Debian 11 Linux Setup Guide

For ThinkStation P360 Tower, Tiny, Ultra



Lenovo

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Section 1 – BIOS Configuration

The first step before installing Linux is to make sure the system BIOS is setup correctly.

Boot into BIOS by pressing the function F1 key at the "Lenovo" splash screen.



• On the "Security" menu tab, scroll down and select the "Secure Boot" option.

	[NO] - FIBSU BTO2 to a bisoions of criteut	version is allowed.	
	Windows UEFI Firmware Update This option enables or disables windows L [Enabled] Allow windows UEFI firmware up [Disabled] BIOS will skip windows UEFI fir	IEFI firmware update feature. Idate. mware update.	Enabled
Start Menu Main Devices Advanced Power Security Startup	Smart USB Protection Smart USB Protection could block copying USB storage device in Windows Read Only mode: the user can copy data for Computer but cannot copy data from the c No Access mode: the user cannot use USB Secure wipe [Enabled] Display the "secure wipe" option Users can select this option to securely era [Disabled] Hidden the "secure wipe" option	data from the computer to the om USB storage device to the omputer to USB storage device storage device in Windows on the F12 BIOS Startup Menu. se HDD data. o n the F12 BIOS Startup Menu.	Disabled •
Exit	 > TCG Feature Setup Contains TCG security features. > System Event Log 		
Lenovo	View or clear the system event log. Secure Boot Customizable Secure Boot settings]	
F1 Help ESC Exit	 Nelect Item € Select Menu 	+/- Change Values Enter Select > Sub-Menu	F9 Setup Defaults F10 Save and Exit

- •
- Check whether Secure Boot is disabled. If found enabled, disable it.

	<i>←</i>	
	Secure Boot	
Start Menu	System Mode	Deployed Mode
에 Main 삼 Devices	Secure Boot [Enabled] Enables Secure Boot,BIOS will prevent un-authorised O loaded. [Disabled] Disables Secure Boot.	DS be Enabled Control
 ☆ Advanced O Power ☆ Security ☆ Startup ⊖ Exit 	 > Restore Factory Keys Restore Factory Keys will put secure boot into factory defaults. > Reset Platform to Setup Mode Reset to setup mode will move secure boot to setup mode. > Exit Deployed Mode 	
Lenovo	Transition between Deployment and User Mode. Key Management Enables users to modify Secure Boot Policy variables.	
F1 Help ESC Exit	↑↓ Select Item +/- Change €→ Select Menu Enter Select >	Values F9 Setup Defaults Sub-Menu F10 Save and Exit

• Save changes by pressing F10 function key.

	÷	
	Secure Boot	
	System Mode	Deployed Mode
Start Menu		
Main	Secure Boot [Enabled] Er loaded Save & Recot	Disabled
& Devices	[Disabled] D	
₩ Advanced	Save configuration and reset?	
O Power	Restore Fa	
	Restore Fact	
💪 Startup	> Reset Plat	
[→ Exit	Reset to set	
	> Exit Deplo	
Lenovo.	Xey Management	
F1 Help ESC Exit	↑↓ Select Item +/- Change Values ↔ Select Menu Enter Select > Sub-Menu	F9 Setup Defaults F10 Save and Exit

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Section 2 – Installing Debian 11

Please refer to the following instructions and screenshots on how to install Debian 11 on the Lenovo ThinkStation P360.

- Insert the Debian 11 installation media (either through USB or CD/DVD).
- Power on the system and press the F12 function key whenever the following Lenovo splash screen appears.



- Lenovo
- Select the Linux bootable installation media from the F12 boot menu list.



• Select "Graphical install" from the GRUB boot menu and press enter.



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• Select the appropriate language and press Continue.

elect a language		
Choose the language t anguage for the insta	to be used for the installation process. The selected language will also be the illed system.	default
Language:		
Chinese (Jraditional)		
Crinese (Traditional)	- 平文(紫檀)	
Croatian	- Hrvalski	
Danish		
Dutch	- Nederlands	
Dzongkha	- Ésia	
English	- English	
Esperanto	- Esperanto	
Estonian	- Eesti	
Finnish	- Suomi	
French	- Français	
Galician	- Galego	
Georgian	- ქართული	
German	- Deutsch	

• Select the user location and press Continue.

