

The computer industry is very fast moving, with larger and faster technologies supplanting previous hardware releases within six to nine months. Some of the specifications listed may no longer be available, having been replaced with faster CPUs, larger hard-drive capacities, or more memory (RAM). Vanguard Appraisals understands how rapid the technology changes. This document is designed to be a guide when purchasing new, or upgrading existing equipment.

Some jurisdictions have implemented virtual machine servers to consolidate several servers and save in their overall hardware costs. CAMAvision software performs fine in a virtualized environment. Discuss this option with your server vendors or IT professional.

Workstation Minimum

- Intel Celeron Dual Core processor (or similarly classed AMD brand) **or faster**
- 1 GB RAM
- 60 GB Hard Drive, but this is dependent on other installed software
- Operating System¹: Windows XP, Windows Vista, or Windows 7
- Internet Explorer 8
- 64 MB Video Card, with a minimum 800x600 screen resolution support.
- CD-ROM or DVD Drive
- Mouse or other pointing device
- Connection to Windows supported printer (either via a network or direct connection)
- Monitor
- For Remote Desktop Support, at least one workstation should be equipped with one or more of the following:
 - Internet access for TeamViewer (www.teamviewer.com)
 - Internet access for Windows Remote Desktop Connection
 - Your preferred VPN solution

Please consult your IT/Mainframe technicians for additional hardware and/or software requirements.

Workstation Recommended

- Intel Core2 Duo processor (or similarly classed AMD brand)
- 2 GB RAM
- 80 GB Hard Drive, but this is dependent on other installed software
- Operating System¹: Windows XP, Window Vista, or Windows 7
- Internet Explorer 9
- 128 MB Video Card, with a minimum 1024x768 screen resolution support.
- CD-ROM or DVD Drive
- Optical Mouse
- Connection to Windows supported printer (either via a network or direct connection)
- 19" LCD Monitor
- For Remote Desktop Support, at least one workstation should be equipped with one or more of the following:
 - Internet access for TeamViewer (www.teamviewer.com)
 - Internet access for Windows Remote Desktop Connection
 - Your preferred VPN solution

Optional Equipment

- Backup device and/or DVD/CD-RW burner for backups

¹ All Service Packs, security patches and/or updates need to be applied to the respective Operating System on **each** PC (this includes network servers).

Remote Laptop Recommended

- Intel Core2 Duo processor (or similarly classed AMD brand) **or faster**
- 2 GB RAM
- 60 GB Hard Drive (dependent on amount of parcels to be stored)
- Operating System¹: Windows XP, Windows Vista, or Windows 7
- Screen resolution must support a minimum 1024x768
- 10/100 Network card
- Wireless 802.11g/n
- USB ports
- CD-ROM or DVD Drive
- For Remote Laptop Support, it should be equipped with one or more of the following:
 - Internet access for TeamViewer (www.teamviewer.com)
 - Internet access for Windows Remote Desktop Connection
 - Your preferred VPN solution

Please consult your IT/Mainframe technicians for additional hardware and/or software requirements.

Optional Laptop Equipment

- Automobile charger adapter
- External mouse and keyboard
- USB Flash Drive (2GB or larger)

Client sites

(A) File Server/Database Server Combo Minimum Specification

- Pentium Dual Core processor (or similarly classed AMD brand) **or faster**
- 1 GB RAM
- 80 GB Hard Drive (dependent on amount of parcels to be stored and if photographs are included)
- Operating System^{2,3}: Windows 2003 / 2008 Server R2
- SVGA Graphics
- DVD-ROM Drive
- USB Ports
- Printer supported by Microsoft Windows (for print server)
- Backup device
- Ethernet (10/100/1000 NIC) connectivity
- TCP/IP networking protocol
- Expansion slots (3-4)
- Relational database¹⁰

(B) Dedicated File Server Minimum Specification (database will be located elsewhere)

