

EndoVision 15.0 SYSTEM REQUIREMENTS

Notes & Considerations

1. With each Henry Schein Practice Solutions update, these hardware, networking, and system software recommendations may change.
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 usability 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.
4. Your choice of a technician is at least as important as your choice of hardware and systems. Ultimately, the performance and stability of your software and hardware are intimately 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. We strenuously request that you discourage the slightest deviation from what we recommend. We urge you to make sure that your technician knows and follows these system requirements.
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. Microsoft has discontinued support for Windows XP. Windows XP is no longer recommended or supported for use with EndoVision.
7. Microsoft has discontinued support for Windows Server 2003. Windows Server 2003 is no longer recommended or supported for use with EndoVision.

Server (Non-dedicated) OR Workstation (Single or Multiple)

Hardware/Software	Recommendation
CPU	Intel Core i5 – 3 GHz
RAM	8 GB
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 7 Professional 64-bit, Windows 8.1, Windows Server 2008 64-bit, Windows Server 2012, or Windows 10
CD-ROM	DVD
Audio	Optional
Network Card	100/1000 Mb
Monitor	20" or larger
SAP SQL Anywhere EndoVision utilizes an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 16 – Highly Recommended Version 12 – Required <ul style="list-style-type: none"> For new customers – The most current supported version of Sybase SQL Anywhere is sold and installed. Version 11 – Not Supported Version 9 – Not Supported <ul style="list-style-type: none"> Please contact your sales representative for upgrade options.

Comments:

- 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 to 1TB or higher. Please consult with your imaging software company and/or hardware provider for additional details and recommendations.
- We recommend that you exclusively use servers and workstations with true Intel processors (AMD and Cyrix, for example, may cause incompatibilities).
- Antivirus software is recommended in all cases.
- 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 10 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

Hardware/Software	Recommendation
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 7 Professional 64-bit, Windows 8.1, Windows Server 2008 64-bit, Windows Server 2012, or Windows 10
CD-ROM	DVD
Audio	Optional
Network Card	100 / 1000 Mb
Monitor	15" or larger
SAP SQL Anywhere EndoVision utilizes an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 16 – Highly Recommended Version 12 – Required <ul style="list-style-type: none"> For new customers – The most current supported version of Sybase SQL Anywhere is sold and installed. Version 11 – Not Supported Version 9 – Not Supported <ul style="list-style-type: none"> Please contact your sales representative for upgrade options.

Comments: See previous comments.

Tablet PCs

Hardware/Software	Minimum
CPU	Intel Core 2 or higher
RAM	1 GB
Storage	200 GB
Video	1600 x 900 resolution, with 4 MB video memory
Operating System	Windows 7, Windows 8.1, Windows Server 2008, Windows Server 2012, or Windows 10
CD-ROM	Optional
Audio	Optional
Network Card	100 / 1000 Mb
Monitor	14"
SAP SQL Anywhere EndoVision utilizes an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 16 – Highly Recommended Version 12 – Required <ul style="list-style-type: none"> For new customers – The most current supported version of Sybase SQL Anywhere is sold and installed. Version 11 – Not Supported Version 9 – Not Supported <ul style="list-style-type: none"> Please contact your sales representative for upgrade options.

Comments: See previous comments.

Server (Dedicated)

Notes:

- Four or more workstations (clients) require a dedicated server.
- You must have a separate database server in conjunction with a Citrix® Metaframe™ server or Microsoft® Terminal Services™ server. See the “Database Server” section.

Requirement	Recommended
CPU	1-10 clients: Dual Core Xeon 2.6 GHz or Intel Quad Core Xeon 1.6 GHz 10 -25 clients: Xeon 3.2 to 3.6 GHz 25+ clients: Dual Xeon 3.6 GHz
RAM	8 GB
Storage	3 TB or larger redundant storage
Video	1600 x 900 or higher resolution, with 4 MB or more video memory
Operating System	Windows Server 2008 64-bit or Windows Server 2012
Network Card	32-bit PCI Plug and Play adapter (1000 Mb)
Monitor	17” or larger
SAP SQL Anywhere EndoVision utilizes an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 16 – Highly Recommended Version 12 – Required <ul style="list-style-type: none"> • For new customers – The most current supported version of Sybase SQL Anywhere is sold and installed. Version 11 – Not Supported Version 9 – Not Supported <ul style="list-style-type: none"> • Please contact your sales representative for upgrade options.

Comments:

- 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. Please consult with your hardware provider for additional specifications.
- We recommend that you exclusively use servers with a genuine Intel processor.
- A dedicated server must be dedicated. This means that the server should NOT be used as a workstation to run other programs and 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. 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.
- 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, so running the database on a 64-bit dedicated server is supported.

Database Server

Note: You must have a separate database server in conjunction with a Citrix Metaframe server or Microsoft Terminal Services server.

Requirement	Recommended
CPU	1-10 clients: Dual Core Xeon 2.6 GHz or Intel Quad Core Xeon 1.6 GHz 10 -25 clients: Xeon 3.2 to 3.6 GHz 25+ clients: Dual Xeon 3.6 GHz
RAM	12 GB
Storage	1 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 2008 64-bit or Windows Server 2012
Network Card	100/1000 Mb network card
Monitor	15" or larger
SAP SQL Anywhere EndoVision utilizes an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 16 – Highly Recommended Version 12 – Required <ul style="list-style-type: none"> For new customers – The most current supported version of Sybase SQL Anywhere is sold and installed. Version 11 – Not Supported Version 9 – Not Supported <ul style="list-style-type: none"> Please contact your sales representative for upgrade options.

Comments:

- Multiple hard drives set up for RAID 10 is suggested.
- See previous comments.

