

PC Recommendation for
ORCA-Flash4.0 V3 / LT+

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Purpose

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

- [C13440-20CU](#) : ORCA-Flash4.0 V3
- [C11440-42U30](#) : ORCA-Flash4.0 LT+
- Notice
 - Optimum performance can be achieved under the conditions describe in this document, but it is not guaranteed.

Single Camera with Camera Link

| Items | Recommended |
|---------------|--|
| Camera | C13440-20CU (V3) |
| Model | Dell Precision™ 5820 Tower Workstation |
| CPU | Intel Xeon W-2123 |
| OS | Windows 10 / 8.1 Professional 64-bit |
| RAM | 32 GB or more |
| Frame Grabber | Active Silicon AS-FBD-1XCLD-2PE4L-F installed in SLOT1_PClE3x8, SLOT4_PClE3x16 or SLOT5_PClE3x4 |
| Drivers | DCAM-API v18.5 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

| Items | Recommended |
|---------------------|--|
| Camera | C13440-20CU (V3) or C11440-42U30 (LT+) |
| Model | Dell Precision™ 5820 Tower Workstation |
| CPU | Intel Xeon W-2123 |
| OS | Windows 10 / 8.1 Professional 64-bit |
| RAM | 8 GB or more |
| Interface connector | Front-side USB 3.0 interface connector |
| Drivers | DCAM-API v18.5 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

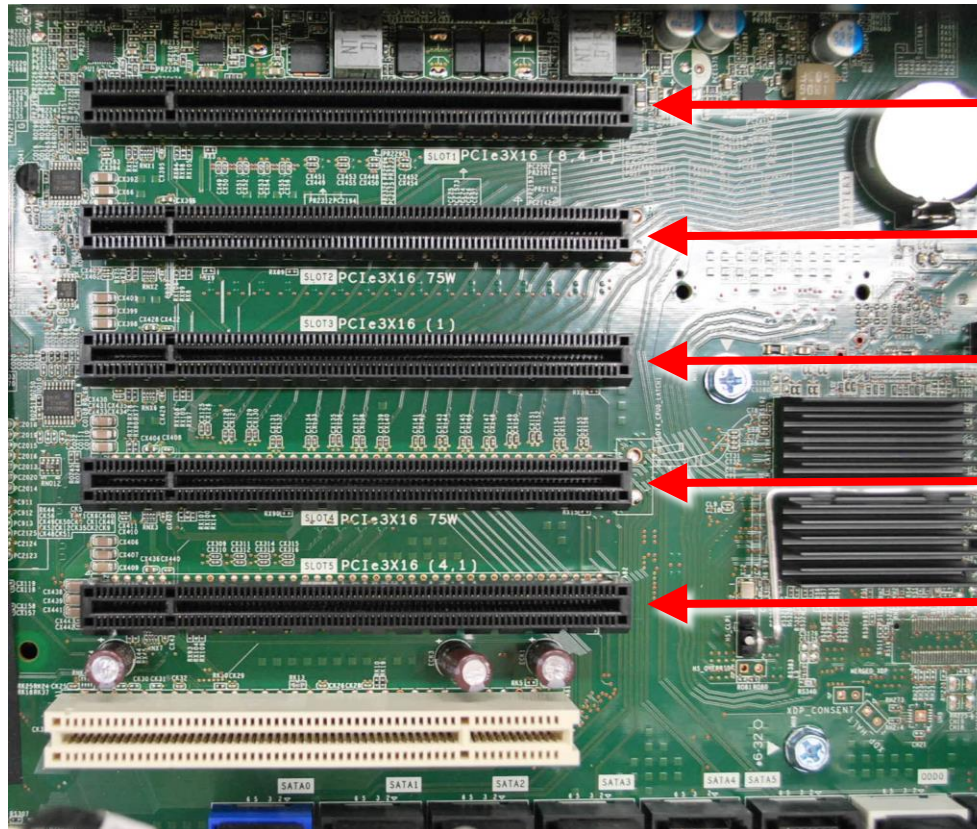
| Camera Interface | Camera Link | USB 3.0 | Note |
|------------------|---|--------------|---|
| CPU | Intel Xeon E5-1630 v4 or better | | We recommend that you use at least a single 3.2Ghz Quad (or more) Core High End CPU with a CPU Mark equal or higher than the E5-1630 v4 from this benchmark table: High End CPU's - Intel vs AMD Frequency is more important than the number of CPU cores. |
| OS | Windows 10 / 8.1 Professional 64-bit | | 32-bit Edition is not recommended because of performance and memory size limitations |
| RAM | 32 GB or more | 8 GB or more | DDR4 2400MHz or higher-speed |
| Chipset | Intel C610 series chipset or newer | | e.g. C612, C236, C422 |
| Free Slot | PCIe2(3) x4 wired | PCIe2(3) | PCIe Gen2 is mandatory but Gen3 should cover Gen2. |
| BIOS | Latest | | PCIe slot performance sometimes is improved in the latest BIOS. We highly recommend to adjust the following BIOS settings: <ul style="list-style-type: none"> 1. Disable Processor C-state_control to force C0 state for all processors. 2. Enable Intel Turbo Boost. 3. Disable Intel SpeedStep if allowed with Turbo Boost Enabled. Enable Turbo Boost may mutually exclude disabling SpeedStep. 4. Enable Intel Hyper-Threading. |

Storage Size vs. Number of Recorded Images

| Free space | Number of Recorded Images ⁽¹⁾ | Time in seconds ⁽²⁾ (Approx.) | | |
|------------|--|--|-----------------------|------------------------|
| | | 30 fps ⁽³⁾ | 40 fps ⁽³⁾ | 100 fps ⁽³⁾ |
| 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



SLOT1_PClE3x8

SLOT2_PClE3x16

SLOT3_PClE3x1

SLOT4_PClE3x16

SLOT5_PClE3x4

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