

## APPLICATION

Vitre software is a multi-modality advanced visualization system providing comprehensive applications in a variety of IT environments.

## APPLICABLE COMBINATIONS

The clinical solutions are applicable to the following systems:

- Canon Medical Systems Angio Workstation (AWS) for Angiography System

### Supported version of AWS

V6.1 or later

- Canon Medical Systems CT System

### Supported Scanners

Aquilion ONE series

Aquilion series

- Canon Medical Systems MRI System

Supported Scanners	System Version
Vantage Centurian	V6.0 or later
Vantage Galan 3T	V4.0 or later
Vantage Titan 3T	V2.30 or later
Vantage Orian	V4.5 or later
Vantage Fortian	V8.0 or later
Vantage Titan	V2.31 or later
Vantage Elan	V3.0 or later

- Applicable Combinations of Olea Medical® Applications and MRI

	Vantage Centurian	Vantage Galan 3T	Vantage Titan 3T	Vantage Orian	Vantage Fortian	Vantage Titan	Vantage Elan
Relaxometry T2* map	V6.0 or later	V4.0 or later	V2.50 or later	V4.5 or later	V8.0 or later	V3.6 or later	V4.0 or later
Relaxometry T2 map			V3.5 or later				
Metabolic			V2.50 or later				
IVIM			V3.5 or later				

- Canon Medical Systems UL System

### Supported Models

Aplio i900, Aplio i800, Aplio i700

## SUPPORTED DICOM AND DATA MANAGEMENT SERVICES

- DICOM® 3.0 export
- DICOM query/retrieve
- DICOM storage as SCU and SCP (receive and push)
- DICOM printing
- DICOM archival CD/DVD

## SECURITY STANDARDS

- Controlled user access

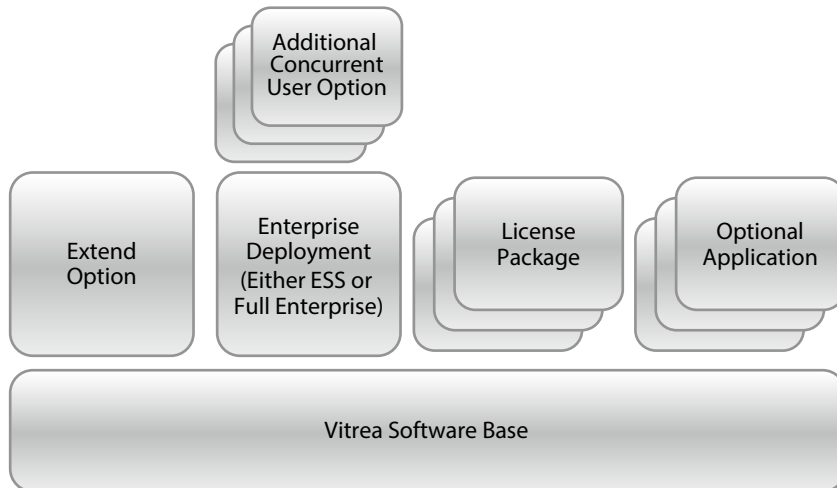
## **HARDWARE CONFIGURATION**

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Please refer to the latest version of Vitrea Advanced Visualization Technical Specifications document.  
Product Data No. "MPDHI0017Exx".

## **SOFTWARE CONFIGURATION**

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## **SUPPORTED MONITOR RESOLUTIONS**

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All applications except the following are compatible with the 27-inch widescreen (native resolution : 3840 × 2160)

- MR Wall Motion Tracking Multi Chamber
- MR Coronary Tracking
- Embolization Plan
- US Cardiac Fusion
- US Anatomical Polar Map

## VITREA BASE

Model Name: VLO-BASE/LO

This package is the foundation of Canon Medical Systems' advanced visualization. It includes 2D, 3D and 4D viewing with image subtraction and time intensity analysis. Post-processing tools such as whole body stitching and vascular analysis are available along with basic export and reporting.

### Base Features

- Study List
  - Sortable and filterable listing of all studies
  - Customizable study list
  - Series thumbnail display indicates available series
  - Creation of user specific worklist filters to optimize data searching/selection for users
  - Interactive thumbnails for quick study/series preview
  - Launch directly into 2D or 3D workflow for a study or series
  - Intelligent Application Launcher automatically selects the data that matches the desired application
  - Results tab with viewable findings, exporting, deletion and report review
- Report Editor
  - Slide Tray containing snapshots, batches and movies saved in the Viewer window
  - Quick preview for snapshots, movies and batches
  - Multi-selection for direct DICOM export, adding to report page or deletion
  - Snapshot restoration
  - Report templates including protocol-based text report pages or image formats with various configurations
  - Report header that includes user configurable information
  - Ability to add comments and arrows to the images
  - Printing of the report on DICOM (on workstation only) or Postscript format printers, exporting to a DICOM image archive, posting on Vitrea software's Web server, recording on a CD or DVD, or exporting to a MS Word document.
- Data Publishing
  - Capture of key images and batches for export to PACS/EMR
  - Creation of movies for presentations
  - Export images in PNG, DICOM, and AVI format
  - Windows® and plain paper printing
  - Detailed image information retrieval from DICOM header
  - Create a CD or DVD with a viewer
- Built in user guide help available within each application
- Monitors\*1
  - Supports dual monitor with the same resolution to display both of data list and application on the same screen.