(e) debian 11	
Select your location	
The selected location will be used to set your time zone and also for example to help select the syste Normally this should be the country where you live.	em locale.
This is a shortlist of locations based on the language you selected. Choose "other" if your location is Country, territory or area:	not listed.
India	^
Ireland	
Israel	
New Zealand	
Nigeria	
Philippines	
Seychelles	
Singapore	
South Africa	=
United Kingdom	
United States	
Zambia	
Zimbabwe	
other	~
Screenshot Go Back	Continue

• Configure the keyboard by choosing the appropriate keyboard language and press Continue.

(debian 11	
Configure the keyboard	
Keymap to use:	
American English	
Albanian	
Arabic	
Asturian	
Bangladesh	
Belarusian	
Bengali	
Belgian	
Berber (Latin)	
Bosnian	
Brazilian	
British English	
Bulgarian (BDS layout)	
Bulgarian (phonetic layout)	
Burmese	
Canadian French	
Canadian Multilingual	▼
Screenshot	Go Back Conținue

• Enter a hostname for the system and select Continue.

(e) debian 11	•	
Configure the network		
Please enter the hostname for this system.		
The hostname is a single word that identifies your system to the network. If you do hostname should be, consult your network administrator. If you are setting up your can make something up here. <i>Hostname</i> :	n't know what 'own home ne	your twork, you
debian		
K		
Screenshot	Go Back	Continue

- Lenovo
- Enter a domain name and select Continue. If there is no domain in the environment just leave it blank.

of your host name. It is often something network, you can make something up, but

• Set a root password and select Continue.

(e) debian 11	
Set up users and passwords	
You need to set a password for 'root', the system administrative accor root access can have disastrous results, so you should take care to cl guess. It should not be a word found in dictionaries, or a word that c A good password will contain a mixture of letters, numbers and punc regular intervals. The root user should not have an empty password. If you leave this e and the system's initial user account will be given the power to beco Note that you will not be able to see the password as you type it. <i>Root password:</i>	ount. A malicious or unqualified user with hoose a root password that is not easy to could be easily associated with you. ctuation and should be changed at empty, the root account will be disabled ome root using the "sudo" command.
 Show Password in Clear Please enter the same root password again to verify that you have ty 	yped it correctly.
Re-enter password to verify:	
Show Password in Clear	
Screenshot	Go Back Continue

Lenovo

• Enter a full name for the user and select Continue.

(@) de	bian 11			
Set up users and passw	ords			
A user account will be created for you to use instead of the root account for non-administrative activities. Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.				
ruii name ior the new use	r:			
Screenshot			Go Back	Continue

• Enter a username to create a user and press Continue.

(e) debian 11	
Set up users and passwords	
Select a username for the new account. Your first name is a reasonable ch with a lower-case letter, which can be followed by any combination of nur Username for your account:	noice. The username should start nbers and more lower-case letters.
Screenshot	Go Back Collection

- Lenovo
- Create a strong password for the newly created user and press Continue.

(e) debian 11
Set up users and passwords
A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals. Choose a password for the new user:
Show Password in Clear Please enter the same user password again to verify you have typed it correctly. Re-enter password to verify:
Show Password in Clear
Screenshot Go Back Continus

• Select an appropriate time zone to configure the clock and press Continue.

(e) debian 11
Configure the clock
If the desired time zone is not listed, then please go back to the step "Choose language" and select a country that uses the desired time zone (the country where you live or are located). Select your time zone:
Eastern
Central Mountain Pacific Alaska Hawaii Arizona East Indiana Samoa
Screenshot Go Back Continue

• Choose an appropriate option for partitioning the disk. If the user selects "Guided – use entire disk", Debian will erase the content and use the entire disk for OS installation.

🕐 debian 1	11		
Partition disks			
The installer can guide you through par you can do it manually. With guided par results.	titioning a disk (u rtitioning you will	sing different stand still have a chance	dard schemes) or, if you prefer, ater to review and customise the
If you choose guided partitioning for an Partitioning method:	entire disk, you v	vill next be asked w	hich disk should be used.
Guided - use the largest continuous fre	e space		
Guided - use entire disk and set up LVM Guided - use entire disk and set up enc Manual	l rypted LVM	×	
Screenshot			Go Back Continue

• Select disk to partition and press Continue.

