

Hardware

This section covers information about hardware required/used with our simulator.

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General overview

To use our simulator you will need the following hardware.

- Computer
- Projector
- Projection screen

We will supply you with the following

- [Camera](#)
- Tripod
- Software

Minimum requirements can be found [here](#).

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Minimum hardware requirements

To run the simulator it is **highly recommended** to meet the minimum requirement.

Computer

Processor	Intel core I5 or Ryzen 5
GPU	GTX 1070 or newer
Network connection	Only for setup
Ram	16 GB(8 GB can sometimes work)
Storage	2 GB

Camera

It is **highly recommended to use the simulator with our cameras**, although it may work with other USB cameras.

Light conditions

With our cameras, even harsh light conditions are not a big problem with proper setup.

Projector

Any projector with a resolution aspect ratio of 16:9 and 1280x720 or higher (1920x1080 is recommended) should work. We also recommend getting a projector with at least 2000 ANSI lumens.

Projection screen

The projection screen heavily depends on the desired size of the projection. Our system does not have any requirements for the projection screen, besides it being white. So any white wall or projection screen will work.

Cameras

Helion Interactive uses premium machine vision cameras from German company Basler. These cameras provide superior performance in terms of resolution, frame rate and especially reliability.

Types

We supply 2 kinds of camera

- Standard
- Premium

Main difference between these cameras is resolution and reliability in harsh light conditions and a sensor size. Detailed breakdown of each camera can be found below. Both camera kits include [Tripod](#), [Camera](#), [Lens](#), [Optical filter](#), [USB 3 Cable](#)

Standard Camera

Standard camera is a **great and reliable option for anyone who is looking to get our simulator**. Standard camera provides superior performance even in harsh light conditions.

- Resolution: 1280x720
- Maximum frame rate: 50
- Gain range: Moderate
- Light conditions: Harsh
- Port: USB 3
- Manufacture: Basler

Premium Camera

Premium camera offers premium experience. **Full HD output, 100+ maximum frame rate and greatly configurable gain and a bigger sensor size**. This camera excels in very harsh light competition in comparison to other cameras in the market. Camera's lens has configurable aperture. The camera is ideal for organizations and users who have bad light conditions or demand premium experience.

- Resolution: 1920x1080
- Maximum frame rate: 160
- Gain range: Large
- Light conditions: Very harsh
- Port: USB 3

- Manufacture: Basler

Note that most computers cannot get 160 fps from the camera in FullHD resolution. This is the limitation of the USB ports.

Breakdown

Camera

	Standard	Premium
Maximum resolution	1280x720	1920x1080
Maximum frame rate	50	160
Gain range	Moderate	Large
Light condition	Harsh	Very harsh
Port	USB 3	USB 3
Manufacturer	Basler	Basler

Lens

	Standard	Premium
Focus ring	Yes	Yes
Aperture ring	Yes	Yes
Focal length	6mm	6mm
Optical filter	Yes	Yes