Platform Requirements for ABELMed EHR-EMR/PM Clinical and Administrative Software

Computers running ABELMed EHR-EMR/PM MUST meet or exceed the recommended specifications. **In order to reduce total cost of ownership, and allow maximum life and re-use of older hardware, ABEL strongly recommends a thin client (terminal services) approach. In such an approach ABELMed runs on a server(s) running Microsoft terminal services. Client machines can be either dumb Windows Terminals or even older PC's.**

Component	Recommended (for v5, v7 CMS/EMR, Admin, Physio)	Details
File Server for 2-6 workstations *	Intel Core 2 Duo 3.0 GHz or better or Core 2 Quad (or AMD equivalent), 2.0 GB RAM, 320GB Hard disk, 52X CD ROM or DVD, 1.4MB floppy drive. Vista Business or Ultimate with Service Pack 1 or Windows XP Pro with Service Pack 3 **Note that the hardware must come equipped with a 32 bit (not 64 bit) operating system**	**Vista Home and Windows XP Home are NOT supported** Faster processors generally give better performance. Faster models are released every few months. The fastest processors are usually disproportionately higher priced. The best performance for the dollar is usually found a couple steps down from the fastest processors available. The newer Dual and Quad core processors will perform well. These include Core 2 Duo, and Core 2 Quad from Intel and Athelon 64 X2 from AMD Larger hard drives are released every few months and in general the more space the better. Although even a 80GB may be sufficient for those who use their system primarily for ABEL software, 120GB will soon become the smallest drive that is readily available for purchase. If you are loading several software packages, or are storing digital images or x-rays on the system, a 500GB hard drive or better is recommended Windows Server 2003 R2 Terminal Services is strongly recommended if remote sites are to connect to a common server. Windows 7 and Windows Server 2008R2 are not supported until ABELMed v9.03.
File Server for Greater than 6 workstations *	Intel Core 2 Duo 3.0 GHz or better, or Intel Core 2 Quad or AMD equivalent, 4GB RAM, 320 GB Hard disk, 52X CD ROM, 1.4MB floppy Windows 2003 Server SP2 with client access licenses for each workstation **Note that the hardware must come equipped with a 32 bit (not 64 bit) operating system**	See above. Intel Xeon or AMD Opteron are both excellent and appropriate processors for larger servers. Windows Server 2008R2 is not supported until ABELMed v9.03.
Application / Terminal Server	Server with dual or quad core processor(s), 4GB+ of RAM, 120GB HD (RAID) Windows 2003 Server SP2 with Terminal Services and appropriate number of Terminal Services and Windows CAL's **Note that the hardware must come equipped with a 32 bit (not 64 bit) operating system**	Notes in above cells apply to terminal server too. If File server and Terminal server are separate physical servers then disk space on the terminal server is not as critical, 40GB of storage will be plenty. You may still want to mirror the disk for redundancy. If the Terminal Server and application server roles are combined into a single server then 320GB, 500GB or larger drives will be more appropriate. An additional 1GB of RAM should be added for every 4 terminal services users Windows Server 2008R2 is not supported until ABELMed v9.03.
Thin client / terminal	Windows PC with remote desktop client or Winterminal appliance (See Details column)	When using a thin client approach several options are available for client workstations: • Many older network enabled Windows PC's using Windows 98 or later can act as dumb terminals by running the Remote Desktop Client • New PC's even those running consumer/home operating systems or PCs that don't meet ABELMed requirements can act as dumb terminals by running the Remote Desktop Client • Windows terminal appliances can be used as clients instead of using full PC's
Client machines or Stand Alone System **	Intel Core 2 Duo 3.0 GHz or better (or AMD equivalent), 2GB RAM, 80GB Hard disk, 52X CD ROM, or DVD Windows XP Pro with SP3 or Windows Vista Business or Ultimate SP1 **Note that the hardware must come equipped with a 32 bit (not 64 bit) operating system**	**Vista Home and Windows XP Home are NOT supported** Windows 7 and Windows Server 2008R2 are not supported until ABELMed v9.03.
Tablets & Notebooks	Centrino 1.5 GHz (or Pentium M), 512 MB RAM, 40 GB HD. Vista Business or Ultimate, or Windows XP Tablet Edition SP2	External floppy & CD drives may be required, alternatively software can be installed over the network from another machines CD drive. For those who wish to use wireless networks 802.11g or n is the appropriate standard. We strongly recommend that Wireless clients be run as thin clients connecting to a Windows 2003 server with Terminal services. **WPA2 is the minimum standard acceptable for wireless security**.
Display	19" LCD with 1280x1024x16 bit color	LCD display's are becoming much more affordable, and are an excellent choice where space is limited.