(e) debian 11	•	
Partition disks		
Note that all data on the disk you select will be erased, but not before you have cor want to make the changes. Select disk to partition:	nfirmed that yo	ou really
SCSI5 (0,0,0) (sda) - 1.0 TB ATA WDC WD10EZEX-08W		
Screenshot	Go Back	Continule

• Select "Finish partitioning and write changes to disk" option after confirming the partitions and press Continue.

(C	de de	ebian	11				,	
artition d	lisks							
This is an system, m	overview of y nount point, e	our currently config etc.), a free space to	ured p creat	artitions and partitions,	d mount points. Sele or a device to initiali.	ect a partition to mo ze its partition table.	dify its settings (i	file
Config Config Config	ure the Log ure encrypt ure iSCSI ve	ical Volume Mana ted volumes blumes	ger	OFZEY ORM				
>	(0,0,0) (sua	1 0 MB	WDI	FREE SP	CE			
>	#1	536.9 MB	в 1	ESP				
>	#2	998.6 GB		ext4	/			=
>	#3	1.0 GB	1	swap	swap			
>		728.6 kB		FREE SP/	ACE		ĸ	
SCSI9	(0,0,0) (sdb) - 31.0 GB KINGS1	ON D	T Rubber 3	.0			
>	#1 pri	mary 31.0 GB	в	fat32				
Undo o	changes to	partitions		41-1-				

• Select "Yes" to write changes to the disk and press Continue.

C debian 11
Partition disks
If you continue, the changes listed below will be written to the disks. Otherwise, you will be able to make further changes manually.
WARNING: This will destroy all data on any partitions you have removed as well as on the partitions that are going to be formatted.
The partition tables of the following devices are changed: SCSI5 (0,0,0) (sda)
The following partitions are going to be formatted: partition #1 of SCSI5 (0,0,0) (sda) as ESP partition #2 of SCSI5 (0,0,0) (sda) as ext4 partition #3 of SCSI5 (0,0,0) (sda) as swap Write the changes to disks?
○ No
• Yes
▶
Screenshot

• Select "No" for network mirror and select Continue.

<u>Note:</u> Debian can be installed with a Graphical User Interface (GUI) or a Command Line Interface (CLI). To install Debian 11 with a GUI, connect the system to the internet and select "No" to continue without a network mirror. If "Yes" is selected, the system will be installed as a CLI only.

(e) debian 11
Configure the package manager
No network mirror was selected.
If you are installing from a netinst CD image and choose not to use a mirror, you will end up with only a very Continue without a network mirror? No Yes
Screenshot Go Back Continue

• Choose to participate or not in the package usage survey and press Continue.

ninue.				
\bigcirc	debian 1	1		
onfiguring po	opularity-contest			
he system m ackages on t listribution C	ay anonymously supply the o his system. This information D.	distribution developers influences decisions su	with statistics abou uch as which packag	it the most used es should go on the first
f you choose t the distributio	to participate, the automatic on developers. The collected	submission script will statistics can be viewe	run once every wee d on https://popcon	k, sending statistics to .debian.org/.
This choice ca	n be later modified by runni	ng "dpkg-reconfigure p	oopularity-contest".	
Participate in the	he package usage survey?			
) Yes				
Screenshot				Conkinue
				Constitue

• Select the correct location and press Continue.

(\bigcirc)	debian	11			
Configure the p	oackage manager				
The goal is to f countries, or e Debian archive	find a mirror of the De ven your own, may no mirror country:	ebian archive that is o ot be the best choice.	lose to you on the	network be aware t	hat nearby
Singapore Slovakia Slovenia South Africa					~
Spann Sweden Switzerland Taiwan					
Thailand Turkey Ukraine United Kingdo	om				_
United States Uruguay Vietnam]				
Screenshot				Go Back	Continue

• Select the mirror and select Continue.



• Choose software to install from the list of software and press Continue.

