



# Medis® Suite MR 3.0 product specification sheet

Including the following apps: QMass®, QFlow®, 3DView, QMap RE and QStrain RE

## M-MSP: Medis Suite Platform (viewer, connectivity, reporting)

- Support for Cardiac MR studies of all major MR vendors
- Access to Cardiac MR studies across the network
- Import of cardiac MR studies from local storage media (hard disk, USB, and CD/DVD)
- DICOM connectivity, receiving cases, query and retrieve, pushing results to PACS
- Centralized database, thick client solution possible with multiple clients
- **NEW: JPEG2000 and enhanced MR support**
- **NEW: Review series side by side, drag 'n drop series into the viewer, cross referencing tools**, fast paging through series, simple caliper measurements
- Enhanced workflow, run multiple apps in parallel
- **NEW: Loading of prior exams in parallel.**
- Enhanced clinical report, combining all measurements in a single report, snapshots, add comments, save as PDF, view in text format. **NEW: Clinical XML output**

## M-MGM: QMass Global Function module (MR)

- Guided workflow
- LV and RV function analysis
- Global function analysis (Simpson's method) on short axis or transversal stack of cines
- Quantification of custom volumes, such as atrial volumes
- Area-length and Bi-plane volumetric analysis methods for long axis cines
- Automatic contour detection of LV endo and epicardium and RV endocardium, semi-automatic contour editing
- "LiveContour" algorithm to quickly detect endocardial contours
- "Time-Continuous" contour detection
- Automatic exclusion of images in short axis based on information in long axis
- Auto-detection of papillary muscles and trabeculae with "MassK mode"
- Quantification of EDV, ESV, SV, %EF, CO, CI, indexed values (BSA and height), (time to peak filling and ejection rate
- Various BSA calculation methods for indexed results
- Various normal ranges possible, calculation of z-scores

## M-MRM: QMass Regional Function module (MR)

- Analysis of regional parameters, such as wall motion, wall thickness, wall thickening and wall thickness changes over time

## M-DCE: QMass Delayed Signal Intensity (DSI) module (Infarct size, T2w analysis, combined DSI-T2w analysis)

- Guided workflow for automatic scar tissue quantification
- Transfer contours from short axis cine stack
- Various automated threshold calculation methods



- Automatic infarct detection
- Quantification of infarct size (% and mass), infarct transmurality
- Quantifying regions of hyper-, intermediate and hypo-intense signal intensities
- Threshold per slice or per sequence of slices
- T2-weighted analysis, combined DSI-T2-weighted analysis
- **NEW: T2-ratio**

### **M-MSU: QMass Time Signal Intensity (TSI) module**

- Enhanced Contour registration to correct for breathing motion
- Baseline correction methods
- Automatic calculation of relative upslope
- Upslope curves per myocardial segment and user defined ROI's
- Set transmural range for measurement of subendocardial and subepicardial perfusion curves

### **M-TTM : QMass T2/T2star Analysis module**

- Fast quantification of T2\* decay time and decay rate
- Color overlay
- Correct for breathing motion

### **M-TOM: QMass T1 analysis module**

- Calculation of T1 relaxation time in MOLLI and Look Locker sequences
- Calculation of residual maps
- Color overlay
- Correction for breathing motion

### **M-FLX: QFlow app**

- Phase-contrast MR blood flow analysis
- Automatic contour detection
- Copy of contours in forward and backward direction
- Various background correction methods to correct for flow-induced artifacts, “Stationary Flow Fit” and “Phantom Correction”
- Phase unwrapping to correct for aliasing
- Color-coding to visualize velocities
- Calculation of velocities and volumetric blood flow in up to 4 ROI's
- Automatic calculation of regurgitant fraction and volumes
- Display of min and max velocity pixels
- Calculation of maximum pressure and mean systolic pressure gradient
- Quantification of CSF flow

### **M-MRA: 3DView app**

- Viewing 3D MR and CT Angiography series, double oblique viewing, MPR, MIP, slabbed MIP, VR
- Efficient caliper measurements
- Sculpting ( isolating custom volume of interest)
- Create reformats

### **M-CCT: QMass Global Function module , CT add-on**

- Enables Global and Regional analysis for CT



### **MS-ECV: QMap ECV, for research use only**

- Create parametric maps for T1-ECV
- Quantification of delta T1 (pre and post adenosine stress exams)
- Supports LL, MOLLI, SR, console generated maps
- **NEW: correction factor**
- Offset, scaling, fit residual error
- Display of relaxation graphs
- Flexible manual motion correction
- Flexible co-registration of T1 native (pre-contrast) and T1 post-contrast maps
- Comprehensive results for myocardial segments and up to 4 ROI's and segments
- AHA 16 segment model results and bull's eyes
- Save maps as DICOM
- Save results to MS-Excel

### **MS-REL: QMap T1&T2 Relaxometry, for research use only**

- Create parametric maps for T1, T1\*, T2 and T2\*
- supports LL, MOLLI, SR, T2 prep and console generated maps
- **NEW: correction factor**
- Offset, scaling, fit residual error
- Display of relaxation graphs
- Flexible manual motion correction
- Flexible co-registration of T1 native (pre-contrast) and T1 post-contrast maps
- Comprehensive results for myocardial segments and up to 4 ROI's and segments
- AHA 16 segment model results and bull's eyes
- Save maps as DICOM
- Save results to MS-Excel

### **M-STR: QStrain, LV Strain, for research use only**

- Quantify strain in LV long and short axis orientations based on feature tracking in SSFP images
- Quantification of Global strain parameters: GLS, GCS and GRS
- Quantification of delta rotation
- Quantification of 16 segment AHA strain parameters: Strain, Strain Rate, velocity
- Generate results for endo, mid and epicardial wall
- Generate detailed results and export to MS-Excel
- Ability to re-use contours from QMass for strain quantification

### **M-STP: QStrain, Plus (RV & Atrial), for research use only**

- Quantify of strain in RV 4 Chamber orientation based on feature tracking in SSFP images
- Quantification of RV Global strain parameters: GLS, Fractional Area change
- Quantification of RV segmental (septum and free wall) strain parameters: Strain, Strain Rate, velocity
- Quantification of strain in Atrial 2 Chamber orientation based on feature tracking in SSFP images
- Generate detailed results and export to MS-Excel



Medis Suite MR Packages		Essentials	Basic Edition	Full Edition	Premium Edition	
<b>Clinical</b>	<b>QFlow</b>	V		V	V	
	<b>3DView</b>			V	V	
	<b>QMass</b>	<b>Function Global</b>	V	V	V	V
		<b>Function Regional</b>			V	V
		<b>DSI</b>		V	V	V
		<b>TSI</b>			V	V
		<b>T1</b>			V	V
		<b>T2/T2*</b>			V	V
<b>Research</b>	<b>QMap</b>	<b>T1</b>			V	
		<b>T2/T2*</b>			V	
		<b>ECV</b>			V	
	<b>QStrain</b>	<b>LV (SAX &amp; LAX)</b>				V
		<b>Plus (Atrium &amp; RV)</b>				V
<b>Packaging is flexible. More options are available.</b>						

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Medis Suite, QMass, QFlow and 3DView are cleared for market in the US, Canada, Japan and Europe.

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