## Applications

- Multi Modality Viewer
- MR Stitching
- Vitrea Peripheral Vessel Probe
- Filming
- Global Illumination
- MR Vascular Analysis
- MR Abdominal Analysis
- MR Musculoskeletal
- MR Brain Tumor Analysis
- MR Breast
- CT Abdominal Analysis
- CT Circle of Willis
- CT Carotid
- CT Larynx Airway
- CT Musculoskeletal
- CT Renal
- CT Runoff Analysis
- CT Urogram
- CT Aorta Analysis
- <sup>SURE</sup>Volume Synthesis

## VITREA EXTEND OPTION

Model Name: VLO-EXTO/LO

A workstation based system supplying up to three concurrent users with advanced visualization. This deployment option helps to improve patient care by reducing information delays and by providing quick access to the exams required by your clinical workflows. A centralized database and multiple access points ensure that clinicians can share work without being affected by disparate databases, different clinical tools or unfamiliar interfaces.

## VITREA ENTERPRISE DEPLOYMENT

Model Name: VLO-EPD/LO

Advanced 3D visualization and analysis solution that delivers an easy-to-use suite of advanced multi-modality clinical applications and tools, which can be accessed anywhere and anytime. Enables up to two Multi Modality Viewer dedicated nodes with four users each, for a total of eight.

## VITREA ADDITIONAL CONCURRENT USER OPTION

Model Name: VLO-ADDCCU/LO

Additional Concurrent User option is required per Additional user.

## VITREA ENTERPRISE SINGLE SERVER OPTION

Model Name: VLO-EPD/LO + VLO-AD2CCU/LO or VLO-AD5CCU/LO

This cost-effective single-server-based solution is a turn-key Vitrea Advanced Visualization deployment option for up to three or up to six concurrent users. Supports both workgroup deployments and domain deployments, including support for PACS integration when on a domain. Enterprise Single Server leverages Remote Desktop for access with RDS CALs.

\*1: Not compatible with PACS Integration

## ***XA/CT PACKAGES***

Application	Vitre Non-US Package-1 w/ CT Lung Package	Vitre Non-US Package-3 w/ CT Lung Package	Vitre Non-US Package-4 w/ CT Lung Package	Vitre CT Lung Package	Vitre CT Cardiac Package	Vitre Revitalize Option Package for CT
Vitre XA 3D-Angio						
Cerebral Aneurysm Analysis						
Embolization Plan						
Vitre CT EP Planning						✓
Vitre CT Endovascular Stent Planning (EVSP)			✓			✓
Vitre CT Liver Analysis						✓
Vitre CT TAVR Planning						✓
Vitre CT Colon Analysis	✓	✓	✓			✓
Vitre CT Lung Analysis	✓	✓	✓	✓		✓
Vitre CT Lung Density Analysis	✓	✓	✓	✓		✓
Vitre CT Brain Perfusion 2D with Bayesian			✓			✓
Vitre CT VScore	✓	✓	✓		✓	✓
Vitre CT Cardiac Analysis	✓		✓		✓	✓
Vitre CT Cardiac Functional Analysis	✓		✓		✓	✓
Vitre CT Multi-Chamber Functional Analysis						✓
Vitre CT Fat Measurement						✓
Vitre CT <sup>SURE</sup> Plaque option			✓		✓	✓
Vitre CT Myocardial Perfusion						✓
Vitre CT Brain Perfusion 4D			✓			✓
Vitre CT Body Perfusion 4D						✓
iCAD VeraLook® CT Colon CAD						
MeVis® Visia™ CT Lung CAD						
CT Dental option						
Dynamic Myocardial Perfusion						
CT Respiratory Analysis						
Vitre CT DE image View						
Mirada® Oncology Fusion Advanced						
Mirada Oncology Fusion Standard						
Mirada Oncology Fusion Core						
Vitre Image Denoising	✓	✓	✓	✓		✓
US Cardiac Fusion						
US Anatomical Polar Map						

Description	Model Name
Vitrea Non-US Package-1 w/ CT Lung Package	VLP-NOUS1L/LO
Vitrea Non-US Package-3 w/ CT Lung Package	VLP-NOUS3L/LO
Vitrea Non-US Package-4 w/ CT Lung Package	VLP-NOUS4L/LO
Vitrea CT Lung Package	VLP-VLUNG/LO
Vitrea CT Cardiac Package	VLP-VCARDI/LO
Vitrea Revitalize Option Package for CT	VLP-ROPCT/LO

## **VITREA XA 3D-ANGIO**

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Model Name: VLO-XA3D/LO

XA 3D-Angio provides visualization and analysis tools for rotational images acquired in angiography labs. 3D angiography provides enhanced 3D views of complex anatomy.

## **CEREBRAL ANEURYSM ANALYSIS**

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Model Name: VLO-CAA/LO

CAA supports cerebral aneurysm rupture risk assessment through visualization and quantification tools.

## **EMBOLIZATION PLAN**

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Model Name: VLO-EMB/LO

Embolization Plan is a dedicated software for advanced embolization it supports an efficient planning for liver tumor treatments.

It is applicable to CT volumes of CTHA and /or CTAP acquisitions and XR LCI volumes.

## **VITREA CT EP PLANNING**

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Model Name: VLO-EP/LO

CT Cardiac EP Planning automatically segments the left atrium and pulmonary veins to enable analysis and assessment which are used in procedural planning and can be exported for 3D road mapping during electro-physiology procedures.

## **VITREA CT ENDOVASCULAR STENT PLANNING**

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Model Name: VLO-EVSP/LO

CT Endovascular Stent Planning (EVSP) enables visualization and measurements of aortic vessels for evaluation, treatment and follow-up for aortic vascular disorders. It automates 3D segmentation of the aorta and initializes stent measurements, based on a template provided by stent manufacturers for a highly efficient workflow.

## **VITREA CT LIVER ANALYSIS**

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Model Name: VLO-LIVER/LO

CT Liver Analysis provides tools for segmenting and quantifying the liver and liver-related tumors. It provides automatic registration for display of multiple series, optimized screen layouts and quantification tools for routine clinical measurements, including surgical liver resection planning tools.