(e) debian 11
Software selection
At the moment, only the core of the system is installed. To tune the system to your needs, you can choose to install one or more of the following predefined collections of software. Choose software to install:
✓ Debian desktop environment
✓ GNOME
LXDE
🗆 LXQt
web server
SSH server
✓ standard system utilities
Screenshot Continue

 Optionally, you can select as many of these settings as you would like, for this installation process will be selected default software.

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• Remove the installation media and reboot the system by pressing Continue.

Continue.	ne system by pressing
(e) debian 11	
Finish the installation	
Installation complete Installation is complete, so it is time to boot into y installation media, so that you boot into the new	rour new system. Make sure to remove the system rather than restarting the installation.
Screenshot	Go Back Continue

Section 3 – Wireless Connection

Before the next steps ensure you have connected to LAN network.

To install the Wifi drivers complete the next steps:

Download the appropriate driver for your card from
 <u>https://www.intel.com/content/www/us/en/support/articles/000005511/wirel
 ess.html
</u>

Notes: 1 – For this example, Intel® Wi-Fi 6 AX201 has been used. 2 - In some cases, GitHub clone* may be needed to find all necessary files to complete the installation (for Intel AX201 file iwlwifi-so-a0-hr-b0-68.ucode need to be added to /lib/firmware).

*GitHub clone - <u>https://git.kernel.org/pub/scm/linux/kernel/git/firmware/linux-</u> <u>firmware.git/tree/</u>

• Extract the files from download file



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• Copy extracted files to /lib/firmware



• Add "contrib" and "non-free" components to /etc/apt/sources.list.

#Debian Sid

deb http://deb.debian.org/debian/ sid main contrib non-free

	E lenovo@debian: ~ Q	=	×						
l	GNU nano 5.4 sources.list *								
1	<pre>deb http://security.debian.org/debian-security bullseye-security main deb-src http://security.debian.org/debian-security bullseye-security main</pre>								
	<pre># bullseye-updates, to get updates before a point release is made; # see https://www.debian.org/doc/manuals/debian-reference/ch02.en.html#_updates_and_backports deb http://deb.debian.org/debian/ bullseye-updates main deb-src http://deb.debian.org/debian/ bullseye-updates main</pre>								
4 4 4 4	# This system was installed using small removable media # (e.g. netinst, live or single CD). The matching "deb cdrom" # entries were disabled at the end of the installation process. # For information about how to configure apt package sources, # see the sources.list(5) manual.								
	#Debian Sid deb http://deb.debian.org/debian/ sid main contrib non-free								
•	^G Help ^O Write Out ^W Where Is								

 Update the list of available packages and install the firmwareiwlwifi package:
 # apt update && apt install firmware-iwlwifi

lenovo@debian: ~ ×
File Edit View Search Terminal Help
root@debian:/home/lenovo# apt update && apt install firmware-iwlwifi
Hit:1 http://security.debian.org/debian-security bullseye-security InRelease
Hit:2 http://deb.debian.org/debian bullseye InRelease
Hit:3 http://deb.debian.org/debian bullseye-updates InRelease
Get:4 http://deb.debian.org/debian sid InRelease [165 kB]
Get:5 http://deb.debian.org/debian sid/main amd64 Packages [9,149 kB]
Get:b http://deb.debian.org/debian sid/main Translation-en [6,782 kB]
Get:/ http://deb.debian.org/debian_sid/main_amdo4_DEP-11_Metadata_[4,393_KB]
Get:8 http://deb.debian.org/debian sid/main DEP-11 48X48 icons [3,686 KB]
Get: 9 http://deb.debian.org/debian_sid/main_DEP-11_04X04_ICONS_[7,039_KB]
Get:10 http://deb.debian.org/debian_sid/main_DEP-11 128x128 icons [11.9 MB]
Get:11 http://deb.debian.org/debian_sid/contrib_amu04_Packages [05.4 kB]
Get:12 http://deb.debian.org/debian.sid/contrib_amd64_DEP_11_Metadata_[15_6_kB]
Get:14 http://deb.debian.org/debian_sid/contrib_DEP_11_48v48_Tcops [48_1_kB]
Get:15 http://deb.debian.org/debian_sid/contrib_DEP-11_40x40_Icons_[40.1_KB]
Get:16 http://deb.debian.org/debian_sid/contrib_DEP-11_128x128_Icons_[190_kB]
Get:17 http://deb.debian.org/debian_sid/non_free_amd64_Packages [112 kB]
Get:18 http://deb.debian.org/debian_sid/non-free_Translation-en_[103 kB]
Get:19 http://deb.debian.org/debian_sid/non-free_amd64_DEP-11_Metadata [19.4 kB]
Get:20 http://deb.debian.org/debian_sid/non-free_DEP-11_48x48_Icons [3.128_B]
Get:21 http://deb.debian.org/debian_sid/non-free_DEP-11_64x64_Icons [26.7_kB]
Get:22 http://deb.debian.org/debian sid/non-free DEP-11 128x128 Icons [9.874 B]
Fetched 44.5 MB in 3s (15.3 MB/s)

