SCW

Technical Info: Viewstation & Remote Viewing Requirements
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PC Hardware Specifications

As HD and even UHD 4K cameras become more and more commonplace the need for stronger computer hardware to view multiples of these high quality streams increases.

SCW recommends the following for our Viewstation CMS software - these recommendations should serve as a guideline.   There are many variables that can change the need to either meet or exceed these recommended specifications, including your camera resolutions, how many cameras you plan to stream, and how often you plan to watch them.

For example, the specifications of your computer matter a lot more if you're setting up a constant viewing platform like a guard station or front desk and matter less if you're just occasionally wanting to look at your cameras for short periods of time.

Recommended requirements: At least a 4th gen (or newer) quad core i5 with 8GB of RAM and an Intel integrated HD graphics processor.   The PC should be wired to a 1Gbps switch/network.

Please check the following reference configurations.
Reference specs are for Viewstation 1.2.0 (updated March 2019) which enabled GPU decoding for Windows.

CPU/Computer	Core i7-4790 / Intel HD 4600 / 16GB RAM	Core i7-6700 / Intel HD 630 / 8GB RAM	Core i5-7500 / Intel HD 630 / 8GB RAM
h.264 GPU Enabled			
D1 (720x480)	64 Streams	64 Streams	53 Streams
720p (1280x720)	64 Streams	55 Streams	42 Streams
1080p (1920x1080)	38 Streams	27 Streams	19 Streams
4MP (2592x1520)	30 Streams	20 Streams	15 Streams
4K (3840x2160)	10 Streams	7 Streams	5 Streams

CPU/Computer	Core i7-4790 / Intel HD 4600 / 16GB RAM	Core i7-6700 / Intel HD 630 / 8GB RAM	Core i5-7500 / Intel HD 630 / 8GB RAM
h.265 Standard (NO GPU)			
D1 (720x480)	34 Streams	30 Streams	25 Streams
720p (1280x720)	21 Streams	19 Streams	15 Streams
4MP (2592x1520)	6 Streams	5 Streams	3 Streams
4K (3840x2160)	2 Streams	2 Streams	1 Streams
H.265 GPU Enabled			
D1 (720x480)	51 Streams	50 Streams	45 Streams
720p (1280x720)	43 Streams	42 Streams	35 Streams
1080p (1920x1080)	27 Streams	24 Streams	19 Streams
4MP (2592x1520)	20 Streams	19 Streams	15 Streams
4K (3840x2160)	8 Streams	7 Streams	5 Streams

Other Hardware Considerations

Other factors to consider when sourcing hardware for remote viewing is whether you are purchasing a desktop or laptop, Windows or Mac, and more. SCW highly recommends a Windows desktop computer for the best experience possible.

Desktops computers are built for constant speed and power delivery. The space and cooling fans inside desktops allows the more powerful CPUs to maintain their top speeds for near indefinite periods of time.

Modern laptops are generally built to be thin with cool temps and low voltage processors. These low voltage CPUs feature the ability to jump up to high speeds but due to the lack of space and cooling generally can not withstand those speeds for very long and they begin to throttle the CPU down to keep temperatures low. Other factors can also affect laptop viewing such a power plans, whether you're on battery or plugged in, and more.

Network

Another factor to consider is your network. For internal / local network use it's recommended your computers be wired to the network rather than using Wi-Fi. Be sure that the network features 1Gbps equipment throughout.

If you are viewing your system from away from the location over the internet you'll have to also factor in your internet speed, especially the internet speed at the location of the system.

Internet speeds come in both download speeds and upload speeds. Download speeds are the most well known and advertised, that speed is used when you download a file/etc from the internet. Upload speeds are used when you send something to or over the internet, for example, uploading photos to the cloud, or sending security camera footage to someone viewing over the internet.

In general, download speeds are significantly higher than upload speeds. Upload speeds are rarely advertised and often you have to check the fine print to see the speed. For example, a nationwide ISP offers 940Mbps download, but the upload is currently 35Mbps. 35Mbps would top your internet at sending around ~5 4K streams at h.265 with nothing else using it.

To determine your internet speeds you can go to www.speedtest.net and check the upload speed. For the client viewing remotely the download speed is the most important spec.

Speedtest.net result.

Conclusion

If any of these specifications or info seems daunting - please do not hesitate to contact SCW. Our experience sales and support representatives can point you in the right direction so that you get the experience you need from your remote viewing platform.

Sales: 828-483-4237
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We're also available via live chat at www.getscw.com or by emailing hello@getscw.com