## **VITREA CT TAVR PLANNING**

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Model Name: VLO-TAVR/LO

CT Transcatheter Aortic Valve Replacement (TAVR) Planning provides automatic valve plane recognition and semi automated measurement tools.

## **VITREA CT COLON ANALYSIS**

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Model Name: VLO-COLON/LO

CT Colon Analysis provides clinicians with the ability to perform CT colonography. It provides optimized layouts for 2D and 3D examination of the lumen, including tools for quantitative analysis of suspected polyps, showing the polyp volume, measurement and distance to rectum.

## **VITREA CT LUNG ANALYSIS**

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Model Name: VLO-LUNGNO/LO

CT Lung Analysis is the interface and semi-automated tools help to efficiently determine nodule growth over time. Assessing nodule morphology and volume, whilst offering comparison to prior imaging.

## **VITREA CT LUNG DENSITY ANALYSIS**

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Model Name: VLO-LUNGAN/LO

CT Lung Density Analysis semi-automatically segments lung tissues with quantifiable results to aid in the diagnosis of certain respiratory conditions.

## **VITREA CT BRAIN PERFUSION 2D WITH BAYESIAN**

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Model Name: VLO-2DBPEF/LO

CT Brain Perfusion 2D provides 2D visualization and perfusion mapping of CT perfusion imaging. In acute stroke cases can help physicians determine the presence of acute cerebral infarcts and aid treatment planning decisions. Selection of Bayesian, Singular Value Decomposition (SVD) and delay-insensitive Singular Value Decomposition (SVD+) algorithms.

## **VITREA CT VSCORE**

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Model Name: VLO-VSCORE/LO

CT VScore is a calcium scoring application that allows users to visualize, measure and export a report of coronary calcification and calculate the patients calcium score using a non-contrast cardiac CT exam. Which facilitates coronary risk assessment.

## **VITREA CT CARDIAC ANALYSIS**

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Model Name: VLO-CARDI/LO

CT Cardiac Analysis enables physicians to assess coronary disease by displaying the extracted anatomy in a variety of 2D, 3D and 4D views and using a number of advanced imaging tools. Allowing the assessment of both structural heart and coronary artery disease.

In addition to the automated segmentation and labeling of the three main coronary vessels, there's an option to automatically probe up to 20 branch vessels.

## **VITREA CT CARDIAC FUNCTIONAL ANALYSIS**

Model Name: VLO-CFA/LO

CT Cardiac Functional Analysis (CFA) utilizes 4D CT images of the heart to assist cardiologists and radiologists in assessing the function and morphology of the left ventricle. Clinicians are able to view the cardiac phases in 4D and review the quantified calculated results.

## **VITREA CT MULTI-CHAMBER FUNCTIONAL ANALYSIS**

Model Name: VLO-MCCFA/LO

CT Multi-Chamber CFA utilizes 4D CT images of the heart to assist cardiologists and radiologists in assessing cardiac function of the all the heart's individual chambers. It allows for the full 4D visualization of a cardiac cycle. CT Multi-Chamber CFA computes functional measurements for multiple chambers, such as stroke volume, ejection fraction and cardiac output.

## **VITREA CT FAT MEASUREMENT**

Model Name: VLO-FAT/LO

CT Fat Measurement is a noninvasive post-processing application designed to isolate and quantify subcutaneous and visceral fat. The CT Fat Measurement application calculates body fat area based on a single slice of non-contrast enhanced CT data.

## **VITREA CT<sup>SURE</sup> PLAQUE OPTION**

Model Name: VLO-SUREP/LO

CT<sup>SURE</sup>Plaque provides the visualization and measurement of vessel walls and plaque characteristics in arterial vessels. Using color defined Hounsfield Unit (HU) ranges, plaque characteristics can be assessed. Which can assist in the stratification of patients identified to have atherosclerosis.

## **VITREA CT MYOCARDIAL PERFUSION**

Model Name: VLO-MYOPEF/LO

CT Myocardial Perfusion enables the visualization and analysis stress and rest examinations to assess the presence of perfusion deficits in the myocardium. Semi-automated segmentation and registration compute the analysis in a streamlined workflow.

## **VITREA CT BRAIN PERFUSION 4D**

Model Name: VLO-4DBPEF/LO

CT Brain Perfusion 4D aids with assessing the whole brain and evaluating perfusion deficits by displaying 4D-Digital Subtraction Angiography (DSA) views of blood flow in the vessels and 3D perfusion maps. Advanced tools such as perfusion maps supports the physician in visualizing the apparent blood perfusion in brain tissue affected by acute stroke. Selection of Bayesian, SVD and SVD+ algorithms.

## **VITREA CT BODY PERFUSION 4D**

Model Name: VLO-BODYP/LO

CT Body Perfusion 4D enables whole organ functional assessment using Canon Medical Systems' Aquilion ONE family CT scanner. Parametric maps, based on the contrast flow through an organ, provide additional information to aid clinical decision-making. Views and layouts for dynamic display of images are created throughout the duration of the scan.

## **ICAD VERALOOK CT COLON CAD**

Model Name: VLO-ICAVLK/LO

VeraLook CT Colon computer-aided detection (CAD) from iCAD uses sophisticated image processing software to automatically identify polyps in CTC images.

## **MEVIS VISIA CT LUNG CAD**

Model Name: VLO-MEVLCA/LO

Visia CT Lung by MeVis Medical Solutions is a CAD system for chest multi-slice CT exams. Visia automatically detects potentially actionable lung nodules from 4 mm to 30 mm in size, not just round objects or regions of interest. Sophisticated volumetric segmentation excludes normal anatomy and detects nodules based on size, shape, density and anatomical context.