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 As the iwlwifi module is automatically loaded for supported devices, reinsert this module to access installed firmware: # modprobe -r iwlwifi ; modprobe iwlwifi

lenovo@debian: ~	×
File Edit View Search Terminal Help	
<pre>Fetched 44.5 MB in 3s (15.3 MB/s) Reading package lists Done Building dependency tree Done Reading state information Done 2175 packages can be upgraded. Run 'apt listupgradable' to see them. Reading package lists Done Building dependency tree Done Reading state information Done The following NEW packages will be installed: firmware-iwlwifi 0 upgraded. 1 pewly installed. 0 to remove and 2175 pot upgraded.</pre>	
Need to get 15.5 MB of archives.	
After this operation, 129 MB of additional disk space will be used. Get:1 http://deb.debian.org/debian sid/non-free amd64 firmware-iwlwifi all 2021 818-1 [15.5 MB] Fetched 15 5 MB in 1s (16 8 MB/s)	10
Selecting previously unselected package firmware-iwlwifi. (Reading database 468318 files and directories currently installed.) Preparing to unpack/firmware-iwlwifi_20210818-1_all.deb Unpacking firmware-iwlwifi (20210818-1) Setting up firmware-iwlwifi (20210818-1) root@debian:/home/lenovo# modprobe -r iwlwifi ; modprobe iwlwifi	

• After restart Wifi options should appear in the network manager.



• Configure your wireless interface as appropriate.

Section 4 – Installing the Nvidia Graphics Driver

To get optimal performance out of the Nvidia GPU, it is a good idea to install the Nvidia graphics driver.

<u>Note</u>: Before installing the drivers, you **must** obtain the proper kernel headers for the NVIDIA driver to build with.

 Run this command, you can simply run #apt install linux-headers-amd64

⊡	lenovo@debian: ~	۹	=	×
root	@debian:/home/lenovo# apt install linux-headers-amd64			
Read	ing package lists Done			
Buil	ding dependency tree Done			
Read	ing state information Done			
The	following additional packages will be installed:			
bi	nutils binutils-common binutils-x86-64-linux-gnu gcc-10 libasan	б		
li	batomic1 libbinutils libc-dev-bin libc-devtools libc6-dev libcc	1-0		
li	bcrypt-dev libctf-nobfd0 libctf0 libgcc-10-dev libitm1 liblsan0	lib	nsl-d	ev
li	btirpc-dev libtsan0 libubsan1 linux-compiler-gcc-10-x86			
li	nux-headers-5.10.0-11-amd64 linux-headers-5.10.0-11-common			
li	nux-kbuild-5.10 linux-libc-dev manpages-dev			
Sugg	ested packages:			
bi	nutils-doc gcc-10-multilib gcc-10-doc gcc-10-locales glibc-doc			
The	following NEW packages will be installed:			
bi	nutils binutils-common binutils-x86-64-linux-gnu gcc-10 libasan	6		
li	batomic1 libbinutils libc-dev-bin libc-devtools libc6-dev libcc	1-0		
li	bcrypt-dev libctf-nobfd0 libctf0 libgcc-10-dev libitm1 liblsan0	lib	nsl-d	ev
li	btirpc-dev libtsan0 libubsan1 linux-compiler-gcc-10-x86			
li	nux-headers-5.10.0-11-amd64 linux-headers-5.10.0-11-common			
li	nux-headers-amd64 linux-kbuild-5.10 linux-libc-dev manpages-dev			
0 up	graded, 28 newly installed, 0 to remove and 0 not upgraded.			
Need	to get 47.8 MB of archives.			
Afte	r this operation, 206 MB of additional disk space will be used.			
Do v	ou want to continue? [Y/n] v			

Note: If you're using the kernel from Debian Backports:

Add bullseye-backports as an additional new line to your /etc/apt/sources.list, for example:

bullseye-backports

deb http://deb.debian.org/debian bullseye-backports main contrib non-free

And run the same command but with the -t flag followed by bullseye-backports.

enovo

• Add "contrib" and "non-free" components to /etc/apt/sources.list.

