Technical note

Windows versions

In Axis Network Video Recorders

February 2025

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1. Introduction

This document aims to clarify which Windows versions are used in AXIS Network Video Recorders and why specific servicing channels are being used. It also lists the upgrade path for different products and the eligibility to Windows 11.

2. Current Windows version

During Q1 2025, the operating system using during manufacturing has transitioned to Windows 11 IoT Enterprise LTSC 2024 (version 24H2).

Products manufactured earlier have a different operating system, such as Windows 10 IoT Enterprise LTSC 2021 or even Windows 10 IoT Enterprise 1909 SAC before that.

The Windows Long-Term Servicing Channel (LTSC) is the most suitable option for a video surveillance application. It provides an extended support period from Microsoft, lasting up to 10 years. The LTSC also features smaller updates with fewer new features, which reduces the risk of introducing new issues and minimises maintenance requirements. This servicing channel primarily focuses on delivering security updates and bug fixes.

Windows 11 IoT Enterprise GAC (General Availability Channel) has a much shorter support period, bigger updates and does not fully fit our type of application. This version is not used in Axis products.

You can read more about LTSC here and General Availability Channel (SAC/GAC) here.

3. Recommendations

For customers who have systems using Windows 10 IoT Enterprise LTSC 2021, we recommend remaining on this operating system, as it is supported by Microsoft until Jan 13, 2032, for security fixes.

If a customer wishes to upgrade from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024, an in-place upgrade is not technically possible due to Microsoft licensing policies. This upgrade requires a full reinstallation of the operating system and the purchase of a new license from a Microsoft dealer. Axis is unable to assist with this process.

Customers currently using Windows 10 IoT Enterprise SAC are advised to update to the latest version available on this service channel (currently 22H2) and apply any patches released by Microsoft until the retirement date of October 14, 2025.

NOTE

Axis is not able to support to the same extent a system with a different operating system than the one shipped with the product.

Any recovery kit sent by Axis Technical Services will be based on the operating system the product was sold with.

4. Servicing channel

4.1. Why is LTSC being used?

1.1.1 *LTSC definition:*

The Long-Term Servicing Channel is designed to be used only for specialized devices (which typically don't run Office) such as ones that control medical equipment or ATMs.
The LTSC edition of Windows provides customers with access to a deployment option for their special-purpose devices and environments. These devices typically perform a single important task and don't need feature updates as frequently as other devices in the organization.
Feature updates are offered in new LTSC releases every 2–3 years instead of every 6 months, and organizations can choose to install them as in-place upgrades, or even skip releases.
Microsoft is committed to providing bug fixes and security patches for each LTSC release during the extended LTSC servicing lifecycle.

1.1.2 *SAC*

Windows 11 IoT Enterprise GAC (General Availability Channel) has a much shorter support period, bigger updates and does not fully fit our type of application. This version is currently not used in Axis products.

1.1.3 *Axis strategy*

LTSC is the best Servicing Channel for a Network Video Recorder which runs a Video Management Software, and which shall be interrupted as little as possible to apply feature updates. Typically, an NVR will not need new functionality for Cortana, Edge, and all in-box Universal Windows apps. LTSC is the servicing channel that is commonly being used in the video surveillance industry for Windows products.

5. Support

Product support after Windows 10 IoT Enterprise SAC retirement date.

Axis is committed to supporting customers as long as it remains commercially and technically feasible.
For AXIS Camera Station Pro, we have greater control and will ensure the product functions throughout its warranty period. However, Axis cannot guarantee full support for Windows, as this is beyond our control.
If customers strictly require their operating system to remain within a supported period, they should consider purchasing a Windows 10 IoT Enterprise LTSC 2021 or Windows 11 IoT Enterprise LTSC 2024 field upgrade kit license or opt for Extended Security Updates for their current operating system.
This upgrade necessitates a full reinstallation of the operating system and the purchase of a new license from a Microsoft dealer.
Please note that Axis is unable to assist with this process.

6. Upgrades and eligibility

6.1. Windows 11 eligibility

The table below shows the product eligibility to Windows 11, from a hardware perspective as well as from a software and licensing perspective.
To be eligible for a Windows 11 upgrade without requiring a new license, both columns must display "Yes."

Product	Hardware eligible for Windows 11	Upgrade path from Win 10 to Win 11 possible?	Comment
AXIS S12 Series (Win 10)	Yes	No	No upgrade from Windows 10 LTSC 2021 to Windows 11 LTSC 2024. Customer needs to purchase their own Windows 11 license.
AXIS S93 Series (Win 10)	Yes		
AXIS C7050 Mk III	Yes		
AXIS S2108 (Win 10)	Yes		
AXIS S22 Series	No	No	Unsupported CPU
AXIS S9002 Mk II	Yes	Yes	
AXIS S1116 MT/Racked	Yes	Yes	
AXIS S1132 Rack/Tower, S1148	Yes (only products with TPM)	Yes (only products with TPM)	TPM included after ~August 2021 *
AXIS S9101 Mk II	No	No	No TPM
AXIS C7050 Mk II	No	No	No TPM
AXIS S10 Mk II Series	No	No	Hardware not eligible
AXIS S20 Series	No	No	Hardware not eligible

6.2. Upgrade path

The diagram below shows the theoretical operating system upgrade path for the different products.

Note

* Shipping dates for TPM and LTSC are estimated shipping dates from Axis Configuration and Logistic Centers. They may vary from one model and region to another. Please refer to the sections below to identify if a unit includes TPM and to determine its servicing channel.
Axis Technical Services can also assist during this process.