## **CT DENTAL OPTION**

Model Name: VLO-CTDENT/LO

CT Dental Analysis produces images necessary for dental treatment planning and dental implant sizing, and helps identify diseases of the teeth and oral cavity.

## **DYNAMIC MYOCARDIAL PERFUSION**

Model Name: VLO-DMYOP/LO

CT Dynamic Myocardial Perfusion enables the quantitative assessment of dynamic stress and rest CT examinations. The application provides multiple quantitative results such as myocardial blood flow (MBF) and coronary flow reserve (CFR) for data sets acquired with Aquilion ONE CT.

## **CT RESPIRATORY ANALYSIS**

Model Name: VLO-CTRESP/LO

CT Respiratory Analysis software provides an easy-to-use and intuitive user interface to analyze both 3D and 4D CT data sets to assess respiratory conditions.

3D data sets allow assessment of the area, diameter and volume of the trachea and airways. Also, lung volume and lung density can be measured, which can aid in the assessment of disease progression and treatment response. Using a 4D data set, changes within the airways over an entire breath cycle can be evaluated by visualizing the airway area, diameter, volume and percentage change.

## **VITREA CT DE IMAGE VIEW**

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Model Name: VLO-CTDEIV/LO

Vitrea CT DE Image View enables users to review and report CT Dual Energy images which are acquired using different tube voltages and/or tube currents. The application has multiple functions which enable users to evaluate and characterize body material composition using the attenuation coefficient energy dependence of different materials.

Note: Vitrea CT DE Image View only supports Canon Dual Energy datasets.

## **MIRADA ONCOLOGY FUSION ADVANCED**

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Model Name: VLO-OFUADV/LO

Oncology Fusion Advanced is an integrated multiple modality software application for the evaluation of oncologic disease. It combines the abilities of CT, MR, PET and SPECT imaging into a single viewer on enterprise platform.

This includes following features.

- Quantitative PET measurements (SUV, Mean, Max)
- SPECT measurements
- Follow-up scan comparison
- Snapshots
- Support for 4D (gated) multi-time point data
- Support for multi-sequence, multiple time point MR
- Support for multi-phase, multiple time point CT
- Automatic alignment of studies using deformable registration
- Three-way fused views
- Advanced modality optimized deformable image registration
- Save session: State, bookmarks, VOIs and rulers to PACS
- Derive ruler from VOI
- MR/PET/CT review
- Distribute findings (report)
- RECIST, WHO, and PERCIST measurements
- CT Segmentation Tool

Note: This option supports up to 5 concurrent users.

## **MIRADA ONCOLOGY FUSION STANDARD**

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Model Name: VLO-OFUSTD/LO

Oncology Fusion Standard is an integrated multiple modality software application for the evaluation of oncologic disease. It combines the abilities of CT, MR, PET and SPECT imaging into a single viewer on enterprise platform.

This includes following features.

- Quantitative PET measurements (SUV, Mean, Max)
- SPECT measurements
- Follow-up scan comparison
- Snapshots
- Automatic alignment of studies using deformable registration
- Save session: State, bookmarks, VOIs and rulers to PACS
- Derive ruler from VOI
- Distribute findings (report)
- RECIST, WHO, and PERCIST measurements

Note: This option supports up to 5 concurrent users.

## **MIRADA ONCOLOGY FUSION CORE**

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Model Name: VLO-OFUCO/LO

Oncology Fusion Core is an integrated multiple modality software application for the evaluation of oncologic disease. It combines the abilities of CT, MR, PET and SPECT imaging into a single viewer on enterprise platform.

This includes following features.

- Quantitative PET measurements (SUV, Mean, Max)
- Follow-up scan comparison
- Snapshots

Note: This option supports up to 5 concurrent users.

## **VITREA IMAGE DENOISING**

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Model Name: VLO-DENOIS/LO

Image Denoising is a software-based, post-processing filter designed to be used in conjunction with original image data. It assists clinicians in the enhancement of CT and 3D-XA image presentation by enabling pixel noise reduction while preserving edge detail, spatial size and 3D structure within the original images. Image Denoising is accomplished by using Structure Preserving Diffusion Algorithm (SPD).

## **US CARDIAC FUSION**

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Model Name: VLO-CF01/LO

US Cardiac Fusion is a unique tool to merge Coronary CT images showing accurate coronary anatomy and Ultrasound 3D Wall Motion Tracking, simultaneously displaying the cardiac wall morphology, function and coronary anatomy. Automatic synchronization to match the position of Coronary CT and Ultrasound volume images. Superimposes coronary 3D image and 3D LV parametric model to offer accurate assessment of the coronary artery disease. Coronary vessels projected on to the wall motion polar maps. Fusion views for direct comparison (current and prior, stress and rest, etc)

## **US ANATOMICAL POLAR MAP**

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Model Name: VLO-PM01/LO

US Anatomical Polar Map provides a polar map which shows the approximate perfusion territory of each coronary artery based on CT coronary artery analysis results. This is one of the "Cardiac Fusion" functions.



