

Project: Driver Check Before Updating the BIOS

This project is part of a professional IT portfolio and lays out the full process of checking and updating drivers before performing a BIOS update on a high-end system.

The machine runs on a ROG STRIX Z690-A GAMING WIFI D4 motherboard by ASUS and uses Windows 11 Pro (64-bit). The main goal here is to ensure the system runs smoothly and stays stable before applying BIOS version 4301, released on May 26, 2025.

Drivers—especially for Intel Management Engine, SATA controllers, and LAN—play a critical role. If they’re outdated or mismatched with the upcoming BIOS, that can lead to system issues. So updating them first is not just recommended, it’s essential. This project follows a method that any technician can use when working with sensitive firmware updates on modern systems.

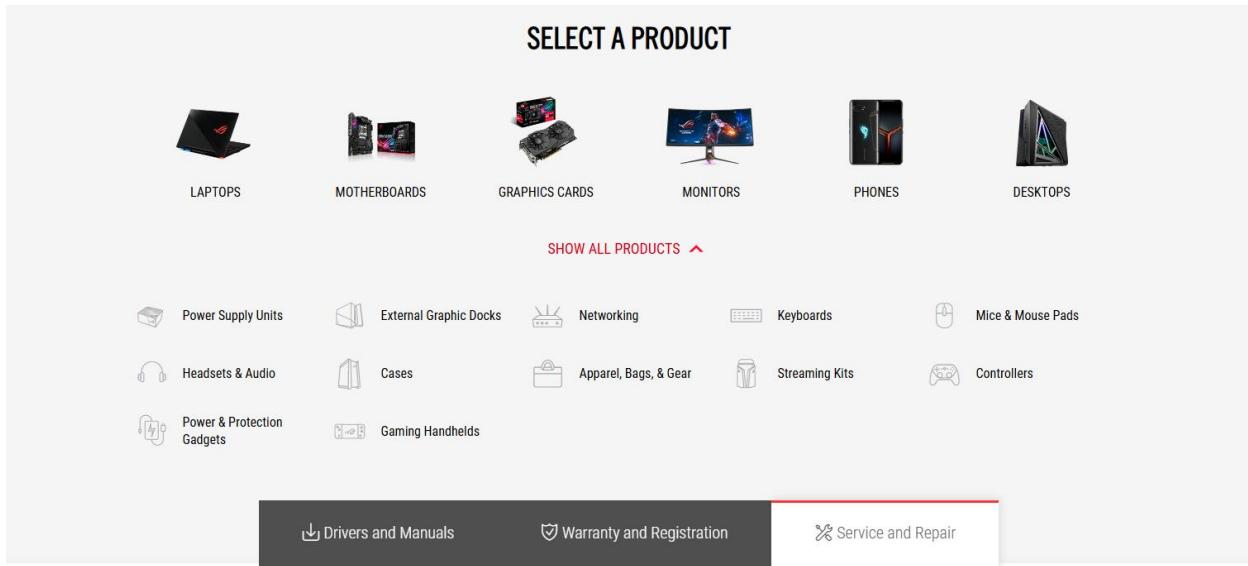
It also includes checking for Windows Updates, especially under “Advanced Options” where feature, quality, and driver updates often show up.

➤ **How Do You Know if Drivers Are Missing?**

Start by checking Windows Update:

1. Open Settings → Windows Update
2. Go to Advanced Options → Optional Updates
3. Look through any suggested driver updates from Microsoft

Next, get the official drivers from ASUS:



1. Go to: <https://rog.asus.com>
2. Search for your motherboard model
3. Go to the Support → Drivers section
4. Download drivers like:
 - Chipset
 - Intel Management Engine (IME)
 - Intel LAN and Wi-Fi
 - Audio (Realtek)
 - Thunderbolt (only if needed)

Chipset

Intel Management Engine Interface V2505.7.2.0 (SW 2507.7.10.0) for Windows 10/11 64-bit.

Version 2505.7.2.0

532.33 MB

2025/03/26

SHA-256 : FEF479378DBF4372FC3F9DA368E6D7FFE07FDD283C1710A39F7D79F8F880E868

[DOWNLOAD](#)

LAN

Intel I225/I226 NDIS driver V 1.1.4.43 for Windows 10 64-bit and Windows 11 64-bit.

Version 1.1.4.43

2.53 MB

2024/08/07

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Wireless

Intel WIFI Driver V22.190.0.4 For Windows 10/11 64-bit.

Version 22.190.0.4

100.81 MB

2023/03/07

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Audio

Realtek USB Audio Driver VB6.3.9600.2342 For Windows 10/11 64-bit.

