

## EndoVision 19

### SYSTEM REQUIREMENTS

The System Requirements describe minimum standards for using EndoVision. Requirements can vary significantly depending on workload and other software being used. Exceeding the minimum standards may result in better system performance.

For help planning, purchasing, and supporting computer hardware and network systems, contact TechCentral by Henry Schein One (1-877-483-0382) or other qualified integration specialists. (Customer Support does not specialize in computer hardware and network systems.)

System requirements for third-party products should be verified with the issuing vendor.

Over time, system requirements change. For the latest system requirements, please visit [www.EndoVision.com](http://www.EndoVision.com).

### Notes & Considerations

1. Over time, system requirements change. For the latest system requirements, please visit [www.endovision.info/support/requirements](http://www.endovision.info/support/requirements).
2. For those who want to run EndoVision on existing hardware, using hardware that does not meet the recommendations in this document can negatively affect the performance and stability of the software. Please contact us if you have any questions regarding how EndoVision will perform on existing systems or systems you are considering purchasing.
3. When purchasing new hardware, make sure it meets or exceeds the recommendations in this document to successfully run EndoVision. ***Exceeding the minimum standards may result in better system performance.***
4. Your choice of a technician is at least as important as your choice of hardware and systems. The performance and stability of your software and hardware are tied to how well your systems are configured and installed. Please make sure your technician follows the guidelines below as well as our installation guide. Your hardware technician may contact us for assistance.
5. If you plan to run other software on these systems, please refer to the specifications published by those other software companies. If there appears to be a conflict, contact us and the other company, and let us help you resolve the conflict.
6. To ensure acceptable network performance, offices with multiple locations need to implement one of the following in their network:
  - 250 mbps (minimum) of synchronous bandwidth for each location if running in a client/server environment where the full EndoVision client software is installed on the workstations.
  - Microsoft Remote Desktop Services or Citrix XenDesktop.
7. Microsoft has discontinued support for Windows XP. Windows XP is no longer recommended or supported for use with EndoVision.

Last Modified: February 2024

## Workstation and Server (Up to 4 clients)

Hardware/Software	Minimum Required
CPU	Intel Core i5 – 3 GHz or faster
RAM	8 GB (DDR4 2133 MHz highly recommended)
Storage	Server – 1 TB or larger internal drive
Video	1600 x 900 or higher resolution, with 4 MB or more video memory
Operating System	Windows 8.1, Windows Server 2016, Windows Server 2019, or Windows 10 Pro/Enterprise
Media drive	DVD
Audio	Optional
Network Card	1 Gbps
Monitor	20" or larger
SAP SQL Anywhere EndoVision uses an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 17 – Highly Recommended Version 16

### Notes:

- If your office plans on running other software programs at the same time, such as those for digital radiography and/or intra-oral cameras, it is highly recommended that hard drive size be increased. Please consult with your imaging software company and/or hardware provider for additional details and recommendations.
- Antivirus software is strongly recommended.
- Please consult with your hardware specialist on what other software should be installed.
- Please be aware that your hardware specialist is responsible for providing any necessary exclusions for antivirus programs (Windows Defender, DEP, and so forth). Those products running in real time can prevent HSPS software from running properly.
- For requirements regarding i-Cat integration, see "i-Cat Integration" on page 7 of this document.
- When setting up the server, please keep in mind that full read/write permissions are required for the root share and subfolders that the HSPS product is installed on. The same permissions are required for any digital X-ray software folders that may be bridged to EndoVision.

## Laptop Computers or Tablet PCs

Hardware/Software	Minimum Required
CPU	Intel Core i5 – 3 GHz
RAM	8 GB
Storage	500 GB or larger
Video	1600 x 900 or higher resolution, with 4 MB or more video memory
Operating System	Windows 8.1, Windows Server 2016, Windows Server 2019, or Windows 10 Pro/Enterprise
Media drive	DVD
Audio	Optional
Network Card	1 Gbps
Monitor	15" or larger
SAP SQL Anywhere EndoVision uses an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 17 – Highly Recommended Version 16

## Database Server (Dedicated)

### Notes:

- Four or more workstations (clients) require a dedicated server.
- You must have a separate database server in conjunction with a Citrix® server or Microsoft® Remote Desktop server. See the "Database Server" section.

