

Lenovo Ideapad 710S-13IKB

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1. Hardware

See:

<https://www.trustedreviews.com/reviews/lenovo-ideapad-710s-13isk>^[1]

1.1. Upgrade Bios for Linux

General info:

<https://forums.lenovo.com/t5/Lenovo-Yoga-Series-Notebooks/Yoga-900-and-Ideapad-710S-Linux-Only-BIOS/ta-p/3466850>^[2]

Updated BIOS for Ideapad 710S-13IKB

<https://support.lenovo.com/us/en/downloads/DS119359>^[3]

After running the exe to upgrade BIOS, I got this message:

"ERROR 182 - BIOS image is equal or older than ROM"

1.2. Access BIOS

You can access the BIOS of a Lenovo Ideapad computer by means of pressing **F2** (**Fn** + **F2**) just after pressing the start button on your keyboard.

1.3. BIOS Setup

- Security
 - **Intel Platform Trust Technology** > Disabled
- Boot
 - Boot mode > Legacy Support
 - Boot Priority > UEFI First
 - USB Boot > Enabled
 - PXE Boot on LAN > Disabled
 - Boot Priority Order
 1. ubuntu
 2. USB HDD: xxx
 3. Windows Boot Manager
 4. NVMe: INTEL SSDxxxxxxxxx
 5. Linux-Firmware-Updater

1.4. Update 2023 for Windows 11 - TPM 2.0 required

It seems that Windows 11 requires TPM 2.0 enabled in the BIOS. Otherwise, you can't use upgrade windows 10 to 11

However, the Intel chip in this computer Lenovo Ideapad 710S-13IKB doesn't seem to be supported for Windows 11 anyways.

In this custom BIOS that this laptop "Lenovo Ideapad 710S-13IKB" has, you seem to be able to enable a TPM2-equivalent setup in the BIOS, under:

Current Lenovo BIOS > Security > **Intel Platform Trust Technology** > Change from Disabled to **Enabled**.

<https://www.intel.es/content/www/es/es/support/articles/000007452/intel-nuc.html>^[4]

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Intel® Platform Trust Technology (Intel® PTT) - Intel® Platform Trust Technology (Intel® PTT) ofrece las capacidades de TPM 2.0 independiente. Intel PTT es una funcionalidad de plataforma para el almacenamiento de credenciales y la administración de claves que utilizan Windows 8, Windows® 10 y Windows* 11. Intel PTT es compatible con BitLocker* para el cifrado de discos duros y cumple con todos los requisitos de Microsoft para el módulo de plataforma segura de firmware (fTPM) 2.0.*

1.5. Allow Virtualization (VTx)

You can enable to run virtualized computers inside your laptop by means of enabling the required option in your BIOS (see how to access your BIOS in an earlier section in this page).

Go to **BIOS** (**Fn** + **F2**) and enable **Configuration > Intel Virtual Technology** (which was disabled by default)

In other computers/brands/bios, the naming changes to something like *Hardware Virtualization*, *VTx*, etc.

2. WSL2

You might install Windows Subsystem For Linux 2 (WSL2) which is the one that enables running Linux GUI apps on Windows OS.

<https://learn.microsoft.com/en-us/windows/wsl/install>^[5]

Some people reported that were able to install WSL2 on Windows 10:

<https://www.omgubuntu.co.uk/how-to-install-wsl2-on-windows-10>^[6]

And it works! 😊

Windows key + **R** > wsl.exe --install

Desktop Environment

(derived from <https://www.makeuseof.com/tag/linux-desktop-windows-subsystem/>^[7])

With Ubuntu 20.04 there seem to be LXDE, KDE, xfce4 and Gnome available as Desktop environments.