Version B6.3.9600.2342

569.22 MB

2023/03/31

[DOWNLOAD](#)

Special version for SS3 Virtual Mixer disabled for better stability.

[See All Downloads](#)

VGA

Intel Graphics Accelerator Driver V32.0.101.6556 for Windows 10 64-bit and Windows 11 64-bit.

Version 32.0.101.6556

1019.99 MB

2025/03/07

[DOWNLOAD](#)

SHA-256 : CCDA0D44F382B7B3C54C7FBC932FCD7A3F1D623178E7C71612F4BF60363FE82

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Bluetooth

Intel Bluetooth Driver(AX201) V22.190.0.2 For Windows 10/11 64-bit.

Version 22.190.0.2

6.66 MB

2023/03/07

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Utilities

ROG GameFirst VI V6.1.30.2 for Windows 10 64-bit, Windows 11 64-bit
Version 6.1.30.2 26.49 MB 2024/04/17

[DOWNLOAD](#)

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SATA

Intel(R) Rapid Storage Technology Driver V20.2.1.1016 for Windows 11 64-bit.(WHQL)
Version 20.2.1.1016 26.01 MB 2024/12/26
SHA-256 :8FB19E6BC047049F7AB31649E88125FB8EAA820BAE31D47FD8ED7E9B891625CF

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Utilities: Armoury Crate

Armoury Crate & Aura Creator Installer
Version 3.3.1.0 2.06 MB 2025/05/21
SHA-256 :BBCD8B2F6DA29C43C26356502DCDE4313FC7BB2720DA1A081763AC0C426A5F6B

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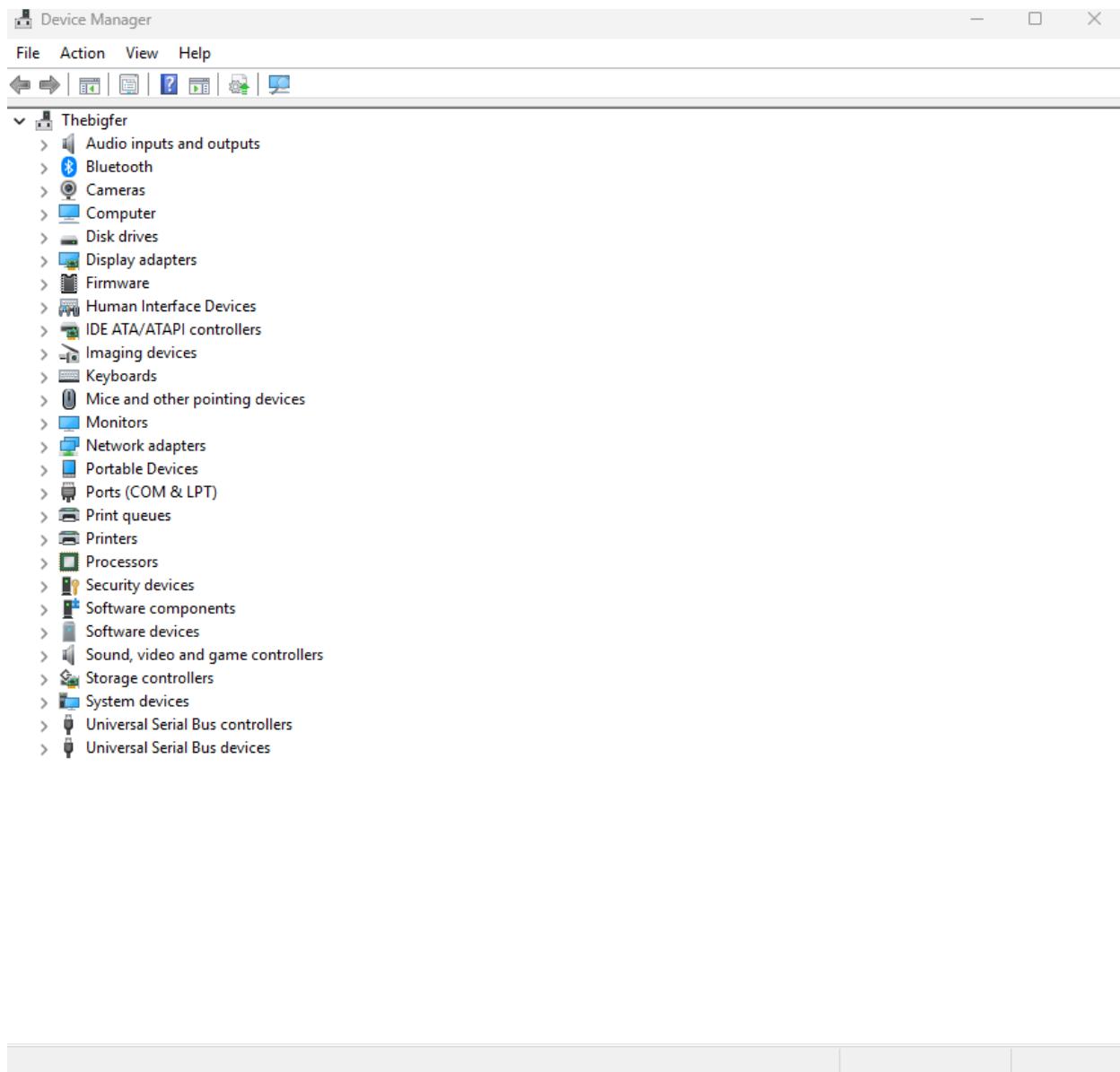
To install Armoury Crate, Aura Creator and other prerequisite services for the full experience – from the initial setup to RGB illumination, pinpoint the latest updates and connect instantly with your gears.

