

### Recommended and Required PC Configurations for GEMS Installations

The following information lists the minimum PC hardware and software environment requirements for each PC upon which GEMS™ WIN software, or its associated database files, will be installed.

The PC hardware requirements are listed by operating system. The requirements differ depending on the type of operating system installed on a specific PC. The software requirements identify the minimum software, including version number and service pack, which must be installed on each PC as determined by the operating system of choice for each PC

**IMPORTANT:** CardioComm Solutions, Inc. requires our customers to complete the setup of each PC according to the minimum installation requirements set out in this document. This will help ensure proper installation and function of our products.

\*\*GEMS™ WIN Requires English Version of Microsoft Windows.

### Additional Database Dependent Required Software

For GEMS™ WIN installations using MS Access Database Engine (These items are required for support and any addition of custom GEMS™ WIN reports)

- MS Access 2000 or above installed on minimum 1 PC, preferably where the GEMS™ WIN Database (.mdb file) is located or accessible.

For GEMS™ WIN installations using MS SQL Server 2000/2005/2008/ 2008 - R2 Express, Standard, Enterprise Database Engine (These items are required for support and any addition of custom GEMS™ WIN reports)

- MS SQL Server 2000/2005/2008/ 2008 R2 Express, Standard, Enterprise

### Minimum Local Area Network (LAN) Requirements

- Minimum Network Speed: 10mbps
- Required Network Protocol: TCP/IP



### Printer Requirements

- Minimum: 600 X 600 dpi
- Recommended: 1200 x 1200 dpi 32 MB laser

### Installation Specifications for Required Software

Operating systems must be directly\* installed.

\* We recommend not using hard drive imaging or "ghosting" techniques for installing a PC's operating system or

### Anti-Virus Software

The use of anti-virus software, regardless of brand, may result in corruption of certain open files when in real-time scanning mode. CardioComm Solutions, Inc. recommends excluding the GEMS application directory and ECG Warehouse directory from real-time scanning mode and scanning on a scheduled, routine basis instead.



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Software	Minimum	Recommended	Workstation acting as Server
OS	Win7 (SP1) <small>(will not work with XP, Vista or Windows 7)</small>	Win7 (SP1) <small>(will not work with XP, Vista or Windows 7)</small>	Win7 (SP1) <small>(will not work with XP, Vista or Windows 7)</small>
Internet Explorer	IE 8.0	IE 8.0	IE 8.0
Microsoft™ Access	MS Access 2000*	MS Access 2010* or above	MS Access 2010 or above <small>(only required if acting as a server)</small>
<b>PC Hardware</b>			
RAM	1 GB RAM(+)	2 GB RAM(+)	2 GB RAM(+)
Processor	1.5 Ghz(+)	1.5 Ghz(+)	1.5 Ghz(+)
Free Space on Hard Drive	10 GB(+)	10 GB(+)	20 GB(+)
CD Rom Drive	8x(+)	32x(+)	32x(+)
Sound Card	24 bit PCI Sound Card <small>(It is recommended to have a separate PCI sound card.)</small>	24 bit PCI Sound Card <small>(It is recommended to have a separate PCI sound card.)</small>	24 bit PCI Sound Card <small>(It is recommended to have a separate PCI sound card.)</small>
Video Card	AGP or PCI Express x16 64MB	AGP or PCI Express x16 64MB	AGP or PCI Express x16 64MB
Remote Access for support/ training	Hi-Speed Internet Connection	Hi-Speed Internet Connection	Hi-Speed Internet Connection
Network connection	10/100 Mbps <small>(For multiple workstation installs)</small>	10/100 Mbps <small>(For multiple workstation installs)</small>	10/100 Mbps <small>(For multiple workstation installs)</small>

\* MS Access 2000 is not mandatory on GEMS™ WIN Workstations, but will greatly assist in product support.

\*\* WinFax 10.03 is not included with the purchase of GEMS™ WIN software.



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		Minimum	Recommended
Installed Software	Non-SQL Server	SQL Server <small>(SQL 2000/2005/2008/2008 R2 Express, Standard, Enterprise)</small>	SQL Server <small>(SQL 2000/2005/2008/2008 R2 Express, Standard, Enterprise)</small>
OS	Win 2008 R2 (SP1)	Win 2008 R2 (SP1)	Win 2008 R2 (SP1)
MS SQL Server	N/A	MS SQL Server* with a Processor Per Server License	MMS SQL Server* with a Processor Per Server License
<b>PC Hardware</b>			
RAM	2 GB RAM	2 GB RAM	4 GB RAM
Processor	2.5 GHz	2.5 GHz	2.5 GHz
Free Space on Hard Drive	10 GB	10 GB	20GB
CD Rom Drive	8x	32x	32x
Remote Access for support/ training	Hi-Speed Internet Connection	Hi-Speed Internet Connection	Hi-Speed Internet Connection
Network connection	10/100 Mbps <small>(For multiple workstation installs)</small>	10/100 Mbps <small>(For multiple workstation installs)</small>	10/100 Mbps <small>(For multiple workstation installs)</small>
Back up Drive	10 GB	40 GB	40 GB
Hard Drives	10K PRM SCSI or Serial ATA hard Drives with a redundant RAID configuration	10K PRM SCSI or Serial ATA hard Drives with a redundant RAID configuration	10K PRM SCSI or Serial ATA hard Drives with a redundant RAID configuration

\* CardioComm Solutions, Inc. does not recommend the use of wireless network connections to a GEMS™ WIN Server.



