



# Aperio GT 450 1.1.0.5000 Patch Notice

Leica Biosystems is always looking for ways to further improve our customers' experience using our products. Our software patches often include new features, but also include improvements based on customer input and our own internal testing. Please make sure to read below for the details of this patch so you can get the best out of your product. Thank you for being a customer of Leica Biosystems.

## New Features Included in This Patch

Case #	Description
27839	SVS image data was updated to include information related to any scan warnings such as image quality and barcode warnings. For information on this new image data, refer to "SVS Metadata (Image Description)" in the <i>Aperio ScanScope Virtual Slide (SVS) Image Format Specification, MAN-0466</i> .
27906	Aperio GT 450 has been updated to give field personnel the tools to configure the scanner to bypass the SVS file conversion to write DICOM image files directly to a network folder.
27812	After three incorrect login attempts, the account of the user trying to log in is now locked. A new feature in Aperio SAM allows an administrator to unlock a locked account. For details, see <i>Aperio GT 450 IT Manager and Lab Administrator Guide</i> .
27822	SVS image data was updated to include new image tags to differentiate the Aperio GT 450 from the Aperio GT 450 DX: ScannerType and SessionMode. For information on these tags, see the <i>Aperio ScanScope Virtual Slide (SVS) Image Format Specification, MAN-0466</i> .
27813	Aperio SAM now presents a new dialog box that allows the user to extend the session before the session time expires.

## Improvements Included in This Patch

The following improvements were added in this patch.

Case #	Description
27843	The Real Time Focus algorithm was enhanced to improve finding the best focus position.
27806	Multiple ICC profiles are now available to adjust for variations in the spectral response of the scanner cameras; Aperio SAM now allows Leica personnel to configure a scanner to use a specific ICC profile.
27666	Auto Image QC was enhanced to increase sensitivity in marking out of focus images reducing false positives.
27807	Barcode decoder performance was improved.
27418	The Tissue Finder algorithm was enhanced to improve tissue cropping when viewing dark tissue and control line samples.
27841	Placing of the prescan point was updated to correct an issue that could result in a striping artifact.
27811	Compression logic was enhanced to correct a problem when the time zone was set to Saudi Arabia.
27805	Aperio services startup was changed to address startup failure due to conflict with customer IT domain policies.
27808	Slide detect logic was updated to address an issue where slides within a rack were incorrectly identified as tilted slides.
27832	A new scanner suite installer was created to address issues related to backward compatibility.
27810	A new firmware installer was released to support remote firmware updates.
27907	DICOM file format was updated to: <ul style="list-style-type: none"> <li>• Correct the macro/slide photo image which had an incorrect image type specification, preventing the macro image from being displayed in the Sectra PACS properly.</li> <li>• Image meta data was updated for the thumbnail image to reflect recent standards updates that now contain a thumbnail type.</li> <li>• The unused Multi-Resolution Navigation module was removed from the thumbnail image to conform to updated standards.</li> <li>• The attribute indicating how frames are arranged (Dimension Organization Type) was corrected.</li> </ul>
27428	The scanner operating system was updated to Ubuntu 20.04 LTS distribution with Linux kernel upgraded to 5.4 for improved security.
27835	The Controller was updated to detect and notify Aperio SAM of the following intrusions: <ul style="list-style-type: none"> <li>• Log entries containing login information for compromised users are modified/deleted with a null-overwrite log cleaner.</li> <li>• Excessive login authentication failures over a short period of time are detected by examining Linux audit logs.</li> <li>• Known rootkits/malware are detected as installed on the system by using rkhunter.</li> </ul>

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Case #	Description
27837	The scanner operating system was hardened to increase security by using these techniques: <ul style="list-style-type: none"><li>• File system integrity checks for critical binaries and files</li><li>• GRUB Bootloader password required</li><li>• More audit logging</li><li>• Additional firewall rules to cover IPV6</li></ul>
27849	A new installer was released to enable remote security vulnerability patch updates to the scanner operating system.
27824	Device certificates are now used to authenticate Aperio GT 450 and Aperio SAM communication.
27814	The Aperio SAM operating system was updated to Windows Server 2019 for improved security.
27827	An Aperio SAM defect was corrected which allowed a user account to be active after that user was deleted.
27829	An Aperio SAM defect was corrected that allowed non-administrator users to perform administration tasks.

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Part Number/Revision: PN-0031, Revision B  
Date: March 2022

This document applies to Aperio GT 450 Controller, Aperio GT 450 Console, and Aperio GT 450 SAM versions 1.1 and later

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- ▶ This product is protected by registered patents. For a list of patents, contact Leica Biosystems.

User Resources

- ▶ For the latest information on Leica Biosystems Aperio products and services, please visit [www.LeicaBiosystems.com/Aperio](http://www.LeicaBiosystems.com/Aperio).

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23GT450, 23GT450SAM

## Revision Record

Rev	Issued	Sections Affected	Detail
B	March 2022	All	Correction to release version number.
A	March 2022	All	New document.

## Cautions and Notes

- ▶ **Serious Incidents Reporting** – Any serious incident that has occurred in relation to the Aperio GT 450 shall be reported to the manufacturer and the competent authority of the member state in which the user and/or the patient is established.
- ▶ **Specifications and Performance** - For device specifications and performance characteristics, refer to the document *Aperio GT 450 Specifications*.
- ▶ **Installation** - Aperio GT 450 must be installed by a trained Leica Biosystems Technical Services representative.
- ▶ **Repair** - Repairs may be done only by a trained Leica Biosystems Technical Services representative. After repairs are done, ask the Leica Biosystems technician to perform operation checks to determine the product is in good operating condition.
- ▶ **Accessories** - For information on using Aperio GT 450 with third-party accessories such as a Laboratory Information System (LIS) not provided by Leica Biosystems, contact your Leica Biosystems Technical Services representative.
- ▶ **Quality Control** - For information on image quality checks, see the *Aperio GT 450 User's Guide*.
- ▶ **Maintenance and Troubleshooting** - For information on maintenance and troubleshooting, see the *Aperio GT 450 User's Guide*.
- ▶ **Cybersecurity** - Be aware that workstations are susceptible to malware, viruses, data corruption, and privacy breaches. Work with your IT administrators to protect workstations by following your institution's password and security policies. To protect workstations from malware intrusion, use caution when inserting USB drives and other removable devices. Consider disabling USB ports that are not in use. If you plug in a USB drive or other removable device, you should scan the devices with an anti-malware utility. For Aperio recommendations on protecting your workstations and servers, see the document *Aperio GT 450 IT Manager and Lab Administrator Guide*.  
  
If a suspected Aperio GT 450 cybersecurity vulnerability or incident is detected, contact Leica Biosystems Technical Services for assistance.
- ▶ **Training** - This manual is not a substitute for the detailed operator training provided by Leica Biosystems or for other advanced instruction.
- ▶ **Safety** - Safety protection may be impaired if this device is used in a manner not specified by the manufacturer.



For additional information on this product, including intended use and symbols glossary, refer to the primary instructions for use, **Aperio GT 450 User's Guide**.