*Aura Creator compatible devices: <https://www.asus.com/support/FAQ/1042484>
*OS version required: Windows 10 (1903 or later) or Windows 11

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But before downloading anything, double-check what's already installed on your system and compare the versions.

➤ Using Device Manager to Verify Drivers



1. Press Windows + X and open Device Manager
2. Scan the list. A yellow triangle or “Unknown device” means something’s missing
3. Look for key devices:
 - o Intel(R) Management Engine Interface
 - o Intel I225-V LAN Driver
 - o Intel WiFi 6 AX201
 - o Intel Bluetooth Driver
 - o Realtek Audio Driver
 - o SATA AHCI (usually says Microsoft if generic)
4. Right-click each device → Properties → Driver tab

That gives you:

- The Driver Version
- The Driver Date

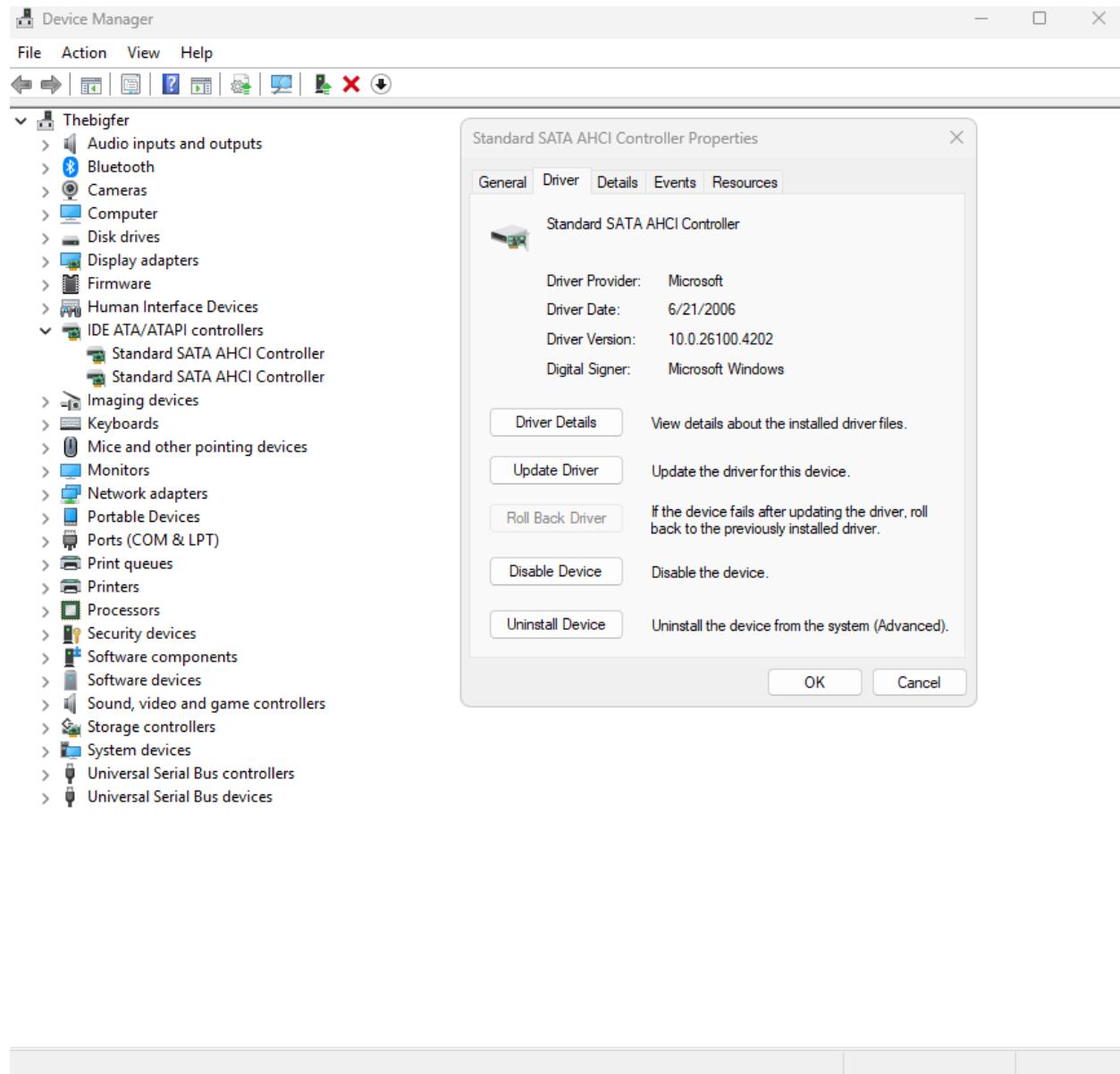
➤ Final Driver Review Table