- Pentium Dual Core processor (or similarly classed AMD brand) **or faster**
- 1 GB RAM
- 80 GB Hard Drive (dependent on amount of parcels to be stored and if photographs are included)
- Operating System⁸: Novell Netware, Windows 2003 / 2008 Server R2
- SVGA Graphics
- DVD-ROM Drive
- USB Ports
- Printer supported by Microsoft Windows (for print server)⁴
- Backup device
- Ethernet (10/100/1000 NIC) connectivity
- Expansion slots (3-4)

(C) Dedicated Database Server Minimum Specification

- Pentium Dual Core processor (or similarly classed AMD brand) **or faster**
- 1 GB RAM
- 80 GB Hard Drive (dependent on amount of parcels to be stored and if photographs are included)
- Operating System⁸: Windows 2003 / 2008 Server R2
- SVGA Graphics
- DVD-ROM Drive
- USB Ports
- Backup device
- Ethernet (10/100/1000 NIC) connectivity
- TCP/IP networking protocol
- Expansion slots (3-4)
- Relational database¹⁰

³ All Service Packs, security patches and/or updates need to be applied to the respective Operating System.

⁴ Laser printers, especially color lasers, are more desirable over other InkJet printers for professional looking reports.

¹⁰ CAMA-X **includes** a relational database called Firebird which has proven to be very fast and stable. Microsoft SQL Server is supported, but may require licenses to be purchased from a software vendor.

Optional Recommended Database Server Equipment

- RAID hard drive configuration

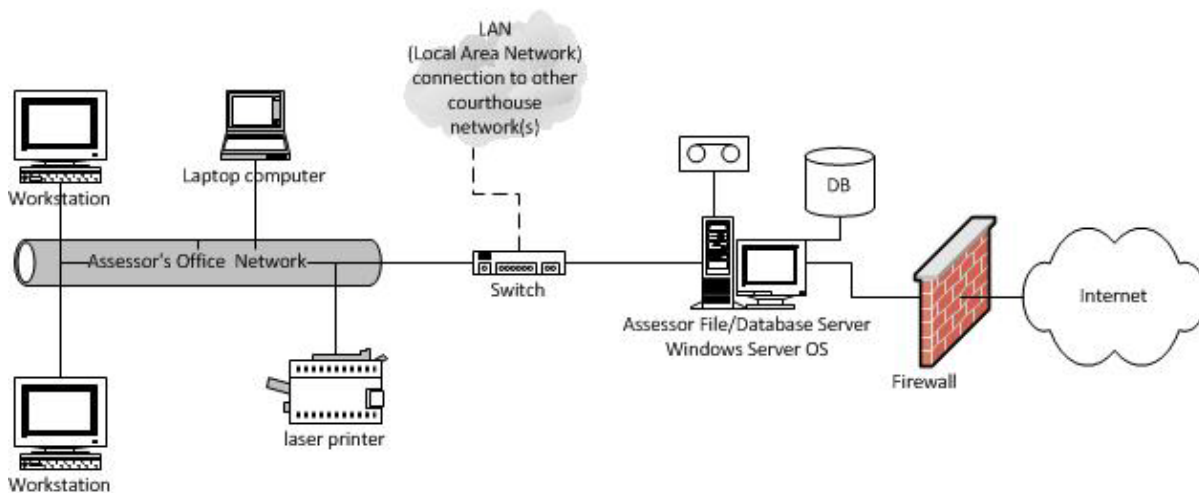
Estimates of hard disk capacity should not be conservative. **Ideally this server should be solely dedicated as the Database Server.** However, if budgets do not allow for separate file and database servers, then allowances for a higher end server should be considered.

Sample Networking Configurations

The following examples illustrate a couple simple networking configurations for CAMAvision. Note that the A, B, and C configuration letters refer to the file/database server specifications outlined above.

Sample one shows a single PC sharing both the File Serving and Database Serving responsibilities. This computer must be running Windows 2003 Server, or Windows 2008 Server R2.

Sample Network using single File
Server/Database configuration
(A)
(for Windows network only)



Example 2 illustrates a dedicated File Server PC and Database Server combo. In this case, the File Server can be Windows 2003, or Windows 2008 R2 Server. The dedicated database server can be Windows 2003, or 2008 Server OS.

