

NEW



ORCA[®]-fusionBT

HAMAMATSU
PHOTON IS OUR BUSINESS

LOW READOUT NOISE

0.7 electrons rms
Ultra-quiet Scan

HIGH QE

95%

@550 nm

Gen III Back-illuminated sCMOS

HIGH SPEED

89.1 frames/s

@2304 × 2304 pixels (16 bit)

HIGH RESOLUTION

2304 × 2304

5.3 Megapixels

See what you've been missing



The ORCA-Fusion BT camera is the pinnacle of scientific CMOS (sCMOS) performance.

The specifications are without compromise: ultra-low readout noise, CCD-like uniformity, fast frame rates and back-thinned enabled high QE.

But the beauty of the ORCA-Fusion BT is what this combination of exceptional photon detection and collection can do for you.

See the dimmest whisper of signal, acquire visually stunning, high S/N images from the fewest photons, capture previously unresolved temporal events and perform computational methods with confidence.

The ORCA-Fusion BT is the camera that makes the difficult experiments easy and previously impossible experiments possible.

ORCA-Fusion BT advantages versus other BT CMOS cameras

Exclusive industry leading BT sCMOS performance with trusted Hamamatsu quality and reliability

- Extremely low readout noise
- High QE, across a wide range of wavelengths
- CCD-like uniformity; minimal high readout noise pixels
- High dynamic range
- 3 readout speeds
- Lightsheet readout mode
- 5.3 Megapixels
- Both USB 3.0 and high speed CoaXPress interfaces

ORCA-Fusion BT advantages versus EM-CCD cameras

A practical and functional replacement for expensive EM-CCDs with uncompromising sensitivity, speed and versatility

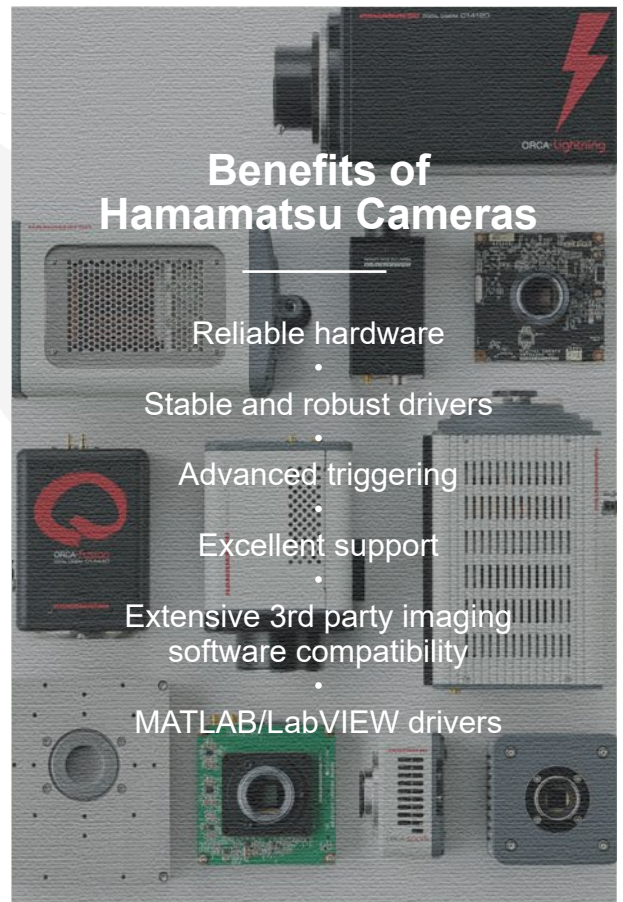
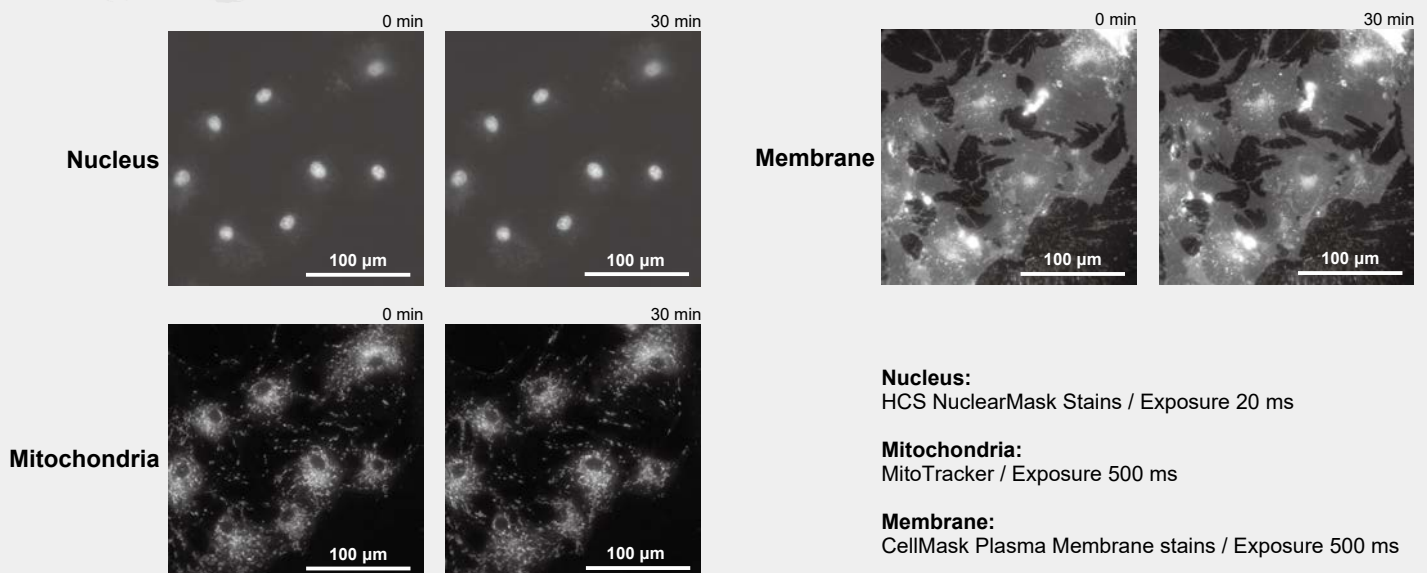
- Resolution
- Binning versatility
- No amplification or excess noise
- High dynamic range
- Large field of view