#Debian Sid

deb http://deb.debian.org/debian/ sid main contrib non-free

	Ð	lenovo@debian: ~	٩		×					
l	GNL	J nano 5.4 sources.list *								
0	deb k deb-s	<pre>leb http://security.debian.org/debian-security bullseye-security main leb-src http://security.debian.org/debian-security bullseye-security main</pre>								
1 1 0 0	<pre># bullseye-updates, to get updates before a point release is made; # see https://www.debian.org/doc/manuals/debian-reference/ch02.en.html#_updates_and_backports deb http://deb.debian.org/debian/ bullseye-updates main deb-src http://deb.debian.org/debian/ bullseye-updates main</pre>									
1 1 1 1	# Thi # (e. # en1 # For # see	is system was installed using small removable media .g. netinst, live or single CD). The matching "deb cdrom" tries were disabled at the end of the installation process. r information about how to configure apt package sources, e the sources.list(5) manual.								
	#Debi	ian Sid http://deb.debian.org/debian/ sid main contrib non-free								
	`G H∉ `X E>	elp ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location <it ^="" ^\="" ^j="" ^r="" ^u="" file="" go="" justify="" line<="" paste="" read="" replace="" td="" to=""><td>1-U Und 1-E Red</td><td>lo lo</td><td></td></it>	1-U Und 1-E Red	lo lo						

• Update the list of available packages #apt update

<pre>root@debian:/home/lenovo# apt_update Hit:1 http://deb.debian.org/debian bullseye InRelease Hit:2 http://deb.debian.org/debian bullseye-updates InRelease Get:3 http://deb.debian.org/debian sid InRelease [165 kB] Hit:4 http://security.debian.org/debian security bullseye-security InRelease Get:5 http://deb.debian.org/debian sid/main amd64 Packages [9,023 kB] Get:6 http://deb.debian.org/debian sid/main Translation-en [6,743 kB] Get:7 http://deb.debian.org/debian sid/main Translation-en [6,743 kB] Get:8 http://deb.debian.org/debian sid/main DEP-11 Metadata [4,356 kB] Get:9 http://deb.debian.org/debian sid/main DEP-11 48x48 Icons [3,657 kB] Get:9 http://deb.debian.org/debian sid/main DEP-11 64x64 Icons [7,583 kB] Get:10 http://deb.debian.org/debian sid/contrib amd64 Packages [65.4 kB] Get:11 http://deb.debian.org/debian sid/contrib Translation-en [55.8 kB] Get:13 http://deb.debian.org/debian sid/contrib DEP-11 48x48 Icons [48.1 kB] Get:14 http://deb.debian.org/debian sid/contrib DEP-11 48x48 Icons [48.1 kB] Get:15 http://deb.debian.org/debian sid/contrib DEP-11 48x64 Icons [95.6 kB] Get:16 http://deb.debian.org/debian sid/non-free amd64 Packages [112 kB] Get:17 http://deb.debian.org/debian sid/non-free Translation-en [104 kB] Get:18 http://deb.debian.org/debian sid/non-free DEP-11 48x64 Icons [3,128 B] Get:19 http://deb.debian.org/debian sid/non-free DEP-11 64x64 Icons [26.7 kB] Fetched 32 1 M RB in 33 (108 RB/c)</pre>	€	lenovo@debian: ~	Q = ×
Reading packages can be upgraded. Run 'apt listupgradable' to see them.	End Provide Control Contrel Control Control Control Control Control Control Control C	<pre>lenovo@debian:~ debian:/home/lenovo# apt update http://deb.debian.org/debian bullseye InRelease http://deb.debian.org/debian sid InRelease [165 kB] http://deb.debian.org/debian sid/main amd64 Packages [9,023 kB] http://deb.debian.org/debian sid/main amd64 Packages [9,023 kB] http://deb.debian.org/debian sid/main Translation-en [6,743 kB] http://deb.debian.org/debian sid/main DEP-11 Metadata [4,356 kB] http://deb.debian.org/debian sid/main DEP-11 Metadata [4,356 kB] http://deb.debian.org/debian sid/main DEP-11 48x48 Icons [3,657 kB] http://deb.debian.org/debian sid/main DEP-11 64x64 Icons [7,583 kB] 0 http://deb.debian.org/debian sid/contrib amd64 Packages [65.4 kB] 1 http://deb.debian.org/debian sid/contrib Translation-en [55.8 kB] 2 http://deb.debian.org/debian sid/contrib DEP-11 48x48 Icons [48.1 kB] 3 http://deb.debian.org/debian sid/contrib DEP-11 48x48 Icons [48.1 kB] 4 http://deb.debian.org/debian sid/contrib DEP-11 48x48 Icons [48.1 kB] 5 http://deb.debian.org/debian sid/contrib DEP-11 48x48 Icons [12 kB] 6 http://deb.debian.org/debian sid/non-free amd64 Packages [112 kB] 7 http://deb.debian.org/debian sid/non-free Translation-en [164 kB] 7 http://deb.debian.org/debian sid/non-free DEP-11 Metadata [19.4 kB] 8 http://deb.debian.org/debian sid/non-free DEP-11 Metadata [19.4 kB] 8 http://deb.debian.org/debian sid/non-free DEP-11 Metadata [19.4 kB] 8 http://deb.debian.org/debian sid/non-free DEP-11 48x48 Icons [3,128 B] 9 http://deb.debian.org/debian sid/non-free DEP-11 64x64 Icons [26.7 kB] ed 32.1 MB in 3s (10.8 MB/s) ng package lists Done ing dependency tree Done ng state information Done packages can be upgraded. Run 'apt listupgradable' to see them. debian.'deprava#</pre>	Q = ×