*ASP customers do not require a local file server
** ASP customers do not have to meet these requirements. Thin clients (Win Terminals) or older computers will suffice.

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Backup Unit (on server)	Online offsite backup services or External hard disks (USB or SATA).	Remote backups via the Internet are recommended. External hard drives can also be used, but we recommend a drive for each day of the week so recent backups are not overwritten. At least some backups should be stored offsite. Although CD burners work for data backups, they are not ideal as backup units since their capacity (700MB) does not allow full disk backups to be done easily on a single volume. DVD's would have sufficient capacity for a very mall practice, but ease of use of the software and the knowledge required of the backup operator should also be taken into consideration.
Database (on server)	See Details column.	MS SQL Server is required for ABELMed-CMS. This comes in several versions. SQL Server Workgroup Edition is appropriate for most offices. ABEL can bundle RUNTIME licenses of MS SQL Server 2005 Workgroup Edition with ABELMed. You can also purchase MS SQL Server with your hardware from your hardware vendor. MS SQL Server client access licenses (CALs) are required for each workstation. The supported editions of MS SQL Server are; -Workgroup Edition (2000 or 2005) -Standard Edition (2000 or 2005) Requires MS Windows 200x Server -Enterprise Edition (2000 or 2005) Requires MS Windows 200x Server
Office Productivity	MS Word 2007 MS Access 2007	Word is used for Word Processing & Prescriptions. (Word 2002 min) Access can be useful for reports & maintenance. (Access 2002 min)
Browser	Internet Explorer 7	
Modems (on server)	US Robotics / 3COM Sportster 56 Kbps (External models are recommended)	We recommend a dedicated modem line. Do not select your main business line or any line that will interfere with regular office calls when the modem is in use. EDT requires a modem. It can also be used for ABEL support and CML & Dynacare Labs too. A second modem will be required for ABELMed-CMS customer's who will be communicating with MDS too. MDS requires their own dedicated modem. Line sharing devices can be used to share the modem(s) with your fax machine etc.
Health Card Reader	Any 2 stripe card reader	Card readers are available at Icard Systems Inc., 5799 Young Street St. 901 Willowdale, ON M2M 3V3. Phone: 416-222-6485, Fax: 416-222-6199 Email: icard@magtek.com.
Network Interface Card	1 Gbps NIC	In all situations where computers share information on a network, each PC will require a network card or built in network interface.
Switch or Hub	1 Gbps switch	In a typical small business network the cables converge at an Ethernet switch. Gigabyte speed switches are recomended. A port is required for each computer.
Cable	Cat 5e or 6 Ethernet (See Details column)	Ethernet cable will be required in your office running from each computer to a switch or hub. The switch is normally located centrally in your office, possibly in a wiring closet.
Communication software (on server)	A high speed Internet connection is strongly recommended for support purposes.	A high speed Internet connection is strongly recommended for support purposes. ABEL provides support via the Internet using ABEL provided tools, the customer just requires high speed Internet access and the Internet Explorer browser.
Laser Printer	Printer with appropriate Windows Drivers (32MB RAM recommended)	HP 2015, HP2020, 3005, 4000 series are known to work. Inkjet printers are not recommended for various speed and compatibility reasons.
Label Printer	DYMO Labelwriter 400 Thermal Label Printer	A number of customers have had problems with some of the other label printers. The DYMO 400 series has worked with all revisions tested.
Scanner	Recommended for EMR	ABELMed works with TWAIN compliant scanners.
Uninterruptible Power Supply (UPS)	Any UPS matching the power required by your system.	A good UPS is strongly recommended on your server to keep it running through short power outages, and allow time for a proper shutdown in the event of longer outages. Look for a UPS with good surge suppression and power regulation to protect your server from spikes and fluctuations in the power.
Sound Card & Speakers	Optional	A sound card with speakers or headphones are required for the ABELMed training videos and to view demo video clips.
Voice Dictation	See Details column.	A Microphone and Dragon Naturally Speaking software (ver. 8/9/10 tested) is required for voice dictation. **For Dragon v10- Medical edition is necessary if using thick clients**.
Antivirus Software	See Details column.	AntiVirus Software, configured to check for definition updates on a daily basis, is strongly recommended for every PC connected to the Internet.
Firewall / Router	See Details column.	A router or security appliance is strongly recommended for all Networks with a high speed Internet connection. A software Firewall would be adequate for computers with a dialup Internet connection.