

Cenova™

Image Analytics Servers



Cenova™ Image Analytics Server Release Notes

Software Version 4.0
MAN-11481 Revision 001

HOLOGIC®

Cenova™

Image Analytics Server

Release Notes

For Software Version 4.0

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1: Introduction

These Release Notes provide a listing of product features and known issues in the most recent release of the Cenova™ Image Analytics Server.

1.1 Software Applications



Note

Not all software applications are available in all markets.

The server supports the software applications listed below.

- **ImageChecker® CAD 10.0**, computer-aided detection software used to identify and mark regions of interest on routine screening and diagnostic mammograms. Version 10.0 also applies to Hologic-generated 2D images.
- **ImageChecker® 3D Calc CAD 1.1**, a software application used for analyzing Hologic 3D Mammography™ datasets.
- **Quantra™ 2.2**, software used to calculate breast density categories from Hologic screening digital breast X-ray images.
- **DigitalNow™ HD 1.0**, software used to process digitized screen-film mammograms so that the resulting images more closely resemble digital mammography images.



Note

DigitalNow™ HD 1.0 is no longer available for sale, but it is still supported for existing customers.

1.2 Supported Image Acquisition Systems

The Cenova server processes mammography images originating from the following image acquisition systems:

- Hologic Selenia®, Hologic Selenia Dimensions®, Hologic 3Dimensions™
- GE Senographe® 2000D, GE Senographe DS, GE Senographe Essential
- Siemens Mammomat® Novation^{DR}



Note

The Cenova server does not process mammography images originating from other manufacturer image acquisition systems, such as Fuji, Giotto, or Planmed.

1.3 Input Ports and Application Licenses

Each device that produces digital mammography image files maps to an input port on the Cenova server. The DICOM header for each image object includes an identifier (e.g., a serial number) that indicates the device from which the image originated.

Each Cenova server provides up to four input ports for processing two-dimensional mammography image files. For Cenova servers processing Hologic 3D Mammography datasets, two input ports are available (limit of two input ports).

Each Cenova software application requires one software license for each input device. For example, if there are four FFDM devices, then the Cenova server must be configured with four software licenses for each desired Cenova software application.

The Cenova server can also process images sent from any number of PACS devices, as long as the images originated from one of the licensed input devices.

For assistance with license configurations, contact your Hologic representative.

1.4 Rack-Mount Server

The optional rack-mount server is a good solution for sites that need to save space and want to place the server in a data center. For existing customers who do not have the rack-mount server, it is available for purchase separately.

1.5 Cenova Result Formats

The software allows you to select from the following result formats:

- **Mammography CAD SR** – The Structured Report (SR) format is the DICOM standard for ImageChecker CAD and Hologic Imaging Biomarker results.
- **RTSS** – The Radiotherapy Structure Set format was developed specifically to display ImageChecker CAD results on certain GE review workstations.
- **SC Image** – Mammography CAD SC (Secondary Capture) provides the case-processed views (normally the four screening views) with ImageChecker CAD results, Hologic Imaging Biomarkers results, or proprietary ImageChecker 3D Calc CAD results. For ImageChecker CAD and Hologic Imaging Biomarkers, this format is for workstations that do not support Mammography CAD SR.
- **Printer** – This format provides ImageChecker CAD results for the case-processed views (normally the four screening views).
- **MG Image** – This DICOM Digital Mammography X-Ray (MG) Image – For Presentation format provides DigitalNow HD images.

1.6 CAD Score

Starting with Cenova version 2.2, when processing ImageChecker CAD results, the Cenova server no longer outputs the CAD Score value as one of the LesionMetrics™ results. If you do not have SecurView® 8.2 or later, EmphaSize™ (variable-size) marks will not be displayed.

1.7 System Upgrades

Upgrade kits are available that allow any qualified Cenova server to be updated with the current Cenova release. A customer can be upgraded as long as:

- Their system is covered by a Hologic warranty or service agreement. (Restrictions apply.)
- Their server hardware meets the minimum requirements. Only Windows 10 is supported. Kits to upgrade eligible Windows 7 hardware to Windows 10 are available.



Note

Ensure that the minimum hardware requirements to run Windows 10 are met (refer to the *Cenova™ Image Analytics Server System Requirements*).

- Their diagnostic review workstations can render the Cenova output.

Customers may be eligible for software upgrades as a part of their warranty or service contract, as long as the above requirements are met. Upgrades can also be purchased separately.



Note

The Cenova T-Series server is required to run ImageChecker 3D Calc CAD.

1.8 DICOM 6000 Interface

DICOM 6000 Interface software is not validated on Windows 10.

If DICOM 6000 Interface software is running on a separate Windows 7 computer, you may continue sending ImageChecker CAD results to it from a Cenova 4.0 server.

If DICOM 6000 Interface is running on a Cenova 3.0 or earlier server, you will need to move the DICOM 6000 Interface software and dongle to a separate Windows 7 computer, or transition to use a different ImageChecker CAD results output format with downstream workstations, such as Mammography CAD SR or SC Image.