Requirement	Minimum Required
CPU	<b>1-10 clients:</b> Dual Core Xeon 2.6 GHz or Intel Quad Core Xeon 1.6 GHz (or equivalent) <b>10-25 clients:</b> Xeon 3.2 to 3.6 GHz (or equivalent) <b>25+ clients:</b> Dual Xeon 3.6 GHz (or equivalent)
RAM	8 GB (DDR4 2133 MHz highly recommended)
Storage	3 TB or larger redundant storage, with a minimum of RAID 1
Video	1600 x 900 or higher resolution, with 4 MB or more video memory
Operating System	Windows Server 2016 or Windows Server 2019
Network Card	1 Gbps
Monitor	17" or larger
SAP SQL Anywhere EndoVision uses an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 17 – Highly Recommended Version 16

### Notes:

- These recommendations assume that the server is running the Sybase SQL database engine exclusively. If the server is used to run any other programs (this is strongly discouraged), the CPU, hard drive size, RAM, and operating system may need to be changed. Degraded performance will result if other large programs, such as Microsoft Exchange Server, are installed on the same server

machine. The server software should not be installed on a domain controller or on the same server where Terminal Services is installed for user connections. If you install other products, performance will be degraded. Please consult with your hardware provider for additional specifications.

- The server should never be configured to run screen savers or programs in the background.
- Do not install this product on Windows Small Business Server, as performance problems will result.
- Network printers should not be attached or shared through the file server. Consult your hardware technician on the proper use of network print servers.
- When setting up the server, please keep in mind full read/write permissions are required for the root share and subfolders that EndoVision is installed on. The same permissions are required for any digital X-ray software folders that may be bridged to EndoVision.
- Please be aware that your hardware specialist is responsible for providing any necessary exclusions for antivirus programs (Windows Defender, DEP, and so forth). Those products running in real time can prevent EndoVision from running properly.
- Sybase Sql Anywhere is 64-bit compliant; running the database on a 64-bit dedicated server is supported.
- Multiple hard drives set up for RAID 10 is suggested.

## Citrix Server / Microsoft Remote Desktop Server

Requirement	Minimum Required
CPU	Intel Quad Core Xeon 3.0 GHz or faster
RAM	12 GB (DDR4 2133 MHz highly recommended)
Storage	500 GB or larger internal drive
Video	1600 x 900 or higher resolution, with 4 MB or more video memory
Operating System	Windows Server 2016 or Windows Server 2019
Network Card	1 Gbps
Monitor	17" or larger
SAP SQL Anywhere EndoVision uses an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 17 – Highly Recommended Version 16

### Notes:

- Each server should hold 30 – 35 users if running EndoVision alone. Running additional products may reduce the number of users per server.
- Bandwidth should be 78kb per Citrix/Terminal Server client at the server location and 78kb per user at remote locations.
- Local – static-print queues, using built in Microsoft services, are highly recommended for thin client environments.

## Wide Area Networking (for Multiple Office Connections)

High-speed Internet connectivity is recommended for access to software updates and all available services. Wireless networks are to be used at your own risk due to potential interference from X-ray machines and other devices. Wireless networks require professional installation to ensure appropriate security and to provide a reliable signal. You and your computer technician(s) are responsible for the setup and maintenance of your WAN. A Broadband connection with VPN-secured tunnels is recommended for EndoVision not the WAN administration.

**WARNING:** Many technicians who are experts at installing personal computers and local networks do *not* have the required skill set to install and maintain a Wide Area Network (WAN). Use a computer technician that has expertise with WANs, VPNs, Citrix and Microsoft® Remote Desktop Server.