After installation you need to export a few variables probably, running these commands in a linux terminal window:



```
export DISPLAY=:0
export LIBGL_ALWAYS_INDIRECT=1
```

3. DualBoot (via AHCI drive mode)

Inspired by this post, which confirmed that dual booting on these lenovo ideapad machines is possible with some config changes:

<https://forums.lenovo.com/t5/Lenovo-Yoga-Series-Notebooks/Yoga-900-and-Ideapad-710S-Linux-Only-BIOS/tac-p/3473813/highlight/true#M345>^[8]

See changes needed to the Windows:

<http://triplescomputers.com/blog/uncategorized/solution-switch-windows-10-from-raidide-to-ahci-operation/>^[9]

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SOLUTION: Switch Windows 10 from RAID/IDE to AHCI operation

Posted on June 16, 2016^[10]

PSA: You **should not** be attempting these fixes unless you're a professional! And it goes without saying, you will ALWAYS need your local admin password, recovery media, and backups of your data before fooling around with low-level storage driver configuration — or really anything else for that matter. See the comments section below for examples of a couple of people who ran into mishaps after encountering other underlying issues or forgetting their admin password before starting the process. **PROCEED AT YOUR OWN RISK!**

It's not uncommon to find a system on which RAID drivers have been installed and something like the Intel Rapid Storage Technology package is handling storage devices, but where an SSD might require AHCI operation for more optimal performance or configurability. In these cases, there is in fact a way to switch operation from either IDE or RAID to AHCI within Windows 10 without having to reinstall. Here's how.

1. Right-click the Windows Start Menu. Choose **Command Prompt (Admin)**.
 1. If you don't see Command Prompt listed, it's because you have already been updated to a later version of Windows. If so, use this method instead to get to the Command Prompt:
 1. Click the Start Button and type **cmd**
 2. Right-click the result and select **Run as administrator**
2. Type this command and press ENTER: **bcdedit /set {current} safeboot minimal**
 1. If this command does not work for you, try **bcdedit /set safeboot minimal**
3. Restart the computer and enter BIOS Setup (the key to press varies between systems).
4. Change the SATA Operation mode to AHCI from either IDE or RAID (again, the language varies).
5. Save changes and exit Setup and Windows will automatically boot to Safe Mode.
6. Right-click the Windows Start Menu once more. Choose **Command Prompt (Admin)**.

7. Type this command and press ENTER: **`bcdedit /deletevalue {current} safeboot`**
 1. If you had to try the alternate command above, you will likely need to do so here also: **`bcdedit /deletevalue safeboot`**
8. Reboot once more and Windows will automatically start with AHCI drivers enabled.

That's all there is to it! Special thanks to Toobad here for outlining this procedure.

Update 8/2/17: Thanks also to Aalaap Ghag for clarification of instructions for those who have already updated to the Creators Update. Thanks also to those who wrote in about removing {current} to make this work for some users.

4. Ubuntu LTS

See 16.04, 18.04, 20.04 ... pages.

4.1. Keyboard Backlight

Manage keyboard backlight with Fn + Space bar:

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Some Lenovo laptops have keyboard backlights, and they can be turned on using Fn + Space. There are three states: off, normal and bright.

4.2. Screen Resolution

IT's so powerfull, that max screen resolution (default value set by kde) makes things too small for me (I'm getting old-ish ;-), and in normal condition, I'd rather prefer to have it at:

- 1440 x 810 px

5. Links

FLOSS rocks 😊

Alias names for this page:

lenovo | ideapad | ahci

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^[3] <https://support.lenovo.com/us/en/downloads/DS119359>

^[4] <https://www.intel.es/content/www/es/es/support/articles/000007452/intel-nuc.html>

^[5] <https://learn.microsoft.com/en-us/windows/wsl/install>

^[6] <https://www.omgubuntu.co.uk/how-to-install-wsl2-on-windows-10>

^[7] <https://www.makeuseof.com/tag/linux-desktop-windows-subsystem/>

^[8] <https://forums.lenovo.com/t5/Lenovo-Yoga-Series-Notebooks/Yoga-900-and-Ideapad-710S-Linux-Only-BIOS/tac-p/3473813/highlight/true#M345>

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