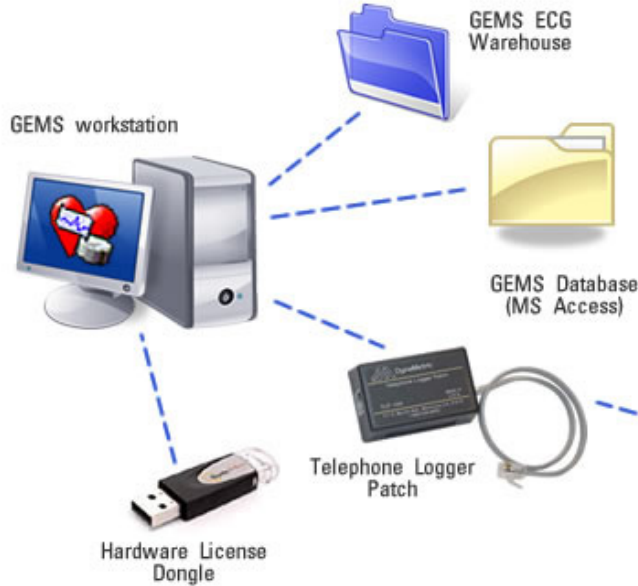
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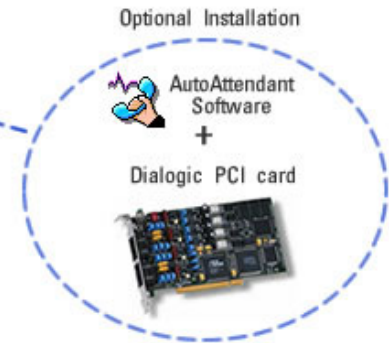
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### GEMS - Single Workstation Configuration

