



## HARDWARE AND SOFTWARE REQUIREMENTS

### PENTAGON 2000SQL FOR WINDOWS

#### File Server / Database Server

- 64 Bit Processors, Dual/Quad Core recommended, 3.2 GHZ or better (Xeon, i5, i7 processors recommended)
- 12 GB of RAM or better
- Two or more 350 GB or better fast SCSI / SAS hard disk drives, number of drives depends on raid selection (15,000 RPM or faster with caching).  
[Second drive will be used as the backup]
- Fast SAS/SCSI/raid controller (with fast caching)
- Raid 1 configuration recommended, Raid 10 is the preferred configuration if budget allows (Raid 10 requires minimum of 4 drives)
- UPS battery to protect file server (American Power Conversion)

#### Workstations – Local network

- Pentium 4, 3.2 GHZ or **better**
- 2 GB RAM or **better**
- 20GB hard disk drive or **better**
- SVGA/XGA Color Monitor (0.28 dot pitch)
- 17"-19" monitor or better recommended (Minimum of 1024/768 resolutions, higher resolution recommended)
- Operating system: Windows 7 Professional.

#### Workstations – Remote Access

Remote Desktop or Citrix Client can be used by various applications; Windows PC, Mac. iPod, etc., the requirement and performance are mostly based on the internet bandwidth, speed and server capacity the client is connected to.



## File Server Software & Hardware

- Windows Server 2008 R2 Standard/Enterprise/ Datacenter
- Twisted pair 32bit / 1GB or better Ethernet cards
- Twisted pair switch with sufficient ports
- Cabling - Ethernet level 5 or 6 twisted pair

## Database Server Software & Hardware

- Windows Server 2008 R2 Standard/Enterprise/ Datacenter
- Twisted pair 32bit /1GB or better Ethernet cards
- Twisted pair switch with enough ports

## Printers – Forms & Reports

- Any LaserJet printer pcl6 compatible (hp pcl6 recommended)

## Printers – Bar-Code Labels

- Any “Zebra Technologies” bar code printer using the ZPL printer language only

## Backup

- Any tape drive with the capacity of the hard drive, or other backup method
- SQL database Backup program

## SQL Engine

- Microsoft SQL Server 2008 R2 Standard/Enterprise with appropriate number of Users installed on Windows 2008 R2 File Server or Database Server with SQL SP update.

## Imaging Module – Supported Scanners

- Any Twain compatible scanner with automatic feeder
- For large capacity imaging, dedicated Drive recommended for store imaging.



## Recommended Server Configurations

### Medium to large scale installations (20 users and more)

#### File server(s)

- Operating System: Windows Server 2008 R2 Standard/Enterprise/ Datacenter

#### Database Server(s)

- Operating System: Windows Server 2008 R2 Standard/Enterprise/ Datacenter
- MS SQL Server 2008 R2

### Small installations (less than 20 users)

#### File server

- Operating System: Windows 2008 R2
- MS SQL Server 2008 R2

#### Single User - Stand alone PC

- Operating System: Windows 7 Professional
- MS SQL Server 2008 R2

### Access from remote location using Thin-Client Configuration

- Citrix Access Essentials or better
- Windows 2008 R2 Terminal Services



## Fax Server Requirements

The decision regarding which type of combination to choose is based on the expected number of faxes sent daily. There are a number of possible combinations; please choose the combination that is most applicable to your operations and the volume of faxes sent out by your organization.

### Note:

Since the fax server is integrated with Pentagon, the convenience of sending faxes via the Pentagon system will increase the number of faxes you will be sending compared to the manual method using the fax machine. Please take this into consideration when estimating the number of faxes to be sent daily.

When estimating the average number of faxes, consider that one fax transmitter can handle between 200-300 faxes per day on average (this is when the faxes are sent during the day in a normal situation).

All fax transmitters' computers need to connect to the same network domain, should have SQL client installed, and access to the \P2000SQL directory.

## General

All the faxes that will be sent by the users will be stored in the SQL database (Fax image and fax information). You can add as many fax transmitters as you wish. The system will distribute the faxes from the main fax list and each fax transmitter will pull the next pending fax on the list based on the settings defined in the transmitter. You can always add more transmitters as needed without interrupting the existing fax transmitters that already configured.

## Fax Modem

Any external modem that is compatible with your operating system. Please visit our [website](#) for recommended fax modems.

## Computer

Windows XP/ Windows 7 supports one modem per computer.  
If you decide that you will need three fax transmitters, you will need three computers with one modem per computer.



## Mandatory Backup Systems

It is imperative that you implement a backup system that will safely and efficiently backup your SQL database. Losing this data would cause significant setbacks both in your operations and finances. Using a backup utility such as **SQL Manage**, **Symantec**, **Verities**, etc. will ensure that your business data remains intact in the face of some unforeseen event.

Whichever choice you make, be sure that it carries out the following operations:

**Database Backup;**  
**Log Backup;**  
**Log and Database Shrink;**  
**Re-index;** and  
**Update Statistics**

We recommend SQL Manage by FutureIT. SQL Manage offers customers a comprehensive maintenance solution from one centralized console, automates and simplifies traditional DBA tasks such as monitoring, re-indexing, backup & restore, compression, and beyond. SQL Manage is a true "All-in-One" solution, allowing anyone with or without a technical background to effectively manage their SQL Server environment. SQL Manage users enjoy enhanced performance, work continuity, higher availability, a dramatic decline in overhead and fewer failures; all of which will reduce overall IT costs.



## Implementation Guidelines

1. Get a Microsoft Professional to install your network and SQL Server
2. Plan your resources months ahead
3. Assign team leaders with procedures responsibility
4. Assign Power-Users who will be your in-house experts
5. Setup your system defaults and tables according to your business practices and your company structure
6. Plan your Data Conversion
7. Get training from Pentagon 2000
8. Practice on the system using your own data by running business cases
9. Plan "Going-live" date
10. Setup daily automatic SQL database back up maintenance plan

**\*\*\*And remember: You can always call Pentagon 2000 with any question you may have.\*\*\***