Citrix Metaframe Server / Microsoft Terminal Services Server

Requirement	Recommended
CPU	Intel Quad Core Xeon 2.0 GHz Citrix load balancing module
RAM	12 GB
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 2008 64-bit or Windows Server 2012
Network Card	1000 Mb network card
Monitor	17" or larger
SAP SQL Anywhere EndoVision utilizes an OEM version of SAP's SQL Adaptive Server Anywhere for data management.	Version 16 – Highly Recommended Version 12 – Required <ul style="list-style-type: none"> For new customers – The most current supported version of Sybase SQL Anywhere is sold and installed. Version 11 – Not Supported Version 9 – Not Supported <ul style="list-style-type: none"> Please contact your sales representative for upgrade options.

Comments:

- Each server should hold 30 – 35 users.
- 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.

Networking

100baseT or 1000baseT (Switch)

Wide Area Networking (for Multiple Office Connections)

You and your computer technician(s) are responsible for the final decisions about and maintenance of your WAN. The following recommendations for WANs cover EndoVision not the WAN administration:

- Point-to-Point dedicated T1 phone lines (provided by local phone company).
- T1-capable IP router at each location.
- Installation and setup by the phone company.

WARNING: Wide Area Networking (WAN) is a specialty. Most technicians who are experts at installing personal computers and local networks do NOT have the required skill set to install and maintain a WAN. Use a computer technician that has expertise with WANs, T1s, VPNs, Citrix and Microsoft® Terminal Services™.

Comments:

- Citrix Metaframe or Microsoft Terminal Services 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.
- EndoVision requires 1.1 megabit per second bandwidth or greater for true WANs. When using "channelized" T1 lines, which use part of the line for Voice over IP (VoIP), you need to dedicate 20 of the 24 channels for data throughput. Citrix networks may be able to use considerably less depending on the architecture of that network. The recommendation is to have 78kb per Citrix/Terminal Server client at the server location and per user at remote locations. Typically, there can be 35 – 50 users per Citrix server or Terminal Services server, based upon a newer quad-core Intel Xeon server with 12 GB of RAM and a 64-bit operating system. See the "Citrix Metaframe Server / Microsoft Terminal Services Server" section.
- Point-to-Point dedicated T1 phone lines (provided by local phone company) are required. Internet T1s are not recommended as they require additional firewall protection and specialized VPN (Virtual Private Network) router hardware (which requires specialized skill sets to install and maintain). This additional protection uses up more bandwidth and doesn't provide you with the full advantages of the point to point T1 option. However, you do use an Internet T1 line, a VPN is required for full functionality of EndoVision. Internet T1s are the standard offering from Telco companies, and are less expensive. If properly set up, they can work very well. A static IP is required.
- Contact your Internet service provider to request Quality of Service (QOS) for Sybase. Sybase should have the highest priority.
- 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

Comments:

- Use only secure remote access to EndoVision through the Internet. Options include Remote Desktop or Terminal Services/Citrix.
- Please have your hardware technician consult with HSPS on which one of the above options you choose to use.

DataBackup

Any backup program that meets your needs and is compatible with Windows 7, Windows 8.1, Windows 2008 Server, Windows Server 2012, or Windows 10 is acceptable.

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

Comments:

- 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.
- Recommended Backup Systems:
 - Off-site backup
 - Online backup

ClinicalVision

- 1440 x 900 or higher monitor resolution is recommended
- USB Voice Recognition Headset for the Voice Activated Charting

Microsoft Outlook

EndoVision only integrates with 32-bit Outlook. 64-bit Outlook is not supported.

Electronic Claims

- Henry Schein E-Services for Dental Claims
- PayerPath (Allscripts) for Medical Claims

Comments:

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

Modem (Canada Only)

- For CDANet customers, an external 56k modem is required (US Robotics preferred) along with a dedicated phone line.
- Itrans is available and requires Internet access not modems.

Comments:

- Modems are not network shareable devices. Therefore, if you want to communicate from more than one workstation, you will need more than one modem.
- Recommended Modem: US Robotics 56k external modem.
- For more information, refer to the “Modem” white paper in the Installation Handbook.

Touchscreens

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

Printers – General Use

Any Windows 7 compatible printer.

Comments:

- Laser printers require 4 MB or more RAM.
- EndoVision will output in color if a color printer is available and configured properly.
- 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.

Printers – Labels (Optional)

Dymo® LabelWriter™ 450

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

Scanners

Any Windows 7 32-bit 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.

Comment: 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 Model No. T-S460-B-R
- USB Model No. T-S460-HSB-R

Comments:

- Wireless Topaz signature pads are not supported.
- If you are running Citrix or Terminal Services servers, they require serial Topaz signature pads and will not work with the USB models.

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
Classic Important: The i-CAT is scheduled for end of life/ support 2016. This will include Classic/OMSVision integration. Contact regional i-CAT sales representative for upgrade options.	ICU07XXXX	No	To Xoran (Classic-based software)	2-step process then studies can be viewed through iCATVision, Invivo or TxStudio (No viewing option with Xoran)
17–19 (also known as Platinum or Next Generation)	ICU08XXXX	Yes	iCATVisionQ	iCATVision, Invivo, or TxStudio
9–17 (also known as CB500 or i-CAT Precise)	NU01XXXX	Yes	iCATVisionQ	iCATVision, Invivo, or TxStudio
FLX	ICU09XXXX	Yes	Smartsan Studio Manager	TxStudio
FLXmv	NU02XXXX	Yes	Smartsan Studio Manager	TxStudio

i-CAT minimum software requirements:

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

Comment: 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*
 - iM80*

* Offers integrated CO₂ monitoring.

Comments:

- 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 Practice Solutions bridge.
- Criticare Model 506N3 will not work with the HSPS bridge and is not supported.
- Criticare now supports Bluetooth adapters. Please 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).

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