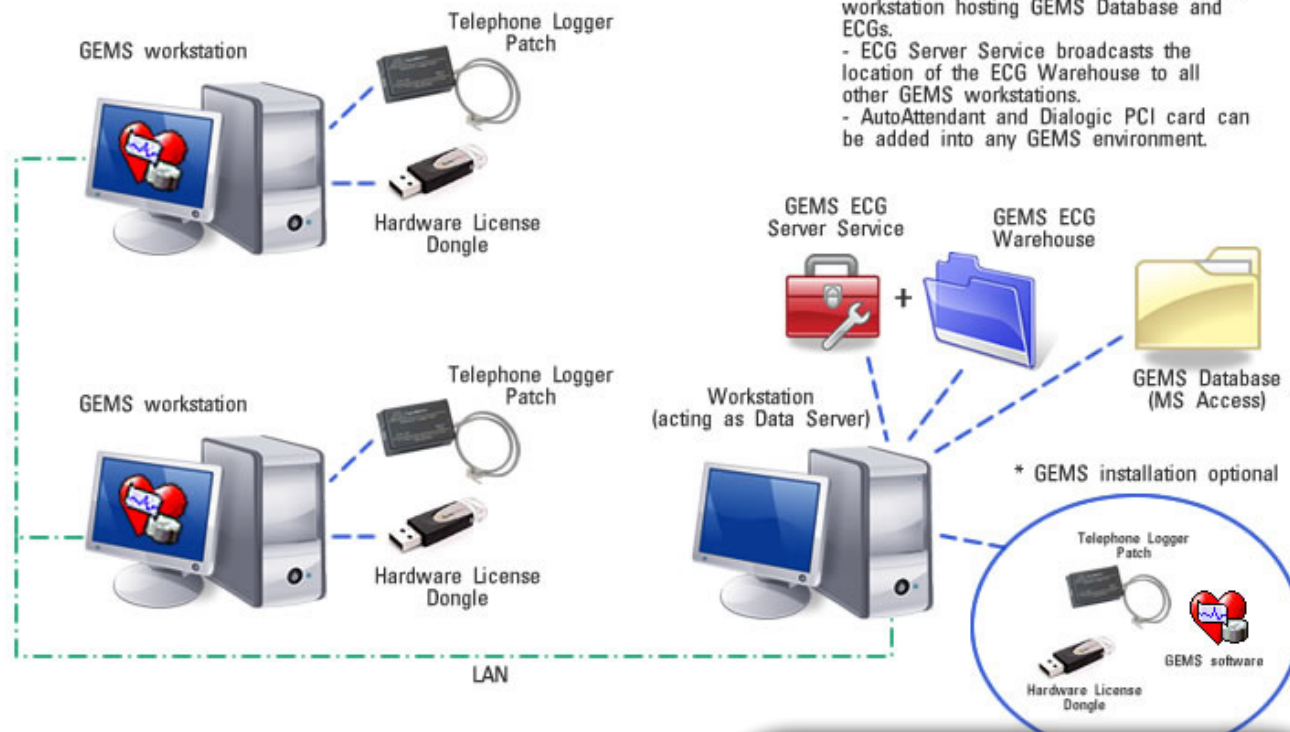


#### Configuration Notes:

- GEMS Database and ECGs are stored locally on one workstation.
- Workstation can be on or off a Network.
- AutoAttendant and Dialogic PCI card can be added into any GEMS environment.
- GEMS Lite is a Single Workstation application only and is NOT networkable.



### GEMS - Multiple Workstation Configuration (no Server)

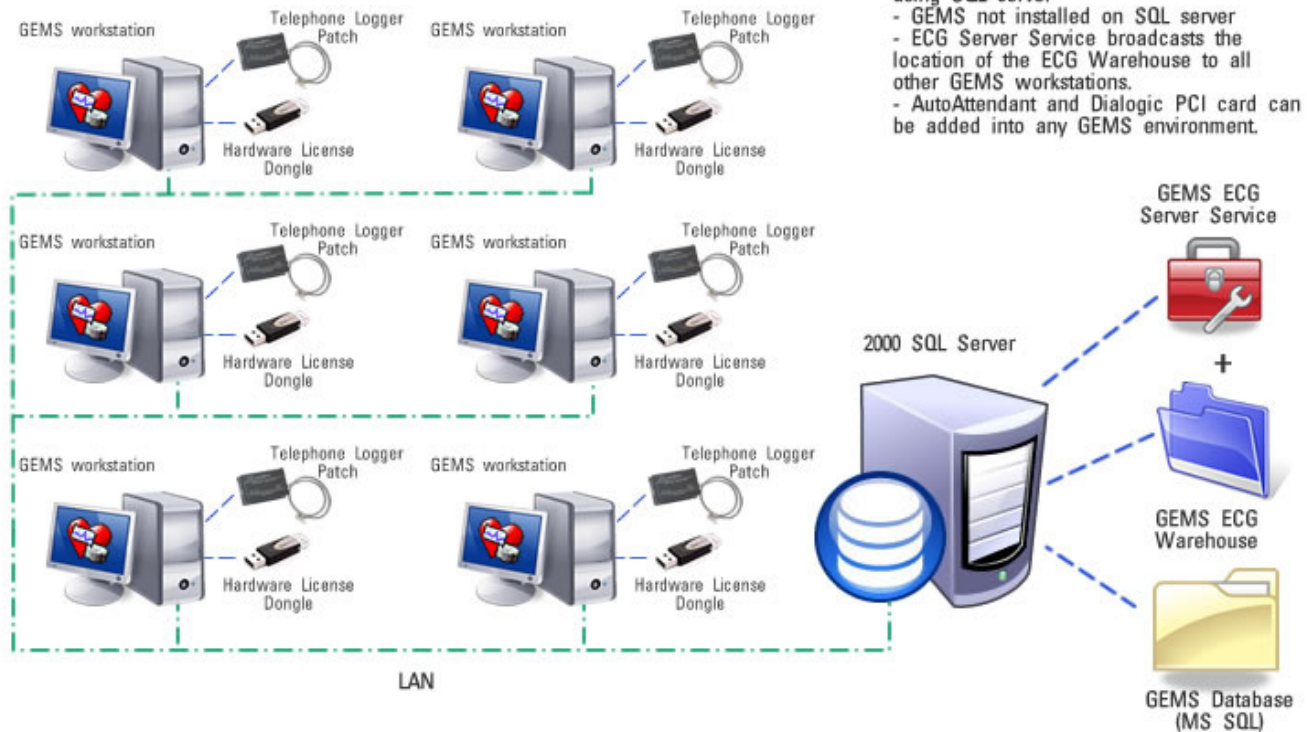


#### Configuration Notes:

- Connect up to 5 GEMS workstations.
- GEMS does not have to be installed on workstation hosting GEMS Database and ECGs.
- ECG Server Service broadcasts the location of the ECG Warehouse to all other GEMS workstations.
- AutoAttendant and Dialogic PCI card can be added into any GEMS environment.



**GEMS - Multiple Workstation Configuration with SQL Server**



**Configuration Notes:**

- Connect 5+ GEMS workstations when using SQL server
- GEMS not installed on SQL server
- ECG Server Service broadcasts the location of the ECG Warehouse to all other GEMS workstations.
- AutoAttendant and Dialogic PCI card can be added into any GEMS environment.



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