cmr42

Software for Organizing, Viewing and Analyzing Cardiovascular MR Images

VERSION 3.4

Product Specification cmr42 version 3.4

Viewer, Series Composer
- Three dedicated viewing modules, including 4D-Viewer
- Floating add-on viewer
- Visible thumbnail pane throughout the modules for fast series/image access
- Reference windows in analysis modules for orientation and verification of slice position
- Mouse controlled viewer settings: Image selection via drag-and-drop, panning, windowing, zooming, phase- and slice-scrolling
- Series Composer for manual sorting of images

LV/RV Function Tools
- Three different analysis approachs: Short axis 3D, Radial Long Axis, Biplanar/Triplanar
- Automatic contour detection for LV endo- and epicardial borders
- Multiple contour definition options, including point mode
- Optional in- or exclusion of papillary muscles
- Polar maps for regional wall analysis, including AHA segmentation model
- Volume-over-time curves
- Valve plane correction for accurate volume measurement in the basal slice
- Semi-automatic RV endo contour detection

Flow Analysis
- Color-coded Flow Analysis with semi-automatic contour detection, synchronization and forwarding
- Graphic display of results
- Background correction

Tissue Characterization++
- Four adjustable viewer frames for various tissue characteristics like scar, edema and inflammation
- Contour drawing can be synchronized between different sequences
- One-click auto-identification of enhanced and normal myocardium
- Semi automatic quantification of signal enhanced areas, including several standard deviations or Full-Width-Half-Max
- Calculation of myocardial salvage
- Microvascular obstruction analysis
- Polar map display of Enhanced Area and Transmurality

First Pass Perfusion Analysis++
- Qualitative and semi-quantitative analysis
- Side-by-side view of Rest , Stress, Function, and LGE
- Contour forwarding and breathing motion correction
- Graphic display of signal intensities over time
- Display of results per myocardial segment in color-coded polar maps, including AHA segmentation
- Baseline correction

T2/T2* Mapping
- Color coding of T2/T2* map
- Display of the fitted decay curve
- Choice of various curve fitting settings
- Correction for background noise

T_1 Mapping
- Color coding of T_1 map
- Choice of various curve fitting settings

Multiplanar Reformatting
- 3D data resampling in any oblique plane
- Accurate measurements with high quality rendering
- Three MPR viewers and 3D reference view
- Thick and thin slab rendering
- Synchronized zoom, windowing, slab thickness
- 4D Viewer with various presets
- Advanced MPR functionality

Data Import/Export
- No restriction in accepting images from different scanner brands
- Import DICOM data from various sources
- Connectivity to scanner, PACS, Server and other DICOM nodes
- Export of analyses as DICOM or file
- Easy image study/selection; browsing and viewing without loading
- Extended filter function for review and analysis
- Customizable one click anonymization

Reporting
- All analyses (and screenshots) in one report
- Clinical and scientific reports
- Export report results as PDF, ODF, TXT, XML or DICOM

++ The Tissue Characterization and Perfusion Modules are not available in the USA since the use of contrast agents for Cardiac MR procedures is not FDA-approved. A non-diagnostic version of cmr42, intended to be used only for research is available on request.

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System requirements

Hardware	Minimum	Recommended
Processor (Intel)	Pentium Core Duo @ 1.83 GHz (or greater)	Pentium Multi Core, Multiple Processor @ 2.2GHz (or greater)
RAM[1]	2GB RAM	4GB RAM
HDD (cmr42)	100MB	
HDD (Patient Workspace)	up to 2MB / patient study (to store metadata)	
HDD (Patient Data)	Will vary based on # of Patient Studies (DICOMs)	
Screen Resolution[2]	1280 x 800	dual screens up to 2560 x 1600
GPU (video card) (must be compatible with OpenGL 1.1)	Integrated Intel GMA 950, X3100	Supported: ATI 1900XT, X2600, nVidia 7300, 8800 256MB VRAM or greater
GPU for 4D Viewer (must support OpenGL 2.1, equivalently OpenGL 2.0 with shading language 1.2, or higher)	Video RAM: 256 MB RAM nVidia GeForce 8000 series or ATI Radeon 1000 series Software Renderer is not supported.	512MB VRAM or greater Recommended: nVidia Geforce GTX 5xx/4xx or ATI Radeon HD 6xxx/5xxx series Supported: nVidia GeForce GTX 470, 330M GT, 320M, 8600M, 8800GT, 9400M, 9600M or ATI Radeon HD 5870, 4870, 4850, 3870, 3850, 2600 XT

Operating System	Minimum	Recommended
Windows	Windows XP (Service Pack 2)	Windows 7
Macintosh	Mac OS X 10.5.8	Mac OS 10.6.4

Image Source	(DICOM Image File Format)
Local HDD	folder(s) of DICOM Images
cmr42 Workstation(s)	over the network via TCP/IP

Image Source	(DICOM Image File Format)
MRI Scanner(s)	over the network via TCP/IP
PACS	over the network via TCP/IP

cmr42 Regulatory Information

Agency	Approval Reference
US FDA 510K #	K082628
CE Certificate #	CE 539277 issued by BSI
Health Canada Device License #	78347
Australia TGA	ARTG # 177785

Product Specification	
Product Version	cmr42 Version 3.4
Language	English, German, Italian
DICOM Functionality	DICOM 3 compliant

Ordering Information

Part #	Description
342003003	International Version, available globally, except in the USA
142003001	US Clinical Version
242003001	US Research Version**

** Contrast enhancement analysis is limited to investigational use only

CE 0086

BSI ISO 13485:2003 FM 539204

1. Minimum RAM available to run cmr42 is 1GB
2. Please check your local medical device requirements to make sure your screen is compliant

E-mail info@circlecvi.com to schedule your personal demo

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