

Getting started with installing Linux Driver

The following guide was written for Ubuntu. For other distributions, please see [Appendix A – Equivalent commands for other distributions](#).

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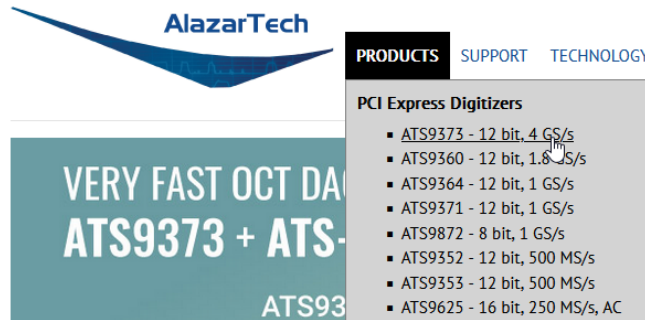
1. Revision History

Version Date	Description of Changes
March 2024	This is the first edition of this guide.
September 2024	<p>Removed “under Ubuntu” from document title; equivalent commands for other distributions are now included in <i>Appendix A</i>.</p> <p>Added sections for Downloading License Installer for ATS-SDK or ATS-GPU, Installation of license installer, Installation of downloaded ATS-SDK or ATS-GPU product.</p> <p>Removed Section 2b. Libats is no longer a separate download and is installed during installation of driver versions 7.11.0 or later.</p> <p>Moved Revision History to the beginning of installation guide.</p> <p>Added <i>Appendix A – Equivalent commands for other distributions</i>.</p>

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2. Download your AlazarTech Product Linux Driver and Alazar-Front-Panel

- 2.1) Go to AlazarTech's website and choose your board from the PRODUCTS drop-down menu



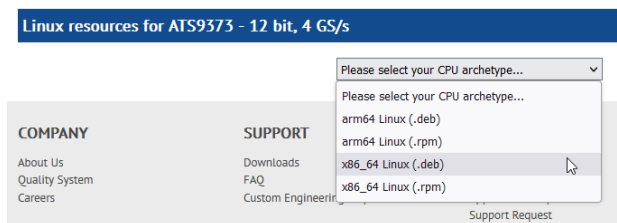
- 2.2) Scroll down on the product's page to find the Drivers section:

Drivers

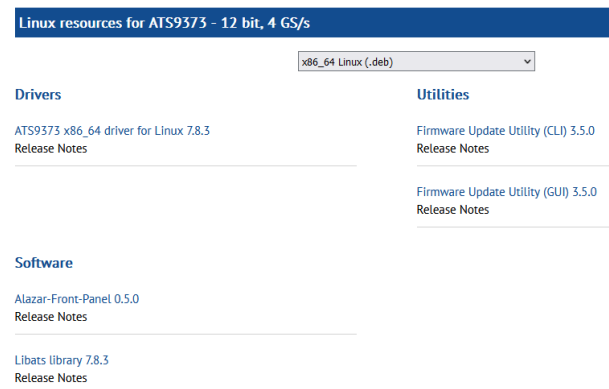
ATS9373 x86_64 driver for Windows
Version: 7.8.3
[Release Notes](#)

[Linux Resources](#)
[Linux ReadMe](#)

- a. Click on **Linux Resources** and you will be brought to the Linux resource page for your product. From here, select your CPU archetype.



- b. After selecting your CPU archetype, click on **ATSyyyy x86_64 driver for Linux x.x.x** in the Drivers section to download your product's Linux Driver, where yyyy is your digitizer model and x.x.x is the driver version number.




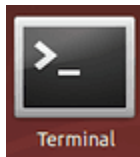
- c. Click on **Alazar-Front-Panel x.x.x** to download the oscilloscope GUI for Linux.

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3. Install your AlazarTech Product Linux Driver and Alazar-Front-Panel

Note: From this point going forward, we assume you have installed Linux O/S and are familiar with Linux operating system.

- 3.1) Open a Terminal Window or click on the Applications icon  in the bottom left corner to open one.