**MR PACKAGES**

Application	Vitre MR Clinical Suite* <sup>2</sup>	Vitre MR Neuro Expert Package	Vitre MR Body Expert Package	Vitre MR Ortho Expert Package	Vitre MR Cardiac Expert Package* <sup>3</sup>	MR Strain/ Coronary Analysis* <sup>3</sup>
Olea DWI option	✓					
Olea Perfusion option	✓					
Olea Kinetics option	✓					
Olea Analysis option	✓					
Olea Mono Followup option	✓					
Olea MR Acute Care Stroke option	✓					
Olea MR Stroke DWI option	✓					
Olea Brain Tumor Streamlined option	✓					
Olea Head Neck Streamlined option	✓					
Olea Breast Streamlined option	✓					
Olea Female Pelvis option			✓			
Olea Prostate Streamlined option	✓					
Olea DTI option		✓				
Olea Permeability option		✓	✓			
Olea ASL option		✓				
Olea Brain Tumor Expanded option		✓				
Olea Brain Tumor DSCDCE Expanded option		✓				
Olea Brain Tumor DCE option		✓				
Olea Head Neck Expanded option		✓				
Olea DTI Spine option		✓				
Olea IVIM option		✓	✓			
Olea Metabolic option			✓			
Olea Relaxometry option			✓	✓		
Olea Breast Expanded option			✓			
Olea Prostate Expanded option			✓			
Olea Rectum Streamlined			✓			
Medis® Suite Cardiovascular MR					✓	
MR Wall Motion Tracking Multi Chamber					✓	✓
MR Coronary Tracking					✓	✓
Olea MSK Cartilage option				✓		
Olea Multi Followup						
Olea Nova®+						
Olea MR Breast Advanced						
Olea MR Breast Biopsy						
Medis 4D Flow* <sup>4</sup>						
Medis QStrain* <sup>4</sup>						

\*2: MR Clinical Suite is required to add and use MR Neuro, Body and/or Ortho Expert Packages.

\*3: MR Cardiac Expert Package and Strain/Coronary Analysis do not require MR Clinical Suite before they can be added and used.

\*4: When this option is purchased, Vitrea MR Cardiac Expert Package needs to be purchased.

Application	MR Stroke Basic	MR Neuro	MR Neuro ASL	MR Prostate	MR Breast	MR Female Pelvis	MR Rectum	MR Head & Neck	MR MSK	MR Body Full	MR Neuro Full
Olea DWI option	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Olea Perfusion option		✓									✓
Olea Kinetics option				✓	✓			✓		✓	
Olea Analysis option	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Olea Mono Followup option										✓	✓
Olea MR Acute Care Stroke option		✓									✓
Olea MR Stroke DWI option	✓	✓									✓
Olea Brain Tumor Streamlined option											✓
Olea Head Neck Streamlined option								✓		✓	
Olea Breast Streamlined option					✓					✓	
Olea Female Pelvis option						✓				✓	
Olea Prostate Streamlined option				✓						✓	
Olea DTI option			✓								✓
Olea Permeability option				✓		✓	✓	✓		✓	✓
Olea ASL option			✓								
Olea Brain Tumor Expanded option											✓
Olea Brain Tumor DSCDCE Expanded option											✓
Olea Brain Tumor DCE option		✓									✓
Olea Head Neck Expanded option								✓		✓	
Olea DTI Spine option											
Olea IVIM option										✓	
Olea Metabolic option										✓	
Olea Relaxometry option									✓	✓	
Olea Breast Expanded option					✓					✓	
Olea Prostate Expanded option				✓						✓	
Olea Rectum Streamlined							✓			✓	
Medis® Suite Cardiovascular MR											
MR Wall Motion Tracking Multi Chamber											
MR Coronary Tracking											
Olea MSK Cartilage option									✓	✓	
Olea Multi Followup										✓	✓
Olea Nova+											
Olea MR Breast Advanced											
Olea MR Breast Biopsy											
Medis 4D Flow*4											
Medis QStrain*4											

\*2: MR Clinical Suite is required to add and use MR Neuro, Body and/or Ortho Expert Packages.

\*3: MR Cardiac Expert Package and Strain/Coronary Analysis do not require MR Clinical Suite before they can be added and used.

\*4: When this option is purchased, Vitrea MR Cardiac Expert Package needs to be purchased.

## **VITREA MR CLINICAL SUITE**

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Model Name: VLP-MCSUITE/LO

MR Clinical Suite includes Diffusion, Perfusion, Curve Kinetics with streamlined application workflows across many different organs. This package provides access to features which enhance the clinical routine.

### **Applications**

- Diffusion Weighted Imaging (DWI)
- Dynamic Susceptibility Contrast (DSC) Perfusion
- Kinetics
- Analysis
- Mono Follow-up

### **Application Workflows**

- MR Acute Care (Stroke)
- MR Stroke DWI
- Brain Tumor Streamlined
- Breast Streamlined
- Prostate Streamlined
- Head and Neck Streamlined

## **VITREA MR NEURO EXPERT PACKAGE**

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Model Name: VLP-MNEUR/LO

MR Neuro Expert Package includes Diffusion Weighted/Fiber Tracking, Permeability, ASL and expanded application workflows for the brain. It provides users with the latest tools and applications for neuro imaging.

### **Applications**

- Diffusion Tensor Imaging (DTI)
- Dynamic Contrast Enhanced (DCE) Permeability
- Arterial Spin Labeling (ASL)
- Intravoxel Incoherent Motion (IVIM)

### **Application Workflows**

- Brain Tumor DSC DCE Expanded
- Brain Tumor DCE
- Brain Tumor Expanded
- DTI Spine
- Head and Neck Expanded

## **VITREA MR BODY EXPERT PACKAGE**

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Model Name: VLP-MBODY/LO

MR Body Expert Package provides expert users with access to the latest tools and applications for Breast, Prostate and Body Imaging.

### **Applications**

- DCE Permeability
- Metabolic
- Relaxometry
- Female Pelvis
- IVIM

### **Application Workflows**

- Breast Expanded
- Prostate Expanded
- Rectum Streamlined

## **VITREA MR ORTHO EXPERT PACKAGE**

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Model Name: VLP-MORTH/LO

MR Ortho Expert Package includes dedicated solutions for expert users who want access to the latest tools and applications for Orthopedic Imaging.