• Install Nvidia drivers #apt install nvidia-driver firmware-misc-nonfree



Lenovo

Lenovo

• During configuration select "Yes" to restart services during package upgrades without asking

1	€ lenovo@debian:~ Q ≡	×
Pa	ckage configuration	
	Configuring libc6:amd64	
	There are services installed on your system which need to be restarted when certain libraries, such as libpam, libc, and libssl, are upgraded. Since these restarts may cause interruptions of service for the system, you will normally be prompted on each upgrade for the list of services you wish to restart. You can choose this option to avoid being prompted; instead, all necessary restarts will be done for you automatically so you can avoid being asked questions on each library upgrade.	
	Restart services during package upgrades without asking?	
	<yes></yes>	
		1

• Then click "OK"

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ned.	
	vidia hed.

• Restart your system to load the new driver.

In case you desire to install a specific Nvidia driver please follow the next steps:

- Download the latest Nvidia graphics driver for the appropriate Nvidia GPU from <u>www.nvidia.com/download</u>
- To get the Nvidia driver running, we will need to blacklist the nouveau driver. Follow the steps below:
 - Log in as root: su
 - Open blacklist.conf file: nano /etc/modprobe.d/blacklistnouveau.conf
 - Blacklist nouveau driver by writing: blacklist nouveau options nouveau modeset=0

G	Đ		lenov	o@debian:~		Q ≡	×
(GNU nano 6.2	/etc/	modprobe.d	/blacklist-n	ouveau.conf *		
opt	ions nouveau	au 1 modeset=0					- 1
Ľ							- 1
							- 1
							- 1
^G	Help ^0	Write Out 💊	Where Is	^K Cut	^T Execute	^C Location	
^χ	Exit ^R	Read File ^	Replace	^U Paste	^J Justify	^/ Go To Li	.ne

