM CONFIGURATION



SPECTRAL RESPONSE CHARACTERISTIC



★ This is typical, not guaranteed

FEATURES

- 4.5 frame/s with 10 million full resolution
- Low readout noise (40 electrons r.m.s. (typ.))
- Large full well capacity
- Wide range sensitivity from Blue to NIR
- Low dark noise with peltier cooling
- Fast repetition readout mode for PIV

OPTIONS

- AC adaptor : A3472-06
Line voltage: AC 100 V to AC 240 V input
Output voltage: DC +12 V
- Power cable : A9071-05 (5 m)

The C9300-124 camera outputs data is transmitted via a Camera Link interface.



SPECIFICATIONS

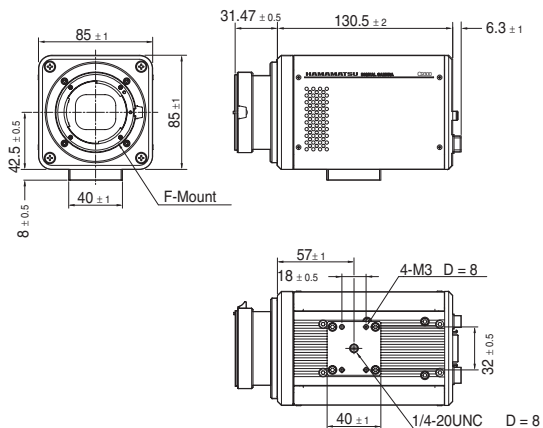
| | | |
|------------------------------------|---|--|
| Type number | C9300-124 | |
| Camera head type | Passive air-cooled head | |
| Imaging device | Progressive interline transfer CCD | |
| Effective number. of pixels | 4000 (H) × 2672 (V) | |
| Cell size | 9 μm (H) × 9 μm (V) | |
| Effective area | 36.0 mm (H) × 24.0 mm (V) | |
| Pixel clock rate | 30 MHz/pixel | |
| Frame rate | 1 × 1 binning | Single readout : 2.5 frame/s, Dual readout : 4.5 frame/s |
| Readout noise r.m.s. (typ.) | Possible** | |
| Full well capacity (typ.) | 40 electrons | |
| Dynamic range* (typ.) | 40000 electrons | |
| Cooling method | 1000 : 1 | |
| Cooling temperature | Peltier cooling, air radiation system | |
| Dark current (typ.) | + 10 °C to + 12 °C | |
| A/D converter | 2 electrons/pixel/s | |
| Output signal / External control | 12 bit | |
| Exposure time | Camera Link | |
| Sub-array | 5 ms to 1 s | |
| External trigger | A setup in an eight-line unit (vertical, perpendicular) is possible in size and a position. | |
| Contrast enhancement | Yes | |
| Lens mount | 1 times to 5 times(16 step) | |
| Power requirements | F-mount | |
| Power consumption | DC +12 V | |
| Ambient storage temperature | approx. 20 V·A | |
| Ambient operating temperature | - 10 °C to + 50 °C | |
| Ambient operating/storage humidity | 0 °C to + 40 °C | |
| | 70 % max. (with no condensation) | |

* Calculated from the ratio of the full well capacity and the readout noise.

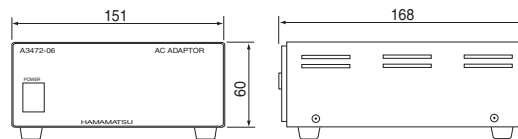
** Please consult Hamamatsu for detail of Binning mode.

DIMENSIONAL OUTLINES (Unit: mm)

● C9300-124 (approx. 1.2 kg)



● A3472-06 (approx. 0.8 kg) - Option -



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 - Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office.
 - Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions.
- Specifications and external appearance are subject to change without notice.

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