2: New Features

2.1 New Features in Cenova Version 4.0

2.1.1 Windows 10 Support

Cenova software is installed and supported only on the Windows 10 operating system.

3: Problems Corrected

3.1 Problems Corrected in Cenova Version 4.0

3.1.1 Quantra Software Update for SmartCurve™ Paddle

Quantra 2.2 software may overestimate the breast density category (for example, 'b' instead of 'a', or 'd' instead of 'c') for some fatty breasts when a dark band is present along the chest wall, especially with the 18x24 SmartCurve paddle. This problem has been corrected by excluding the chest wall band.

4: Known Issues

4.1 Known Issues in Cenova Version 4.0

4.1.1 Password Required when Configuring Proxy Server

If you configure a proxy server with a username and no password, an error message may appear. To avoid this, configure a proxy server with either (1) no username or (2) a username with password. No fix is planned.

4.1.2 Browser Delays when Server is Under Heavy Load

On occasion, Internet Explorer may run slowly when the Cenova server is under heavy load. The behavior usually occurs when the user sends a large number of cases to the system and accesses the Case Manager page. No fix is planned.

4.1.3 Cenova Services Do Not Restart

After an unscheduled shutdown (e.g., facility power outage), the Cenova services (CAD, DICOM) may not restart when you boot up the server. This issue usually occurs when Microsoft Message Queuing (MSMQ) data files are corrupted by antivirus software or backup software configured to scan the MSMQ data storage directory. To fix this issue, you must exclude the following directory from antivirus scans and backup scans:

C:\WINDOWS\system32\msmq\storage

If this procedure does not fix the problem, then delete the corrupted files in the MSMQ directory. This action deletes all pending messages in the queues. The Cenova server, upon restart, queues any pending messages. No fix is planned.

4.1.4 Default Printer

When using VPN, if the user logs into the Cenova server using a remote desktop connection (RDC), the server's default printer will be automatically set to match the default printer of the user's remote machine. When the user exits RDC and logs out of Windows, the server's default printer will be restored to the previous setting. No fix is planned.

4.1.5 Multibyte Characters Not Supported

The server does not support multibyte character sets appearing in the DICOM image headers. Performance of the system has not been evaluated when these characters are present. No fix is planned.

4.1.6 Case Manager Exceptions

In the Cenova Case Manager, dragging a column to the left or right sometimes causes the web page to freeze. In such cases, close and restart the web browser. No fix is planned.

When the user attempts to delete cases in the Cenova Case Manager after the system has been idle for more than 10 minutes, an error message appears. After a delay, the Cenova system displays the log-in screen but does not delete the case. In such cases, log in and delete the case again. No fix is planned.

4.1.7 Export Biomarkers Command Fails

On Cenova systems with an applied SSL certificate, an error appears when you attempt to export Biomarkers from the Cenova Case Manager. No fix is planned.

4.1.8 Biomarker Results Do Not Appear

When the Quantra algorithm is unable to process any views, the Cenova server still produces DICOM Secondary Capture Image output. The Secondary Capture Image uses dash (—) to represent each missing Quantra result value. No fix is planned.

4.1.9 CAD Results Invalid if Two Patients are Merged

If images from two different patients are merged under one study and sent to the Cenova server, the CAD results are invalid.

4.1.10 Quantra Algorithm Information Not Displayed on Hologic SecurView

For Quantra results on Hologic 3D Mammography™ images, the algorithm information is not displayed upon double-clicking the R2 logo on the Hologic SecurView workstation.

4.2 Known Issues in ImageChecker CAD 10.0**4.2.1 Large Benign Calcifications Sometimes Marked**

On occasion, some large benign calcifications may be marked as Calcs or Masses. No fix is planned.

4.2.2 Big Calc Cluster on Normal Tissue

On occasion, Calc marks reported with very high confidence may be displayed on normal tissue (RMLO view). No fix is planned.

4.2.3 Malc Mark Does Not Appear for Some Big Masses

For large masses with calcifications, Malc mark data may not be reported. For a region that includes calcifications in near proximity to a large mass, the workstation may display a Mass mark and a Calc mark that overlap. No fix is planned.

4.2.4 CAD Marks Do Not Display on Agfa IMPAX Workstations

For Agfa IMPAX workstations earlier than v6.4 that receive DICOM Mammography CAD SR objects transferred via a Big Endian transfer syntax, the resultant display on the Agfa workstation incorrectly indicates 'No findings' rather than indicating that CAD results cannot be displayed.

Hologic has not validated compatibility and configuration of CAD mark display on non-Hologic workstations. ImageChecker CAD installation or Cenova upgrade at sites with non-Hologic workstations requires coordination with the site PACS administrator and workstation vendor to ensure correct CAD display.

4.3 Known Issues in ImageChecker 3D Calc CAD 1.1



Note

This feature is not available for sale in all markets.

4.3.1 Processing Equivalent Views

ImageChecker 3D Calc CAD has been developed to support the standard screening views (LCC, RCC, LMLO, & RMLO). Although ImageChecker 3D Calc CAD may process equivalent views, the performance of the software has not been validated for these views. No fix is planned.