Applications

- Wide-field fluorescence microscopy
- Time-lapse imaging
- Spinning disk confocal microscopy
- Lightsheet microscopy
- Super resolution precision localization
- Genetically encoded voltage imaging
- Optogenetics
- Single molecule tracking
- Computational imaging
- Quantum computing

Time-lapse live cell imaging by low light excitation

Sample: H9c2, Objective lens: Apo TIRF 60XC (NA1.49), ND: 8, Interval: 15 sec



ORCA-FusionBT

CAMERA SPECS

LOW NOISE AND EXCEPTIONAL
READOUT NOISE UNIFORMITY WITH HIGH QE



LOW READOUT NOISE

0.7 electrons rms

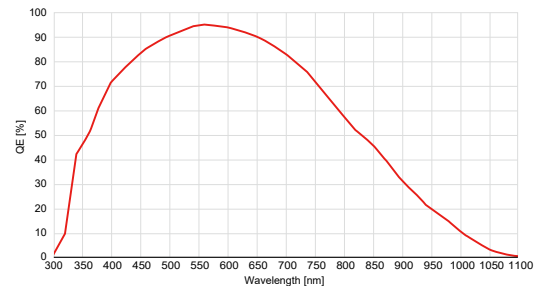
Ultra-quiet Scan

HIGH QE

95%

@550 nm

Gen III Back-illuminated sCMOS



HIGH SPEED

89.1 frames/s

@2304 × 2304 pixels (16 bit)

DSNU

0.06 electrons rms

Ultra-quiet Scan

PRNU

0.06% rms

@7500 electrons

DYNAMIC RANGE

21 400:1

Ultra-quiet Scan

HIGH RESOLUTION

2304 × 2304

5.3 Megapixels

PIXEL SIZE

6.5 μm × 6.5 μm

HAMAMATSUCAMERAS.COM

ORCA is registered trademark of Hamamatsu Photonics K.K. (France, Germany, Japan, U.K., U.S.A.)

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 your local sales representative.

● 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.

© 2020 Hamamatsu Photonics K.K.

HAMAMATSU PHOTONICS K.K. www.hamamatsu.com

Systems Division

812 Joko-cho, Higashi-ku, Hamamatsu City, 431-3196, Japan, Telephone: (81)53-431-0124, Fax: (81)53-433-8031, E-mail: export@sys.hpk.co.jp

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, Bridgewater, NJ 08807, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 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)8152-265-8 E-mail: info@hamamatsu.de

France: Hamamatsu Photonics France S.A.R.L.: 19, 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: infos@hamamatsu.fr

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

North Europe: Hamamatsu Photonics Norden AB: Torshamnsgatan 35 16440 Kista, 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 int. 6, 20020 Arese (Milano), Italy, Telephone: (39)02-93 58 17 33, Fax: (39)02-93 58 17 41 E-mail: info@hamamatsu.it

China: Hamamatsu Photonics (China) Co., Ltd.: 1201 Tower B, Jiaming Center, 27 Dongsanhuan Beilu, Chaoyang District, 100020 Beijing, P.R. China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

Taiwan: Hamamatsu Photonics Taiwan Co., Ltd.: 8F-3, No.158, Section 2, Gongdao 5th Road, East District, Hsinchu, 300, Taiwan R.O.C. Telephone: (886)3-659-0080, Fax: (886)3-659-0081 E-mail: info@hamamatsu.com.tw

Cat. No. SCAS0143E01
MAR/2020 CR
Created in Japan