• Run the command: update-initramfs -u

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• Stop x-windows by using the command: systemctl set-default multiuser.target

ot@debian:/home/lenovo# sudo update-initramfs -u	Ð	lenovo@debian: ~ Q		Ξ		×
<pre>idate-initramfs: Generating /boot/initrd.img-5.17.0-1-amd64 iot@debian:/home/lenovo# systemctl set-default multi-user.target 'eated symlink /etc/systemd/system/default.target → /lib/systemd/system/multi-u 'r.target. iot@debian:/home/lenovo# </pre>	root@debiar update-init root@debiar Created syn ser.target. root@debiar	:/home/lenovo# sudo update-initramfs -u ramfs: Generating /boot/initrd.img-5.17.0-1-amd64 :/home/lenovo# systemctl set-default multi-user.target link /etc/systemd/system/default.target → /lib/systemd/syst :/home/lenovo#	en	ı/mu	lti	-u

- Then restart restart the system by: systemctl reboot
- Log in as root and redirect to the directory where the Nvidia driver is located.

root@debian:/home/lenovo# cd Downloads root@debian:/home/lenovo/Downloads# ls NVIDIA–Linux–x86_64–510.73.05.run root@debian:/home/lenovo/Downloads#

• Run the Nvidia installer by: bash NVIDIA-Linux-x86_64-390.144.run

root@debian:/home/lenovo# cd Downloads root@debian:/home/lenovo/Downloads# ls NVIDIA–Linux–x86_64–510.73.05.run root@debian:/home/lenovo/Downloads# bash NVIDIA–Linux–x86_64–510.73.05.run • Select Continue installation.



• Wait until the kernel modules are completely built.



• Select Yes for installing 32-bit compatibility libraries.

Install NVIDIR's 32-bit compatibility lib	raries?		
		No	

• Wait until the installation is complete.

NVIDIA A	celerated Graphics Driver for Linux-x85_54 (448.54)	
stalling 'NVIDIA Accelerated Graphics Driver for Linu	-x86_64' (440.64):	
ecuting: ˈ/usr/sbin/depmod -a ` (this may take a mome	t) 99ž	

• Select Yes to run nvidia-xconfig utility to automatically update your X configuration file.

	NVIDIA Accelerated Graphic	s Driver for Linux-x86_64 (448.64)	
			and the second se
uld you like to run the nvidia-xconfi Pou pro-existing X configuration fi	g utility to automatically update u	pour X configuration file so that the NV	/IDIA X driver will be used when you resta
ang pre-existing A configuration in	ne offi be backed up.		
UDIO C. Charge Laskallas for Univ/Lin	IV.		www.nvidia

• Select OK once the X configuration file gets updated successfully.

NVIDIA Accelerated Graphics Driver for Linux-x86_64	(510.73.05)
Your X configuration file has been successfully updated. Installati	on of the NVIDIA Accelerated
Graphics Driver for Linux-x86_64 (Version: 510.73.05) is now complet	е.
NUTDIA Poftwore Installer for University	
NVIDIA SUTEWARE INSTALLER FOR UNIX/LINUX	www.nvidia.com

• Enable GUI by: systemctl set-default graphical.target

root@debian:/home/lenovo/Downloads# systemctl set–default graphical.target Removed /etc/systemd/system/default.target. Created symlink /etc/systemd/system/default.target → /lib/systemd/system/graphical.target.

• Execute the following command to verify the Nvidia driver is loaded: nvidiasmi

root@debian:/home/lenovo/Downloads# nvidia–smi n May 16 14:47:55 2022					
NVIDIA-SMI 510.73.05 Driver Version: 510.73.05	CUDA Version: 11.6				
GPU Name Persistence-M Bus-Id Disp.A Fan Temp Perf Pwr:Usage/Cap Memory-Usage	Volatile Uncorr. ECC GPU-Util Compute M. MIG M.				
0 NVIDIA T600 Off 00000000:01:00.0 Off 43% 46C P0 N/A / 41W 0MiB / 4096MiE 	N/A 0% Default N/A				
+ Processes: GPU GI CI PID Type Process name ID ID	GPU Memory Usage				
No running processes found	 				
root@debian:/home/lenovo/Downloads# _					

• Reboot the system.

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Revision History

Version	Date	Author	Changes/Updates
1.1	7/12/2022	Aleksandr Panteleev	Added support for P360 Ultra
1.0	5/17/2022	Aleksandr Panteleev	Initial release