### **Application**

- Relaxometry

### **Application Workflow**

- MSK Cartilage

## **VITREA MR CARDIAC EXPERT PACKAGE**

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Model Name: VLP-MCARD/LO

MR Cardiac Expert Package includes Global and Regional Function, Flow Quantification and Tissue Characterization. It provides access to the latest tools and applications for Cardiac MRI.

### **Applications**

- QMass®
- QFlow®

### **Application Workflows**

- Medis Suite Cardiovascular MR (CVMR)
- MR Wall Motion Tracking Multi Chamber
- MR Coronary Tracking

## **MR STRAIN/CORONARY ANALYSIS**

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Model Name: VLP-MTOSC/LO

MR Strain/Coronary Analysis Package includes strain analysis and coronary assessment for Cardiac MRI.

### **Applications**

- MR Wall Motion Tracking Multi Chamber
- MR Coronary Tracking

## **MR STROKE BASIC**

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Model Name: VLP-STRO/LO

MR Stroke Basic provides radiologists with direct access to expert stroke reports easily and efficiently.

## **MR NEURO**

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Model Name: VLP-NEUR/LO

MR Neuro provides dedicated brain tumor and expanded stroke protocols which provide quick assessment of brain disorders.

## **MR NEURO ASL**

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Model Name: VLP-ASL/LO

MR Neuro ASL is integrated into Vitrea Advanced Visualization and provides non-invasive imaging to efficiently measure perfusion.

## **MR PROSTATE**

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Model Name: VLP-PROST/LO

MR Prostate provides lesion detection, characterization and staging.

## **MR BREAST**

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Model Name: VLP-BREAS/LO

MR Breast provides efficient tools for breast lesion detection, characterization and staging.

## **MR FEMALE PELVIS**

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Model Name: VLP-FEMPEL/LO

MR Female Pelvis provides efficient analyzation of morphological changes on the pelvic female organs under pathological conditions.

## **MR RECTUM**

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Model Name: VLP-RECTU/LO

MR Rectum provides efficient multi-step assisted post-processing and 3D visualization for rectal pathologies.

## **MR HEAD & NECK**

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Model Name: VLP-HENE/LO

MR Head & Neck provides automatic diffusion, permeability maps computation (graphically presented) for qualitative estimation of the lesion heterogeneity and quantitative data to efficiently assess the patient's response to treatment.

## **MR MSK**

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Model Name: VLP-MSK/LO

MR MSK provides views of orthopedic studies for optimal visualization and assessment of soft tissue and bony structures.

## **MR BODY FULL**

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Model Name: VLP-BODY/LO

The MR Body Full package includes the following:

- MR Head and Neck
- MR Breast
- MR Prostate
- MR Rectum
- MR MSK
- MR Female Pelvis
- Advanced Multiparametric Analysis
- DCE Permeability
- DWI
- Kinetics
- Longitudinal Analysis (Mono and Multi)
- IVIM
- Metabolic
- Onco-Inflammatory

## **MR NEURO FULL**

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Model Name: VLP-NEUFUL/LO

The MR Neuro Full package includes the following:

- MR Basic Stroke
- MR Neuro
- Advanced Multiparametric Analysis
- DWI
- DSC Perfusion
- DCE Permeability
- DTI
- Longitudinal Analysis (Mono and Multi)

## **OLEA IVIM OPTION**

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Model Name: VLO-OIVIM/LO

Olea IVIM features the Bayesian post-processing method, a rigorous probabilistic estimation of diffusion parameters. Includes Electronic b, multiple b, values automatic computation, allowing shorter acquisitions while increasing diagnostic confidence. Quantitatively assesses the microscopic translational motions that could contribute to the signal acquired with diffusion MRI.

## **OLEA METABOLIC OPTION**

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Model Name: VLO-OMETA/LO

Olea Metabolic investigates tissue characteristics in hepatitis, cirrhosis, cancer and other disorders, by measuring the Hepatic Fat Fraction (HFF), through a non-invasive method.

## **OLEA NOVA+**

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Model Name: VLO-ONOVA/LO

Olea Nova+ is an advanced MR post-processing plug-in that automatically computes synthetic MRI images from two dedicated acquisition.

## **OLEA MR BREAST ADVANCED**

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Model Name: VLO-OBRADV/LO

Olea MR Breast Advanced provides intuitive features for breast MR characterization and follow-up.

### **Features**

- Automatic subtraction
- 4D automatic MIP mode
- Automatic metrics computation
- 3D, MIP, MPVR, 3D volume rendering
- Lesion follow-up: MR, US, MG DICOM series
- Integrated BI-RADS® ATLAS report

## **OLEA MR BREAST BIOPSY**

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Model Name: VLO-OBRBIP/LO

Olea MR Breast Biopsy provides features for assistance of MR guided breast intervention planning.

### **Features**

- Identical environment (Breast Advanced)
- Grid template

## **MEDIS 4D FLOW**

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Model Name: VLO-MDS4DF/LO

Medis 4D Flow, one of the elements that can be added to Medis Suite Cardiovascular MR, provides visualization tools and a quantitative analysis of 4D Flow MR data.

Note: Canon MRI Scanner currently does not support 4D Flow sequence.

## **MEDIS QSTRAIN**

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Model Name: VLO-MDSQST/LO

Medis QStrain, one of the elements that can be added to Medis Suite Cardiovascular MR, measures ventricular and atrial strain using long axis and short axis SSFP images.

## ***CEDARS SINAI QPET\*5***

Model Name: VLO-CSQPET/LO

Cedars Sinai QPET provides automatic segmentation, quantification and analysis of static and gated myocardial perfusion PET.