## Notes:

- Citrix or Microsoft Remote Desktop Server are the recommended solutions for WANs but require a Citrix server / Windows Terminal Services server certified technician to install and configure. See the “Citrix Metaframe Server / Microsoft Terminal Services Server” section.
- DSL is NOT recommended. DSL is often not able to guarantee consistent throughout depending on location and delivery quality. Check with your DSL service provider to confirm that:
  - Service is reliable. In some areas, DSL can fail several times a day, requiring restarting of the network and resulting in significant downtime.
  - Performance is consistently at 1.1 megabits per second or higher. Most DSL providers supply DSL quality that varies widely. In these cases, performance may occasionally meet the 1.1 megabit per second specification as its “peak” but often or usually will not. In fact, performance can degrade to 10 percent or less of the specification.

## Remote Access

- Microsoft Remote Desktop (recommended)
- LogMeIn.com
- GoToMyPC.com

## Notes:

- Use only secure remote access to EndoVision through the Internet. Options include Remote Desktop or Citrix.
- Have your hardware technician consult with HSPS on which of the above options you should use.

## DataBackup

Any backup program that meets your needs and is compatible with Windows 8.1, Windows Server 2016, Windows Server 2019, or Windows 10 Pro/Enterprise is acceptable.

Backing up your data daily is critical and is the responsibility of the individual customer. A 5-day rotation of your backup media is strongly recommended.

## Notes:

- Your system should be capable of executing a backup script. The amount of additional information you need to back up, such as images, will affect your selection of a backup system.
- The Sybase database service must be stopped before backup, and then restarted after backing up. Running incremental backups is not recommend. (Incremental backups generally use modified date to determine what to back up, and the database modified date is not updated unless the Sybase service is stopped).
- Recommended Backup Systems: Off-site backup, Online backup

## ClinicalVision

- 1600 x 900 or higher monitor resolution is recommended
- USB Voice Recognition Headset for the Voice Activated Charting

## Microsoft Outlook

EndoVision integrates with Office 365.

## Electronic Claims

- Henry Schein One eClaims for Dental Claims
- PayerPath (Allscripts) for Medical Claims

### Notes:

- Sending attachments requires a separate sign up.
- A high-speed Internet connection is required.

## Touchscreens

Touchscreen displays/monitors are not recommended (unless all touchscreen drivers have been disabled). For more information, speak with a Henry Schein One representative.

## Printers – General Use

For the typical dental office, Henry Schein One recommends installation of two printers on the network: a laser printer for all insurance forms, letters, cards, coupons, envelopes, statements, reports; and a color printer for tooth and perio chart printouts. Henry Schein One does not recommend using an inkjet printer as your primary printer. Choose a printer based on your practice needs. Every printer has a “page-per-minute” speed and an approximate number of pages per month which should be evaluated, according to your practice’s needs.

### Notes:

- Whenever possible, load only Windows native drivers. Where this isn’t possible, load only the manufacturer’s drivers and not all of the applets that are often part of the device installation disk.
- Inkjet printers are not recommended as the office’s only printer.
- EndoVision does not support any type of remote procedure call printing such as using redirected printers, redirected printer queues, or dynamically mapped printers. Printers must either be connected locally to the computer workstation or use a local printer queue.

**Note:** It is possible to configure a local printer to use a printer port that communicates through a VPN.

## Printers – Labels (Optional)

Dymo® LabelWriter™ 450

**Note:** If the office plans to print single address or chart labels, a label printer is recommended.

## Scanners

Any 32-bit fully TWAIN-compatible scanner.

**Important:** Scanner must be 32-bit TWAIN compliant.

## Check Printing

Only PBHS checks, which are field-matched checks, are compatible. They are laser, 2-voucher checks that have been pre-printed by PBHS with the check number in the upper-right corner and with the routing number, account number, and check number at the bottom.

**Note:** The margins for checks cannot be adjusted in the system. If you use checks from other vendors, you do so at your own risk and expense. From some vendors (such as Intuit, Quickbooks, Peachtree or Office Depot) you may request samples to test printing with.

