

For Machine Vision, Industrial Inspection and Biomedical Systems



The C8484-05 is a high-resolution digital camera using a progressive scan interline CCD chip with no mechanical shutter. In addition to a high resolution of 1.37 million pixels, a wide dynamic range of 12 bit digital output and high sensitivity in the VIS-NIR region offers a wide application range down to low light level imaging.

Easy integration using the HAMAMATSU SDK (DCAM-API) and Various Interfaces

- LVDS, Camera Link, and IEEE-1394 models are available.

Model (Type. No)	Digital output interface	System configuration
LVDS (C8484-05)	The C8484-05 transmits 12-bit parallel digital output data via an RS-644 (LVDS) interface.	<p>Legend: Standard Optional</p>
Camera Link (C8484-05C)	The C8484-05C camera outputs data is transmitted via a Camera Link interface. The camera transmits 12-bit digital output data. 	<p>Legend: Standard Optional</p>
IEEE-1394 (C8484-05G)	The C8484-05G camera outputs data is transmitted via an IEEE-1394 interface. 	<p>Legend: Standard Optional</p>

SPECIFICATIONS

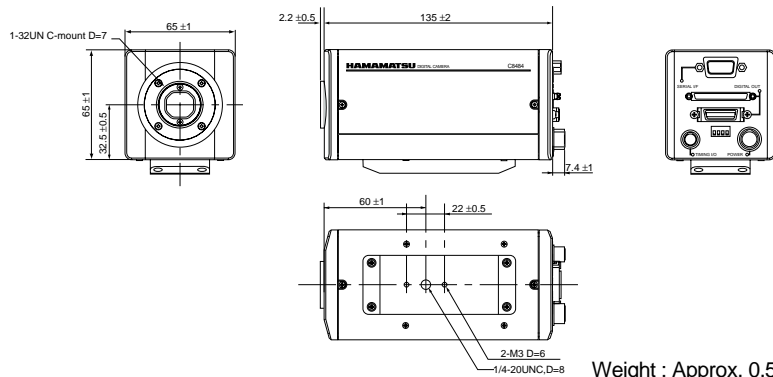
Type number	C8484-05	C8484-05G	C8484-05C		
Imaging device	Progressive scan interline CCD with micro-lens				
Effective no. of pixels	1344 (H) X 1024 (V)				
Cell size	6.45 μm (H) X 6.45 μm (V)				
Effective area	8.67 mm (H) X 6.60 mm (V)				
Pixel clock rate	14.7 MHz/pixel		20 MHz/pixel		
Frame rate	binning	1 X 1	8.3 frame/s	8.9 frame/s	12.2 frame/s
		2 X 2	16 frame/s	16.3 frame/s	22.3 frame/s
		4 X 4	28 frame/s	27.8 frame/s	40.9 frame/s
		8 X 8	45 frame/s	43 frame/s	68 frame/s
Readout noise (r.m.s.) typ.	10 electrons				
Full well capacity typ.	15 000 electrons		17 000 electrons		
Dynamic range*	1500 : 1		1700 : 1		
Dark current	-				
A/D converter	12 bit				
Exposure time	150 μs to 1 s	10 μs to 1 s	20 μs to 1 s		
Sub array	yes				
Contrast enhancement	High gain / Low gain				
External trigger	yes				
Lens mount	C-mount				
Digital output	RS644(LVDS)	IEEE1394-1995	Camera Link		
External control	C8484-05,-05C : RS-232C standard, C8484-05G : 1394-Based Digital Camera Specification Ver.1.30				
Power requirements	DC +12V				
Power consumption	8 W				
Ambient storage temperature	-10 °C to +50 °C				
Ambient operating temperature	0 °C to +40 °C				
Ambient storage/operating humidity	70% max. (no condensation)				

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

SOFTWARE

- Software Development Kit : DCAM-API
- Operating system : Windows 98, 2000 or NT

DIMENSIONAL OUTLINE (Unit : mm)



Weight : Approx. 0.5 kg

- ★ Product and software package names noted in this documentation are trademarks or registered trademarks of their respective manufacturers.
- 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.

© 2001 Hamamatsu Photonics K.K.

HAMAMATSU

HAMAMATSU PHOTONICS K.K., Systems Division

812 Joko-cho, Hamamatsu City, 431-3196, Japan, Telephone: (81)53-431-0124, Fax: (81)53-435-1574, E-mail: export@sys.hpk.co.jp

U.S.A. and Canada: Hamamatsu Photonic Systems: 360 Foothill Road, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-1116, Fax: (1)908-231-0852, E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658, E-mail: info@hamamatsu.de

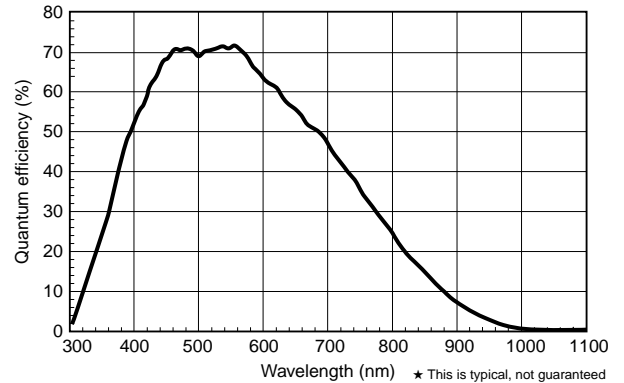
France: Hamamatsu Photonics France S.A.R.L.: 8, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10, E-mail: info@hamamatsu.fr

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire, AL7 1BW, U.K., Telephone: (44) 1707-294888, Fax: (44) 1707-325777, E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 Solna, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01, E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E 20020 Arese (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741, E-mail: info@hamamatsu.it

SPECTRAL RESPONSE



Wavelength (nm) * This is typical, not guaranteed

FEATURES

- High resolution of 1.37 million pixels
- High sensitivity in VIS-NIR region
- Progressive scan interline CCD chip with no mechanical shutter
- Anti-blooming function
- Wide dynamic range
- Small readout noise of 10 electrons
- High frame rate of 45 frame / sec (8 X 8 binning)

APPLICATIONS

- Machine vision
- Metallurgical microscopy
- Semiconductor inspection
- X-ray scintillator readout
- DNA chip reader
- High throughput screening reader
- Dual image acquisition (PIV) < 200ns (C8484-05C only)

OPTIONAL

- Power supply unit : A3472-04
- Line voltage : 100 to 240V AC input
- Output voltage : +12V
- Power cable : 12 pin connector cable
 - A3194-00 : 2 m
 - A3194-01 : 5 m
 - A3194-02 : 10 m
 - A3194-03 : 25 m



Homepage Address <http://www.hamamatsu.com>

Cat. No. SICS1105E03
MAR/2004 HPK
Created in Japan (PDF)