Component	Installed Version (Date)	Latest ASUS Version	Update? Comment
LAN (Ethernet)	2.1.4.3 (2024-02-20)	1.1.4.43 (2024-08-07)	✓ Yes Installed version is newer, but ASUS recommends their own for best compatibility.
Wi-Fi AX201	23.130.1.1 (2025-04-07)	22.190.0.4 (2023-03-07)	✗ No Your version is newer. No update needed.
Bluetooth AX201	23.130.0.3 (2025-03-19)	22.190.0.2 (2023-03-07)	✗ No Already up to date.
Audio (NVIDIA)	1.4.3.2 (2024-09-28)	Not listed	✗ No Managed through NVIDIA's own tool.
Audio (Realtek)	6.3.9600.2393 (2024-06-27)	6.3.9600.2342 (2023-03-31)	✗ No Installed version is newer.
SATA AHCI	10.0.26100.4202 (2006)	20.2.1.1016 (2024-12-26)	✓ Yes Currently using Microsoft generic driver.
Intel ME (Chipset)	2441.7.0.0 (2024-10-07)	2505.7.2.0 (2025-03-26)	✓ Yes Should be updated for BIOS compatibility.

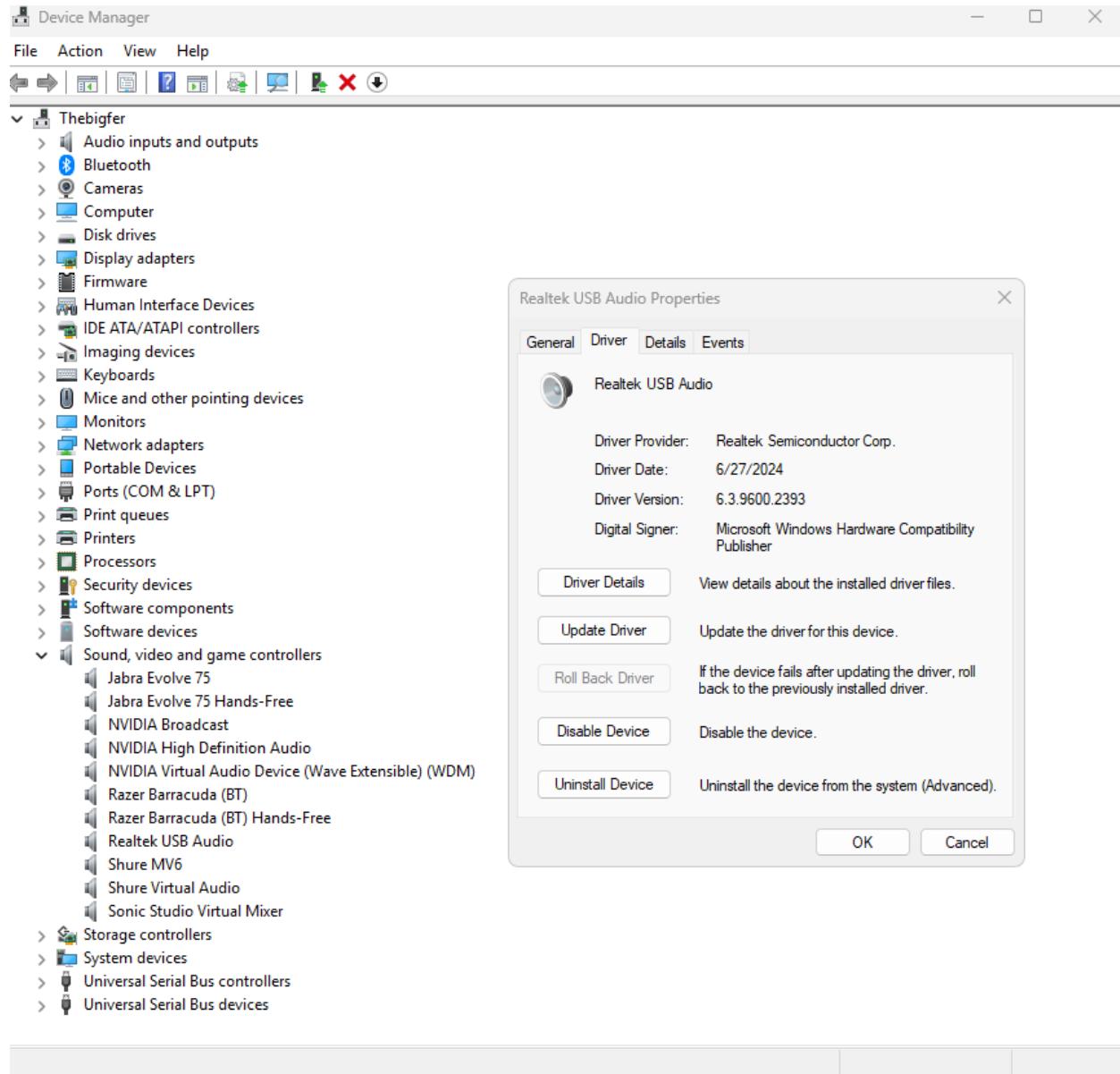
After this check, three drivers were updated manually from ASUS:

- Intel Management Engine (IMEI / Chipset)
- Intel LAN (I225-V Ethernet)
- Intel SATA AHCI / Rapid Storage

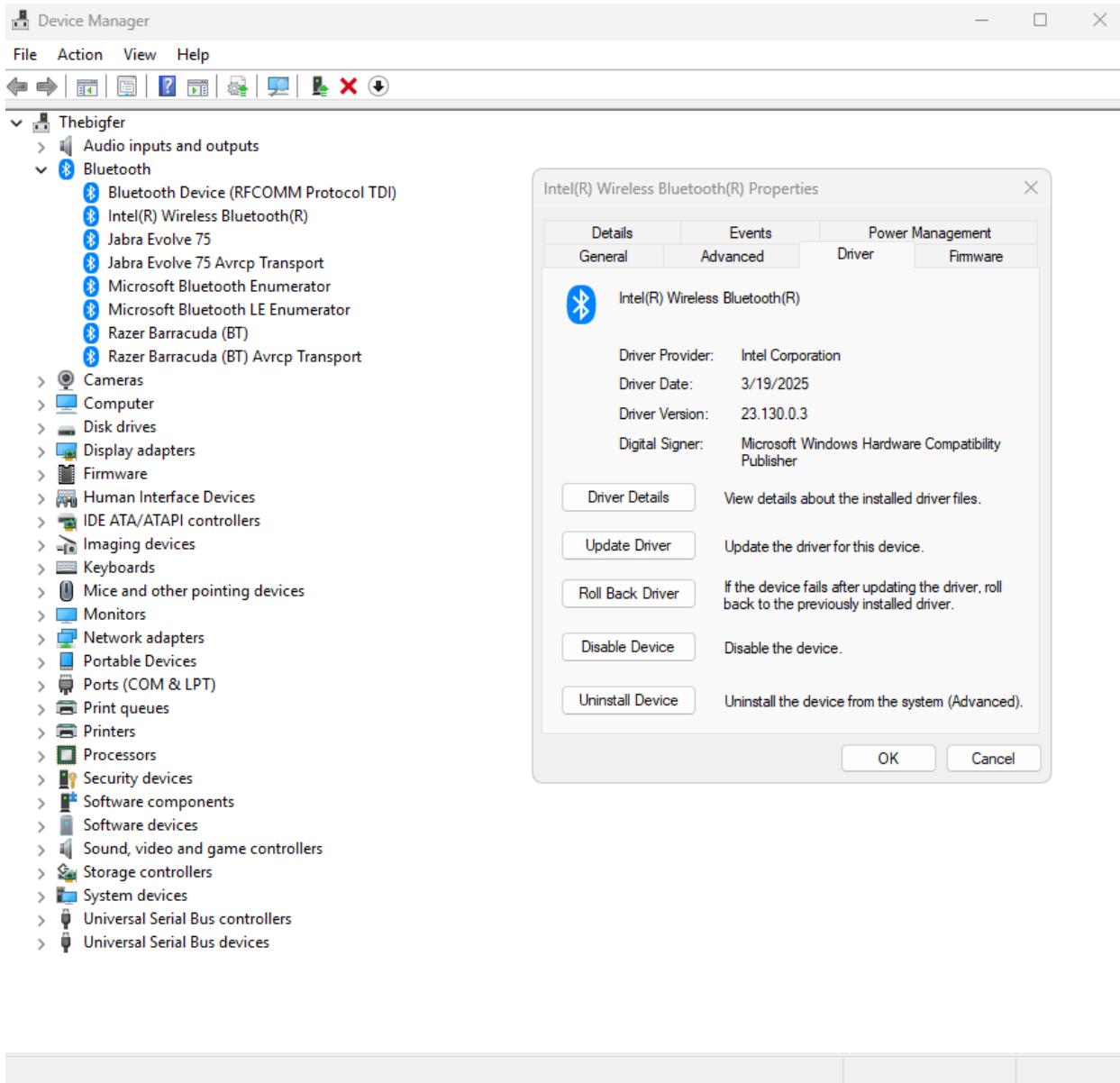
SATA AHCI (Microsoft) driver



