

**CTB-00886****Date:** April 8, 2021**Author:** Service Engineering**Product:** Selenia Dimensions /      **Subsystem:** AWS  
3Dimensions**Subject:** Description of 3D Image Processing and Expected Performance on  
Selenia Dimensions and 3Dimensions Systems

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**Purpose**

The purpose of this bulletin is to provide a brief description of how image processing functions on Selenia Dimensions and 3Dimensions systems when ClarityHD, Intelligent2D, 3DQuorum, and Genius AI Detection are enabled. This document will also explain the factors that impact image processing time to better set expectations for normal system performance.

**Image Processing Explanation**

Image processing on the system occurs in the following manner:

- After a TomoHD, or ComboHD view is acquired, the system processes the preview image to be shown to the user allowing them to accept or reject the image.



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**Note**

Image processing for the entire view (e.g., CC or MLO) is not complete at this time. The preview image is not the final image that will be sent to the reading station.

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- Subsequent images to be processed from the acquired view are placed into a queue in the background.
- After the preview image is accepted, the system will go ready to allow for another view to be acquired while image processing continues in the background. The background image processing is often completed while the patient is being repositioned for the next view.

## Technical Bulletin (cont.)

- The remainder of the views are captured for the exam with the same workflow and image processing.



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### Note

Users could become aware of extended image preview processing times when another view is acquired which causes the newly acquired view to be placed at the end of the image processing queue. The preview image of the most recent view will not be shown until the processing of the prior view is completed.

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### Factors that Impact Image Processing Time

- Breast thickness and the amount of breast tissue covering the breast platform. This amount of tissue coverage (i.e., 40% vs 80%) directly impacts the amount of data to process and has the largest impact on image processing time.
- ClarityHD Tomosynthesis images are a higher resolution than standard resolution Tomosynthesis images and requires additional processing time.
- Intelligent2D, 3DQuorum, and Genius AI Detection also add image processing time based on modality, breast size, thickness, and complexity of the anatomy.

### Expected System Performance with regards to Image Processing

Using Hologic's Unifi Analytics platform, a national average for a four view screening exam is shown to be completed in approximately five and a half minutes. Additional options such as ClarityHD, Intelligent2D, 3DQuorum, and Genius AI Detection, breast anatomy including size and thickness, as well as system configurations may cause variances in the time to perform each individual exam. Often, the speed of positioning a patient during an exam can have a direct impact on the perception of extended image preview processing time. For example, when performing Mosaic or tiling, the repositioning of the breast may occur much faster than normally expected.

Customers can expect performance that is in line with the national average with variances associated with the factors described in this customer technical bulletin. An increase in image preview processing time as explained does not indicate a performance issue and can be expected under certain conditions and should not cause concern with overall system performance.



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### Note

If the first exposure after a user logs into the system takes over one minute to process but the remainder of the images process within the expected system performance please contact Hologic Technical Support.

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