

Simulation Learning System with Virtual Reality (SLS with VR): Computer and VR Hardware Specs

Minimum Computer Specifications

These are the minimum specifications for a computer to run the SimX Moderator application:

- Intel® Core i5 processor
- 8GB RAM
- More than 5GB available HDD space
- Intel UHD Graphics
- No more than FHD (1920x1080) display
- At least 13” display

Recommended Computer Specifications and Features

Combined with the minimum specifications detailed above, these are recommended (though not required) specifications for a computer to run the SimX Moderator application:

- Intel Core i7 processor
- More than 20GB available HDD space
- Intel Iris XE Graphics
- 2-in-1 laptop
 - 2-in-1 laptops allow facilitators to easily moderate cases in tablet mode while standing near the simulation play space.
- No more than 15” display
 - Laptops with smaller displays are lighter-weight and make moderating cases while standing easier.
- USB-C port
 - The USB-C port will make charging your laptop easier and allow for connecting peripherals to install updates.
- HDMI port



- The HDMI port will allow you to easily connect projectors or TVs to your laptop; alternatively, you can simply get an HDMI adapter for your USB-C port.
- Windows 10 Professional
 - Many institutions require the Professional version of Windows 10 for IT management purposes. If in doubt, consult with your local IT staff.

VR Hardware Specifications

Currently, SimX recommends the use of wireless multiplayer VR systems to enable the best possible experience. This includes the following:

- Oculus Quest for Business (Quest 1 is supported, and Quest 2 was released 10/2020)
- Vive Pro Business Edition with Wireless Adapter (released 4/2018)

Due to flexibility, affordability, and ease of use, we strongly recommend use of the Oculus Quest for Business. We will continue to explore newer hardware as it comes to market and add to the list as appropriate.

Both systems allow for a wireless multiplayer experience, but there are some key differences:

Oculus Quest

- Unlimited co-located multiplayer support
- Standalone headset (no PC needed)
- Currently ~\$800 per Oculus for Business Quest 2 device and ~\$180 per year per device for the Oculus for Business software (after the first year)
- “Inside-out” tracking system – player location is tracked using cameras on the headset and the controllers; no other hardware is needed.
- 25’ x 25’ maximum play space, best to use enclosed spaces with matte surfaces.
- **NOTE:** The Oculus Quest consumer edition is supported for use with SimX, but we recommend the Enterprise/Business Edition due to the additional security, support, and device manager features that come with it.

Vive Pro Business Edition with Wireless Adapter

- Co-located multiplayer limited to 3 users in a shared physical space



- Headset requiring “gaming”-level PC with dedicated graphics card and space for Wireless Adapter card
- Addition wireless receiver mounted to headset with portable wearable battery
- Currently ~\$6500 per user for the headset, PC, and all accessories needed
- “Outside-in” tracking system – player location is tracked using base stations that must be mounted on tripods or walls at the edges of the play space
- 28’ x 28’ maximum play space, but possibly larger; best to use spaces with non-reflective surfaces

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