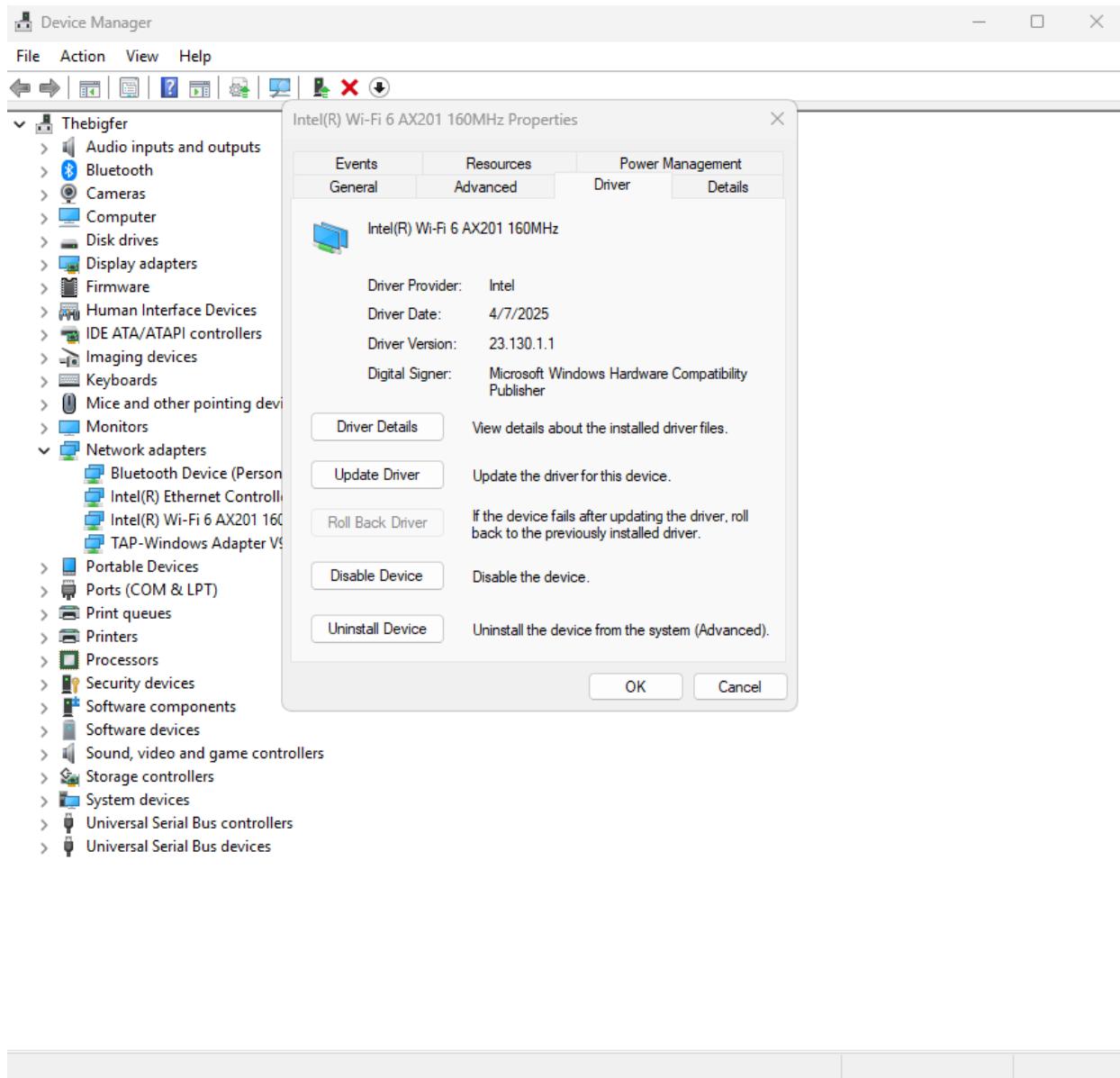
Realtek Audio Driver



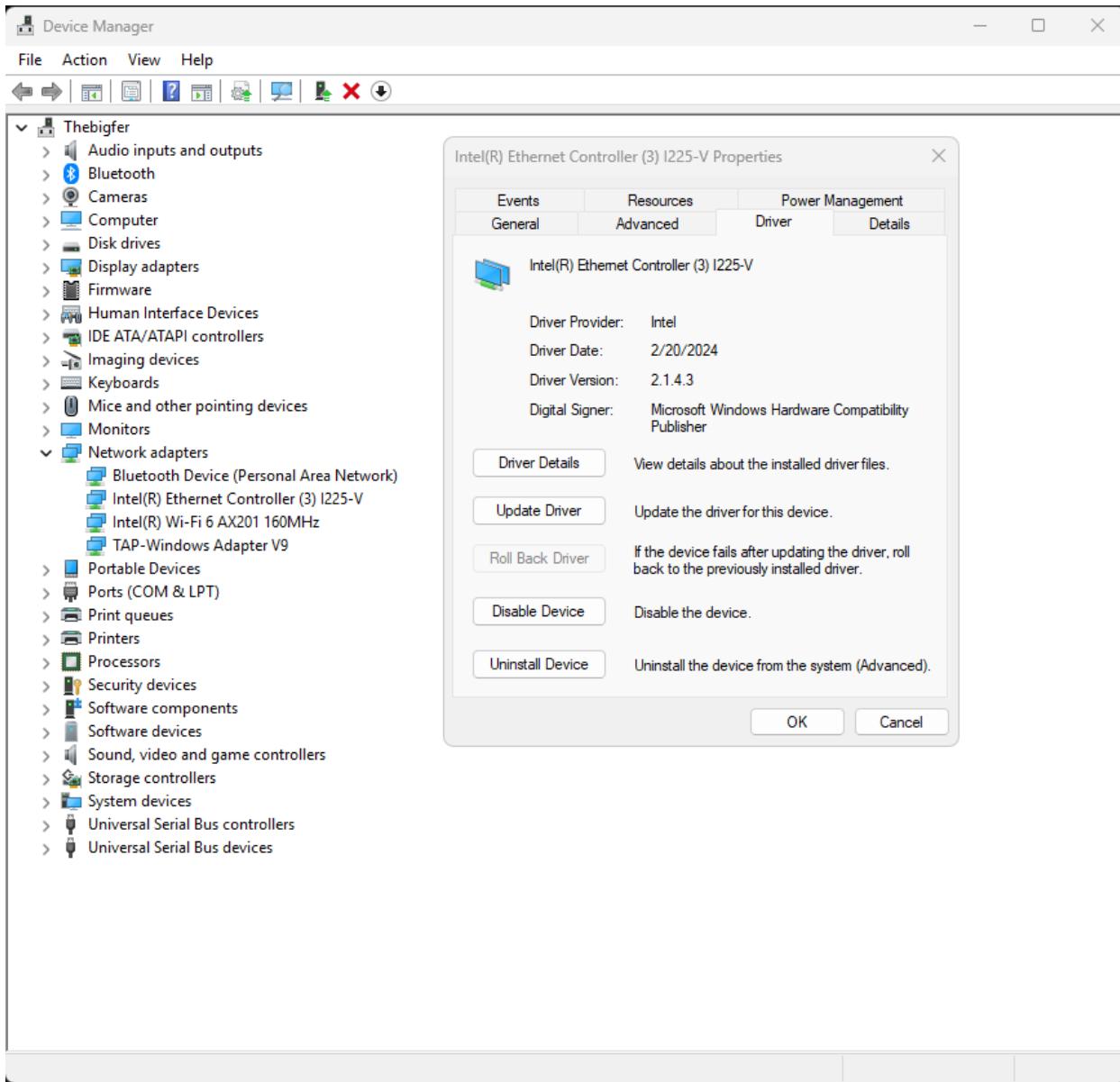
Intel Bluetooth driver



WIFI driver Intel WIFI 6 AX201



Driver_LAN (Ethernet) Intel I225-V



The main drive is a Samsung 980 PRO NVMe, which connects through PCIe and doesn't need the SATA AHCI driver—but the Intel RST driver was installed anyway to prep for possible future RAID setups.