- Support for short axis and transverse datasets
- Tracer kinetics including MBF and CFR quantification
- Normal databases for Rb-82 and N-13 are included
- Viability analysis with scar and mismatch quantification

## ***CEDARS SINAI SPECT PERFUSION + BP BASIC\*5***

Model Name: VLO-CSSPB/LO

Cedars-Sinai SPECT Perfusion+BP Basic includes QGS, QPS, Companion, and Blood Pool. QBS provides quantification of gated blood pool (red blood cells, RBC) images. QGS provides automatic segmentation, quantification, analysis and display of gated myocardial perfusion images. QPS provides automatic segmentation, quantification, analysis and display of static (ungated) short-axis myocardial perfusion SPECT images. The Companion option for QGS/QPS includes Diastolic function assessment (PFR, PER, RPPF), AHA automated 17 segment scoring, and eccentricity calculation.

## ***CEDARS SINAI SPECT PERFUSION + BP DELUXE\*5***

Model Name: VLO-CSSPD/LO

Cedars-Sinai SPECT Perfusion +BP Deluxe includes QGS, QPS, Companion, Blood Pool and Plus Pack. QBS provides quantification of gated blood pool (red blood cells, RBC) images. QGS provides automatic segmentation, quantification, analysis and display of gated myocardial perfusion images. QPS provides automatic segmentation, quantification, analysis and display of static (ungated) short-axis myocardial perfusion SPECT images. The Companion option for QGS/QPS includes Diastolic function assessment (PFR, PER, RPPF), AHA automated 17 segment scoring, and eccentricity calculation. The Plus Pack includes Stress/Rest, motion frozen, QGS phase information, and shape index.

Package Configuration

	SPECT Perfusion, Basic	SPECT Perfusion, Deluxe
QGS	✓	✓
QPS	✓	✓
Companion	✓	✓
QBS	✓	✓
PlusPack		✓

## ***CEDARS SINAI MOTION CORRECTION + AUTORECON\*5***

Model Name: VLO-CSMCAR/LO

Cedars Sinai Motion Correction + Autorecon combines both Motion Correction and Autorecon.

## ***CEDARS SINAI MOTION CORRECTION\*5***

Model Name: VLO-CSMC/LO

Cedars Sinai Motion Correction provides automatic and manual correction of SPECT acquisition motion artifacts. Pattern matching and segmentation algorithms are used in conjunction to minimize motion error metrics over the set of acquired projections; the resulting motion corrected projections are then presented to the operator for validation or modification.

## ***CEDARS SINAI AUTORECON\*5***

Model Name: VLO-CSAR/LO

Cedars Sinai Autorecon reconstructs the data from projections using a variety of algorithms including iterative reconstruction.

\*5: This option requires the purchase of one license per concurrent user.

## **MIRADA RTX POWER**

Model Name: VLO-MIRTXP/LO

Mirada RTx Power provides a comprehensive toolset to support radiation therapy planning for deformable registration and contouring, auto-contouring, 4D, adaptive therapy and re-treatment decision support.

Note: This option supports up to 3 concurrent users.

## **MIRADA RTX SINGLE USER**

Model Name: VLO-MIRTXS/LO

Mirada RTx Single User provides a single user license for Mirada RTx Power.

## **MIRADA RTX ADDITIONAL USER**

Model Name: VLO-MIRTXA/LO

This option is required for purchasing additional concurrent user licenses for Mirada RTx Power.

## **MIRADA NUCLEAR MEDICINE\*5**

Model Name: VLO-MINM/LO

Mirada Nuclear Medicine's flexible display protocols and workflows allow quick and easy reading of Nuclear Medicine studies. TACs and statistics are calculated as the data is loaded and updated in real time as ROIs are edited. Quantitative results can be saved for editing and review, allowing convenient time saving access. This vendor neutral application is intended to improve efficiency on a departmental level.

## **MIRADA NUCLEAR MEDICINE – ADDITIONAL USER**

Model Name: VLO-MINMAU/LO

Mirada Nuclear Medicine - Additional User provides an additional concurrent user for Mirada Nuclear Medicine.

## **INVIA 4DM ESSENTIALS - SPECT+PET**

Model Name: VLO-INS/LO

INVIA 4DM Essentials - SPECT+PET includes:

- SPECT: Advancements in attenuation correction and provides a single application for both SPECT and Gated Blood Pool SPECT studies.
- PET: PET imaging capabilities, such as FDG Viability and Standard Uptake Values (SUV) while increasing the number of normal databases.

Note: This option supports up to 5 concurrent users.

## **INVIA 4DM ADVANCED - SPECT+PET+CT**

Model Name: VLO-INSPC/LO

4DM Advanced - SPECT+PET+CT includes:

- SPECT: Advancements in attenuation correction and provides a single application for both SPECT and Gated Blood Pool SPECT studies.
- PET: PET imaging capabilities, such as FDG Viability and SUV while increasing the number of normal databases.
- CT: Includes co-registered ECT and CT studies, ECT-CTA Fusion, CT Viewing, and Calcium Scoring.

Note: This option supports up to 5 concurrent users.

## **INVIA 4DM PREMIUM – SPECT+PET+CT+MFR**

Model Name: VLO-INSPCF/LO

4DM Premium - SPECT+PET+CT+MFR includes:

- SPECT: Advancements in attenuation correction and provides a single application for both SPECT and Gated Blood Pool SPECT studies.
- PET: PET imaging capabilities, such as FDG Viability and SUV while increasing the number of normal databases.
- CT: Includes co-registered ECT and CT studies, ECT-CTA Fusion, CT Viwing, and Calcium Scoring.
- MFR: Myocardial Flow Reserve (MFR) quantification for dynamic PET is designed to measure absolute blood flow in coronary arteries.

