



# CardioSoft Diagnostic System

## Resting ECG application

Clinically connected. Simply smart.



The CardioSoft™ Diagnostic System Resting ECG application transforms your physician office PC into a resting ECG device. The Cardiac Acquisition Module (CAM-14) with the CAM USB A/T interface is easily connected from the patient to your PC's standard USB port. The CAM-14 provides high-quality ECG presentation for accurate cardiac assessment of your patients. Its outstanding digital signal processing reduces artifact for clearer tracings.

- Comprehensive Marquette™ 12SL™ ECG analysis program including ACI-TIPI, gender-specific criteria, 12SL with Right Ventricular Involvement measurement and serial presentation of ECGs; 12SL is one of the most validated ECG analysis programs in the industry and has been cited in numerous independent publications
- Multiple configurable report formats are available
- Full disclosure data can be stored in the CardioSoft Diagnostic System database and easily accessed remotely via CardioSoft Web; robust editing functions make report generation simple and fast
- Seamless connectivity with other GE resting ECG devices such as MAC™ 800, MAC 1200, MAC 1600, MAC 2000, MAC 3500, MAC 5500 and with EMR<sup>§</sup> systems
- DICOM formatted resting ECG report generated by CardioSoft Diagnostic System is automatically exported to PACS workstations, making physician over-read fast and efficient while speeding up patient throughput
- Seamless connectivity to MUSE™ Cardiology Information System for even more workflow efficiencies
- Multiple networking options are available (consult CardioSoft Diagnostic System Networking product sheet)
- Remote Resting ECG acquisition with Citrix® XenDesktop<sup>1</sup> (Windows® 8.1)

## Specifications

### Signal processing

ST measurements	ST amplitudes, slope
Signal processing technique	Incremental median updating
Baseline correction	Cubic Spline
ECG output	Real-time ECG/TTL synchronization output
Heart rate	Automatic arrhythmia detection, documentation and annotation
Full disclosure ECG	Beat-to-beat ECG record and event review
Reanalysis	Re-analyze after manual correction of median beats and measurements (HEART Algorithm)
ECG program	(Optional) 12SL adult and pediatric ECG analysis program
Additional ECG function	Vectorcardiography

## Technical specifications

### Communications/storage

MUSE systems compatible via SD card; network (optional)	
MUSE Web compatible for retrieval view and printing of MUSE system data	
CardioSoft Web compatible for report viewing	
PDF export of final reports (auto export and custom file name)	
Microsoft® Word export of configured reports	
XML or Microsoft Excel® export of specified data	
EMR connectivity	EMR Gateway

### Data acquisition (via CAM-14)

Technology	Active, "Type BF" floating isolated powered 14-channel acquisition module with built-in lead-fail detection and lead prep impedance measurement
Sampling rate	16,000 samples per second, per lead across 15 leads
Dynamic range	320 mV, $\pm 10$ mV signal superimposed on $\pm 150$ mV DC offset
Resolution	4.88 $\mu$ V/LSB @ 500 Hz
Noise	<15 $\mu$ V peak-to-peak noise over 0.01 to 150 Hz (-3dB) bandwidth
ECG analysis frequency	500 samples per second
High pass filter	0.01 (or 0.05 Hz, special use) with DC offset control
Low pass filter	20, 40, 100, 150 Hz (selectable)
Line filter	50.0 or 60.0 Hz notch filter (selectable)
Baseline correction	Cubic Spline algorithm
Common mode rejection	Measured: 100 dB, calculated: >140 dB (123 dB with AC filter disabled)
Impedance	>10 M Ohms @ 10 Hz, defibrillator protected
Patient leakage	<10 $\mu$ A
Pace detect	Orthogonal LA, LL and V6; 750 $\mu$ V @ 50 $\mu$ s

Display type	User provided
Monitored leads	12, 15
Displayed leads	Number on screen 3, 6, 12 or 15
Display format	4 x 2.5, 4 x 2.5 + 1 rhythm, 2 x 6, 6 rhythm, 3 rhythm
Display speeds	25, 50 mm/s
Display sensitivity/gain	2.5, 5, 10, 20, 40 mm/mV

Computer specifications	
Microprocessor	Minimum Pentium® 4 class processor with 2 GHz
RAM	Minimum 1 GB Windows® 7 Professional (32 bit); 2 GB Windows 7, Windows 8.1 (64 bit) or Windows 10 (64 bit)
Hard drive	Minimum 80 GB and 4 GB of free space if used as a standalone system
SW installation	DVD-ROM drive
Pointer	Mouse
Graphics adapter	Minimum: SVGA 1024 x 768 Recommended: SXGA 1280 x 1024
Interfaces	Minimum: 2 USB ports (1.1, 2.0, or 3.0) for each device using this type of interface, CD-RW, SD card, network interface card (recommended), Serial RS232 for each device using this interface type
Operating system	Windows 7 Professional (32 bit) with SP1 Windows 7 Professional (64 bit) with SP2 Window 8.1 Pro (64 bit) Windows 8.1 Enterprise (64 bit) Windows 10 Professional (64 bit)
Printer	Equivalent to HP® P3015dn (Customer Supplied)
Additional software for export functionality	Microsoft Word and Excel (optional)
Networking LAN	Wireless: 802.11 G, N (optional) TCP/IP interface
Citrix	Citrix XenDesktop/XenApp 7.5 (Desktop Virtualization and/or Application Virtualization) without data acquisition on Windows 7 Professional (32 and 64 Bit), with 12 Lead resting ECG Windows 8.1 Pro (64-bit), Windows 8.1 Enterprise (64 Bit), Windows Server 2008 R2, Windows Server 2012 and Windows Server 2012 R2 (Citrix environment supplied and supported by customer) Requires 5 MB minimum bandwidth availability

<sup>1</sup> Citrix XenDesktop environment supports only Resting ECG acquisition from CardioSoft systems using Windows 8.1 operating systems

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