We also used Snappy Driver Installer Origin, an open-source tool that detects missing or outdated drivers, even ones Microsoft's update tool misses.

You can get it here:

<https://sdi-tool.org>

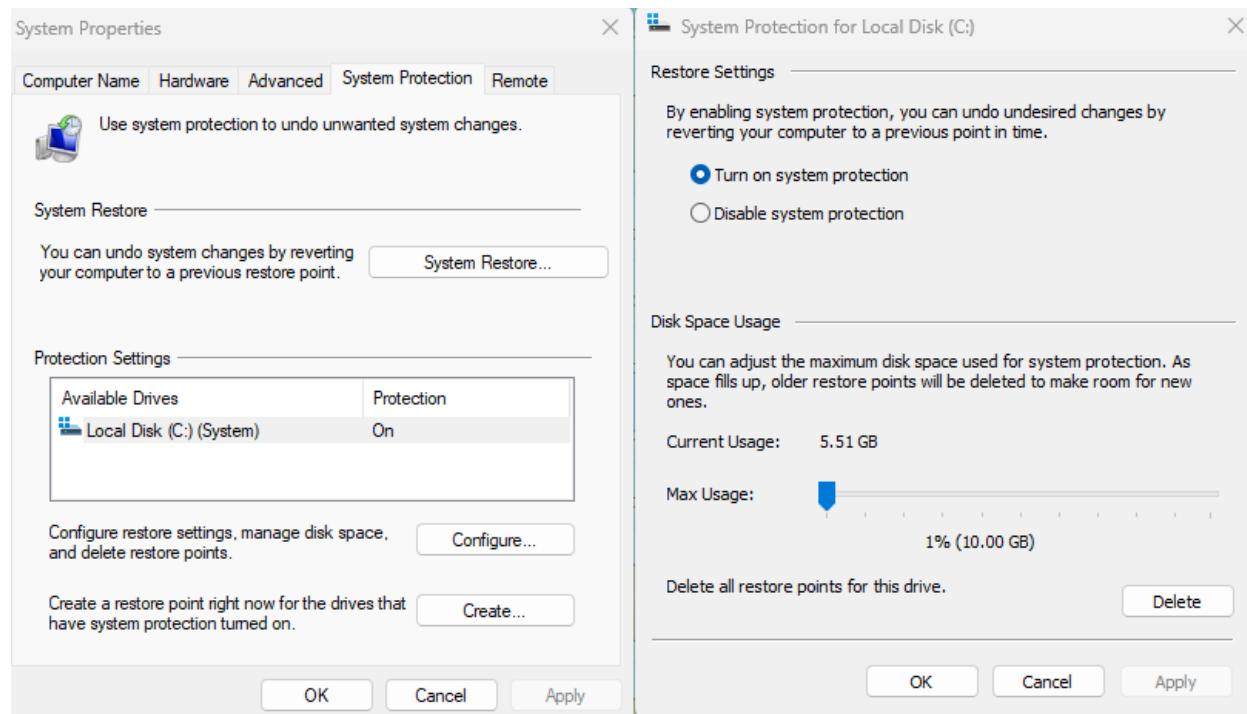
- Choose Download SDIO Lite if you have internet.
- Extract the .zip file.
- Run SDIO_x64_Rxxxx.exe as Administrator.

For regular use, the full version is better. It can be saved on a USB stick and reused.

Before updating any drivers or flashing BIOS:

➤ Create a restore point

That way, if something goes wrong, you can roll back. This step is a safety net in case the system misbehaves or settings get lost.



➤ **Inside Snappy Driver:**

- Check for available updates
- Hover over each one to see old vs new versions
- Choose the drivers to install and hit Install
- Restart the system when it's done

This whole process reflects a careful and professional approach to BIOS prep. We verified drivers through Device Manager, Windows Update, ASUS's support site, and Snappy Driver Installer. With everything updated and a restore point created, the system is ready for a safe BIOS update. That's what solid IT work looks like—focused on stability, avoiding trouble, and keeping things running right.