## Signature Pads

Topaz:

- Serial Ringing1!Model No. T-S460-B-R
- USB Model No. T-S460-HSB-R

### Notes:

- Wireless Topaz signature pads are not supported.
- Both the serial Topaz signature pads and the USB models are supported if you are running Citrix or Microsoft Remote Desktop servers in a remote environment.
- The serial Topaz signature pads require a USB to Serial adapter (and related software driver to be installed on the local computer).

## Digital X-Ray Imaging

The following digital X-Ray imaging solutions are supported: ClioSoft from Sota Imaging, DentalEye / MiPACS, Dentsply's NI-DX, Dexis, DMD/Apteryx/Instrumentarium, E-Woo Technologies EasyDent Viewer, Gendex DenOptix, InVivoDental from Anatomage, Julie QuickImage, Kodak Trophy RVG, Mediadent, MyRay's rayMage, Patterson Imaging, Planmeca's DIMAXIS, Planmeca's Romexis, Practice Works, Schick Technologies' CDR, Sirona (Sidexis), SOPRO Imaging, Soredex Digora, TigerView / TigerDDS, Visix Imaging Software, or XVWeb.

## i-Cat Integration

i-CAT Model	Serial Number Series	EndoVision to DEXIS to i-CAT Integration Option	Direct Patient Scheduling via EndoVision iCATPoller	Imaging Viewing Platform
17-19 ("Platinum" or "Next Generation")	ICU08XXXX	Yes	iCATVisionQ	iCATVision, Invivo, or TxStudio
9-17 ("Precise")	NU01XXXX	Yes	iCATVisionQ	iCATVision, Invivo, or TxStudio
FLX	ICU09XXXX	Yes	Smartscan Studio Manager	TxStudio
FLXmv	NU02XXXX	Yes	Smartscan Studio Manager	TxStudio

i-CAT minimum software requirements:

- i-CATVision 1.8.1
- i-CATTransfer 2.0.0.1
- Xoran 3.1.62

**Note:** Please make sure your i-Cat acquisition computer has the latest i-Cat software. Please contact Imaging Sciences support at 215-997-5666 ext. 5 for more information.

## Vital Signs Monitors

- Mortara Surveyor S12/S19
- Criticare:
  - ComfortCuff
  - Poet line
  - Scholar line
  - nGenuity\*
- Welch Allyn:
  - Spot LXi
  - Spot Vital Signs
  - VSM 5200
  - VSM 300
- Datascope: Any monitor that supports DIAP
- Phillips VS Series:
  - Network
  - Serial
- GE: Dash 2000
- Edan:
  - iM50\*
  - iM60\*
  - iM70\*
  - iM80\*

\* Offers integrated CO<sub>2</sub> monitoring.

### Notes:

- RS-232 (serial port) is the only supported connection for the Mortara Surveyor (Ethernet is not supported).
- Most Criticare monitors that are capable of transmitting a CSV formatted file through a serial port will work with the Henry Schein One bridge.
- Criticare Model 506N3 will not work with the HSPS bridge and is not supported.
- Criticare now supports Bluetooth adapters. Contact Criticare support at 800-453-2697 for more information.
- A certified null modem cable of no more than 18 feet is required for communication with all devices (with the exception of Criticare nGenuity using Bluetooth adapters)
- EndoVision does not officially support integration with rebranded Edan monitors. Customers may try to use a rebranded Edan monitor with EndoVision, but they do so at their own risk—it may or may not integrate properly or fully.



© 2024 Henry Schein One. All Rights Reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrievable system, or translated into any language in any form by any means without the written permission of Henry Schein One. Content subject to change without notice.

Henry Schein One makes no representations or warranties with respect to the contents or use of this documentation, and specifically disclaims any express or implied warranties of title, merchantability, or fitness for any particular use. All contents are subject to change. Henry Schein One, the Henry Schein One logo, and EndoVision are trademarks or registered trademarks of Henry Schein One. Other products are trademarks or registered trademarks of their respective owners.