S12, S93, S21 Series (Shipped from Q1 2025)
Windows 11 IoT Enterprise LTSC 2024
S22 Mk II Series
Windows 11 IoT Enterprise LTSC 2024
S12 Series (Shipped before Q1 2025)
Windows 10 IoT Enterprise LTSC 2021
S93 Series, C7050 Mk III (Shipped before Q1 2025)
Windows 10 IoT Enterprise LTSC 2021
S2108 (Shipped before Q2 2025)
Windows 10 IoT Enterprise LTSC 2021
S22 Series With TPM 1 (Shipped after October 2022[2])
Windows 10 IoT Enterprise LTSC 2021
S22 Series Without TPM 1 (Shipped before October 2022[2])
Windows 10 IoT Enterprise SAC 1909
Windows 10 IoT Enterprise SAC 21H2
Windows 10 IoT Enterprise SAC 22H2
S22 Series Without TPM 1 (Shipped before July 2020[2])
Windows 10 IoT Enterprise SAC 1803
Windows 10 IoT Enterprise SAC 1909
Windows 10 IoT Enterprise SAC 21H2
Windows 10 IoT Enterprise SAC 22H2
S1116 MT, S1116 Racked, S9002 Mk II
Windows 10 IoT Enterprise SAC 1909
Windows 10 IoT Enterprise SAC 21H2
Windows 10 IoT Enterprise SAC 22H2
Windows 11 IoT Enterprise GAC
S1132 Rack/Tower, S1148 With TPM 1 (Shipped after August 2021[2])
Windows 10 IoT Enterprise SAC 1909
Windows 10 IoT Enterprise SAC 21H2
Windows 10 IoT Enterprise SAC 22H2
Windows 11 IoT Enterprise GAC
S1132 Rack/Tower, S1148 Without TPM 1 (Shipped before August 2021[2])
Windows 10 IoT Enterprise SAC 1909
Windows 10 IoT Enterprise SAC 21H2
Windows 10 IoT Enterprise SAC 22H2
S9101 Mk II, C7050 Mk II
Windows 10 IoT Enterprise SAC 1909
Windows 10 IoT Enterprise SAC 22H2
Windows 10 IoT Enterprise SAC 22H2
S10 Mk II, S20 Series
Windows 10 IoT Enterprise LTSB 2016 (1607)
S10 Mk II, S20 Series
Windows 10 IoT Enterprise LTSB 2015 (1507)
Windows 10 IoT Enterprise SAC 1909 Using Field Upgrade Kit 2.0
Windows 10 IoT Enterprise SAC 21H2
Windows 10 IoT Enterprise SAC 22H2

[1] Some products have been updated during their lifetime and TPM was only part on the later hardware revision. Check the following section for identifying if your product contains a TPM.
[2] Shipping date refers to shipping date from Axis Configuration and Logistic Centers. The date is an estimation and varies depending on the region.

1.1.4 *TPM*

Identifying if a product has a Trusted Module Platform (TPM)

TPM was added to AXIS S11 and S22 Series during their lifetime. If the unit contains a TPM, the labels located on the box and underneath the product have “TPM included” written on them:

1.1.5 *Service channel*

Identifying the servicing channel of a product

The servicing channel (i.e. LTSC or SAC) the product was shipped with, can be found on the COA sticker located underneath the product. See example below:

7. Considerations

Timing of Windows feature delivery varies by device. Windows feature availability may vary by market/region. Therefore, a product might be eligible for a certain update, but it may take time until the update is available on the Windows Update page.
This is controlled by Microsoft and Axis is not responsible for the availability of the updates, nor able to provide more information regarding the timing of delivery.

8. Sources / useful links

Windows 11 IoT Enterprise LTSC 2024 available for OEMs:
https://learn.microsoft.com/en-us/windows/iot/iot-enterprise/whats-new/windows-11-iot-enterprise-ltsc-2024
Windows servicing channels:
https://learn.microsoft.com/en-us/windows/deployment/update/get-started-updates-channels-tools#servicing-channels
Windows 10 Enterprise LTSC:
https://learn.microsoft.com/en-us/windows/whats-new/ltsc/overview
Windows 11 system requirements check:
https://support.microsoft.com/en-us/windows/how-to-check-if-your-device-meets-windows-11-system-requirements-after-changing-device-hardware-f3bc0aeb-6884-41a1-ab57-88258df6812b
Windows 10 IoT Enterprise lifecycle:
https://learn.microsoft.com/en-us/lifecycle/products/windows-10-iot-enterprise
Windows 10 IoT Enterprise LTSC 2021 lifecycle:
https://learn.microsoft.com/en-us/lifecycle/products/windows-10-iot-enterprise-ltsc-2021
Windows 11 IoT Enterprise lifecycle:
https://learn.microsoft.com/en-us/lifecycle/products/windows-11-iot-enterprise
Windows client roadmap update:
https://techcommunity.microsoft.com/t5/windows-it-pro-blog/windows-client-roadmap-update/ba-p/3805227
Windows 10 22H2 end of support date updated:
https://learn.microsoft.com/en-us/lifecycle/announcements/windows-10-22h2-end-of-support-update
When to use Windows 10 Extended Security Updates
https://techcommunity.microsoft.com/t5/windows-it-pro-blog/when-to-use-windows-10-extended-security-updates/ba-p/4102628