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PC Recommendation for

# ORCA-Flash4.0 V3 / LT3

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Hamamatsu Photonics K.K.

This document provides the recommended PC configuration for Hamamatsu ORCA-Flash4 Series cameras and Hamamatsu [HCImage](#) software.

- [C13440-20CU](#) : ORCA-Flash4.0 V3
- [C11440-42U40](#) : ORCA-Flash4.0 LT3
- Notice
  - Optimum performance can be achieved under the conditions describe in this document, but it is not guaranteed.

# Single Camera with CameraLink

Items	Recommended
Camera	<a href="#">C13440-20CU (V3)</a>
Model	<a href="#">Dell Precision™ 5820 Tower Workstation</a>
CPU	<a href="#">Intel Xeon W-2223</a>
OS	Windows 11 / 10 Professional 64-bit
RAM	32 GB or more
Frame Grabber	<a href="#">Active Silicon AS-FBD-1XCLD-2PE4L-F</a> installed in SLOT1_PClE3x8, SLOT4_PClE3x16 or SLOT5_PClE3x4
Drivers	<a href="#">DCAM-API</a> v23.3 or later

- To achieve full speed recording at max resolution and max 25,000+ fps speed at small regions.
- These BIOS settings may need to be adjusted:
  - Disable (uncheck) SpeedStep and C-State under the Performance section.
  - Enable (check) Turbo Boost and Hyper-Threading under the Performance section.

# Single Camera with USB 3.0 (USB 3.1 Gen1)

Items	Recommended
Camera	<a href="#">C13440-20CU (V3)</a> or <a href="#">C11440-42U40 (LT3)</a>
Model	<a href="#">Dell Precision™ 5820 Tower Workstation</a>
CPU	<a href="#">Intel Xeon W-2223</a>
OS	Windows 11 / 10 Professional 64-bit
RAM	8 GB or more
Interface connector	Front-side USB 3.1 Gen1 interface connector
Drivers	<a href="#">DCAM-API</a> v23.3 or later

- To achieve full speed recording at max resolution and max 25,000+ fps speed at small regions with frame bundle.
- These BIOS settings may need to be adjusted:
  - Disable (uncheck) SpeedStep and C-State under the Performance section.
  - Enable (check) Turbo Boost and Hyper-Threading under the Performance section.

# Recommended DIY PC configuration for Single Camera

Camera Interface	Camera Link	USB 3.0	Note
<b>CPU</b>	<a href="#">Intel Xeon E5-1630 v4</a> or <a href="#">better</a>		We recommend that you use at least a single 3.2Ghz Quad (or more) Core High End CPU with a CPU Mark equal or higher than the E5-1630 v4 from this benchmark table: <a href="#">High End CPU's - Intel vs AMD</a> Frequency is more important than the number of CPU cores.
<b>OS</b>	Windows 11 / 10 Professional 64-bit		32-bit Edition is not recommended because of performance and memory size limitations
<b>RAM</b>	32 GB or more	8 GB or more	<a href="#">DDR4</a> 2400MHz or higher-speed
<b>Chipset</b>	<a href="#">Intel C610 series chipset</a> or newer		e.g. C612, C236, C422
<b>Free Slot</b>	PCIe2(3) x4 wired	PCIe2(3)	PCIe Gen2 is mandatory but Gen3 should cover Gen2.
<b>BIOS</b>	Latest		PCIe slot performance sometimes is improved in the latest BIOS. We highly recommend to adjust the following BIOS settings: <ol style="list-style-type: none"> <li>1. Disable Processor C-state_control to force C0 state for all processors.</li> <li>2. Enable Intel <a href="#">Turbo Boost</a>.</li> <li>3. Disable Intel <a href="#">SpeedStep</a> if allowed with Turbo Boost Enabled. Enable Turbo Boost may mutually exclude disabling SpeedStep.</li> <li>4. Enable Intel <a href="#">Hyper-Threading</a>.</li> </ol>