Note: This option supports up to 5 concurrent users.

## **INVIA SPECT RECONSTRUCTION**

Model Name: VLO-INSR/LO

Invia SPECT Reconstruction add-on provides nuclear cardiology technologists with a single interface for quality assurance, reconstruction, and processing of SPECT myocardial perfusion, viability, and SPECT gated blood pool studies.

Package Configuration

	Essentials	Advanced	Premium
SPECT	✓	✓	✓
PET	✓	✓	✓
SPECT + PET	✓	✓	✓
Hybrid CT + SPECT		✓	✓
Hybrid CT + PET		✓	✓
Hybrid CT + SPECT + PET		✓	✓
MFR + SPECT			✓
MFR + PET			✓
MFR + PET + Hybrid CT			✓
MFR + SPECT + PET + Hybrid CT			✓

Note: This option supports up to 5 concurrent users.

\*5: This option requires the purchase of one license per concurrent user.

## **SYNTERMED NEUROQ BASE**

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Model Name: VLO-NQBASE/LO

NeuroQ is one of the most widely utilized neuroradiology solutions in the world for diagnosing dementia, epilepsy and many other neurodegenerative diseases. NeuroQ has been developed to aid in the assessment of human brain scans through quantification of mean pixel values lying within standardized regions of interest, and to provide quantified comparisons with brain scans derived from PET/SPECT studies of defined groups having no identified neuropsychiatric disease or symptoms, i.e., asymptomatic controls (AC).

## **SYNTERMED NEUROQ AMYLOID<sup>\*6</sup>**

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Model Name: VLO-NQAMY/LO

NeuroQ/Amyloid is an option in NeuroQ for quantified comparisons with brain scans derived from Amyloid agents including Amyvid (Eli Lilly), NeuraCeq (Piramal), and Vizamyl (GE). All agents have been validated in accordance with agent vendor requirements.

## **SYNTERMED NEUROQ SPECT<sup>\*6</sup>**

---

Model Name: VLO-NQSPE/LO

NeuroQ/SPECT is an option in NeuroQ for quantified comparisons with brain scans derived from TC-99 m ECD and technetium-99 m HMPAO SPECT agents.

## **SYNTERMED NEUROQ DATSCAN<sup>\*6</sup>**

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Model Name: VLO-NQDS/LO

NeuroQ/DatScan is an option in NeuroQ for quantified comparisons with brain scans derived from Ioflupane I123 (DaTscan) injections. Although DaTscan does not diagnose a Parkinsonian Syndrome (PS) or Essential Tremor (ET), the findings of SPECT imaging with DaTscan may be used, in addition to other clinical tests, to help make a diagnosis.

## **SYNTERMED NEUROQ EQUAL<sup>\*6</sup>**

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Model Name: VLO-NQEQL/LO

NeuroQ/EQuAL is an option in NeuroQ for EQuAL (Extent specified Quantified Asymmetry-of-Lobe analysis) which may be useful for assessing maximal temporal asymmetry over a specified proportion of the temporal lobe. This may help to predict whether patients will be free of seizures during the years after neurosurgical resection of epileptogenic tissue.

## **TOMTEC CARDIOLOGY ULTRASOUND BASIC<sup>\*5</sup>**

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Model Name: VLO-TTBASE/LO

TOMTEC Cardiology Ultrasound Basic is the application for routine reading and reporting of the ultrasound images, manual measurements and worksheet.

Key features:

- IMAGE-COM
- Cardiac measurements
- Vascular measurements
- ECHO-COM

## **TOMTEC CARDIOLOGY ULTRASOUND ESSENTIALS<sup>\*5, \*7</sup>**

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Model Name: VLO-TTESTL/LO

TOMTEC Cardiology Ultrasound Essentials enhance your ultrasound workflow, and helps improving diagnostic quality and reproducibility.

Key features:

- 3D rendering option
- AutoLV
- AutoIMT
- AutoSTRAIN

## **TOMTEC CARDIOLOGY ULTRASOUND PREMIUM<sup>\*5, \*7</sup>**

---

Model Name: VLO-TTPRIM/LO

TOMTEC Cardiology Ultrasound Premium provide tools for expert users in both research and clinical environments.

Key features:

- 3D rendering option
- 2D CPA
- 4D LV-ANALYSIS
- 4D RV-FUNCTION
- 4D CARDIO-VIEW
- 4D MV-ASSESSMENT

## **TOMTEC CARDIAC CATH COMPLETE<sup>\*5</sup>**

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Model Name: VLO-TTCATH/LO

TOMTEC Cardiac Cath Complete is the application package for cath routine.

Key features:

- IMAGE-COM
- Digital Subtraction Angiography
- Cath-QCA
- Cath-QLVA

\*5: This option requires the purchase of one license per concurrent user.

\*6: This option requires the purchase of Syntermed NeuroQ Base.

\*7: This option requires the purchase of TOMTEC Cardiology Ultrasound Basic.



## **TOMTEC CARDIAC ECHO CATH<sup>\*5</sup>**

Model Name: VLO-TTECHO/LO

TOMTEC Cardiac Echo Cath is the application package for echo and cath routine.

Key features:

- IMAGE-COM
- Cardiac measurements
- Vascular measurements
- ECHO-COM
- Digital Subtraction Angiography
- Cath-QCA
- Cath-QLVA

## **TOMTEC RADIOLOGY ULTRASOUND<sup>\*5</sup>**

Model Name: VLO-TTRAD/LO

TOMTEC Radiology Ultrasound is the application package for radiology ultrasound images.

Key features:

- IMAGE-COM
- 3D rendering option
- Vascular measurements
- AutoIMT
- 4D SONO-SCAN

\*5: This option requires the purchase of one license per concurrent user.

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