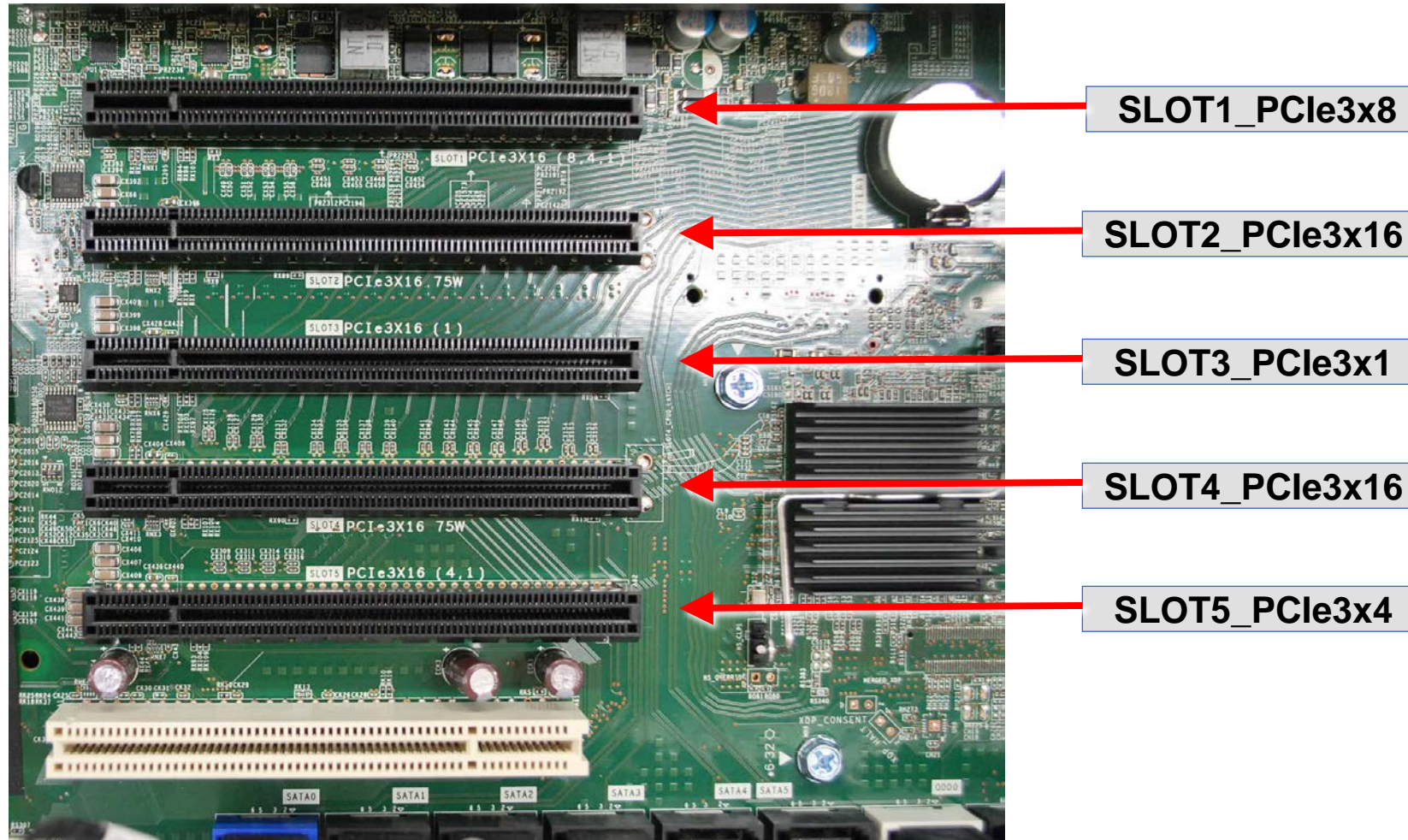
# Storage Size vs. Number of Recorded Images

Free space	Number of Recorded Images <sup>(1)</sup>	Time in seconds <sup>(2)</sup> (Approx.)		
		30 fps <sup>(3)</sup>	40 fps <sup>(3)</sup>	100 fps <sup>(3)</sup>
8 GB	1,024	34	25	10
16 GB	2,048	68 ( ~1 min )	51	20
32 GB	4,096	136 ( ~2 min )	102 ( ~1 min )	40
64 GB	8,192	273 ( ~4 min )	204 ( ~3 min )	81 ( ~1 min )
128 GB	1,6384	546 ( ~9 min )	409 ( ~6 min )	163 ( ~2 min )
256 GB	3,2768	1,092 ( ~18 min )	819 ( ~13 min )	327 ( ~5 min )
512 GB	65,536	2,184 ( ~36 min )	1,638 ( ~27 min )	655 ( ~10 min )
1 TB	131,072	4,369 ( ~72 min )	3,276 ( ~54 min )	1,310 ( ~21 min )

1. In case of 1x1 binning, full size.
2. Numbers are rounded down.
3. Depends on storage writing speed and application writing to storage performance. Writing frame rate is sometimes slower than camera capturing speed.



# Dell Precision™ 5820 Tower Workstation Slot Configuration



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