- 3.2) Type the following command in the open terminal at the prompt:

- a. `sudo apt-get install dkms1,2`

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  menu
The following NEW packages will be installed:
  dkms
0 upgraded, 1 newly installed, 0 to remove and 96 not upgraded.
Need to get 41.4 kB of archives.
After this operation, 190 kB of additional disk space will be used.
Get:1 http://ca.archive.ubuntu.com/ubuntu kinetic-updates/main amd64 dkms all 3.0.6-2ubuntu2 [41.4 kB]
Fetched 41.4 kB in 0s (150 kB/s)
Selecting previously unselected package dkms.
(Reading database ... 189030 files and directories currently installed.)
Preparing to unpack .../dkms_3.0.6-2ubuntu2_all.deb ...
Unpacking dkms (3.0.6-2ubuntu2) ...
Setting up dkms (3.0.6-2ubuntu2) ...
Processing triggers for man-db (2.10.2-2) ...
```

- b. `sudo dpkg -i drivers-ats9373-dkms_x.x.x_amd64.deb2`

```
oem@oem-HP-Z4-G4-Workstation:~/Downloads$ sudo dpkg -i drivers-ats9373-dkms_7.8.7_amd64.deb
Selecting previously unselected package drivers-ats9373-dkms.
(Reading database ... 189252 files and directories currently installed.)
Preparing to unpack drivers-ats9373-dkms_7.8.7_amd64.deb ...
Unpacking drivers-ats9373-dkms (7.8.7) ...
Setting up drivers-ats9373-dkms (7.8.7) ...
Init system: systemd
Creating symlink /var/lib/dkms/ats9373/7.8.7/source -> /usr/src/ats9373-7.8.7
Sign command: /usr/bin/kmodsign
Signing key: /var/lib/shim-signed/mok/MOK.priv
Public certificate (MOK): /var/lib/shim-signed/mok/MOK.der

Building module:
Cleaning build area...
make -j8 KERNELRELEASE=5.19.0-31-generic -C /lib/modules/5.19.0-31-generic/build M=/var/lib/dkms/ats9373/7.8.7/build.
...
Signing module /var/lib/dkms/ats9373/7.8.7/build/ats9373.ko

Running the post_build script:
Cleaning build area...

ats9373.ko:
Running module version sanity check.
- Original module
- No original module exists within this kernel
- Installation
- Installing to /lib/modules/5.19.0-31-generic/updates/dkms/
depmod...
Created symlink /etc/systemd/system/multi-user.target.wants/ats9373.service -> /lib/systemd/system/ats9373.service.
```

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- c. `sudo dpkg -i alazar-front-panel-x.x.x.deb`^{1, 2}

```
oem@oem-HP-Z4-G4-Workstation:~/Download$ sudo dpkg -i alazar-front-panel-0.5.0.deb
[sudo] password for oem:
Selecting previously unselected package alazar-front-panel.
(Reading database ... 189325 files and directories currently installed.)
Preparing to unpack alazar-front-panel-0.5.0.deb ...
Unpacking alazar-front-panel (0.5.0) ...
Setting up alazar-front-panel (0.5.0) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu4) ...
```

Note:

¹You may be prompted for a password request; this is a security measure to prevent malware from getting automatically installed on the computer.

²Output screen content may differ on other Linux distributions.

4. Verify the Installation of your AlazarTech Linux Driver and Alazar-Front-Panel

- 4.1) Type the following command in the open terminal at the prompt to verify the packages have been installed:

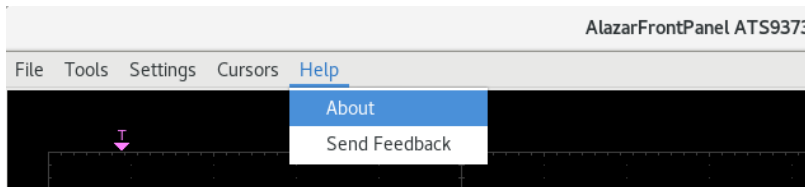
grep installed /var/log/dpkg.log

```
2023-05-09 15:01:36 status half-installed libats:amd64 7.8.7
2023-05-09 15:01:36 status installed libats:amd64 7.8.7
2023-05-09 15:01:46 startup archives install
2023-05-09 15:01:52 status half-installed drivers-ats9373-dkms:amd64 7.8.7
2023-05-09 15:01:58 status installed drivers-ats9373-dkms:amd64 7.8.7
2023-05-09 15:02:02 startup archives install
2023-05-09 15:02:02 status half-installed alazar-front-panel:amd64 0.5.0
2023-05-09 15:02:02 status installed alazar-front-panel:amd64 0.5.0
2023-05-09 15:02:02 status installed mailcap:all 3.70+nmu1ubuntu1
2023-05-09 15:02:02 status installed gnome-menus:amd64 3.36.0-1ubuntu3
2023-05-09 15:02:02 status installed desktop-file-utils:amd64 0.26-1ubuntu4
```

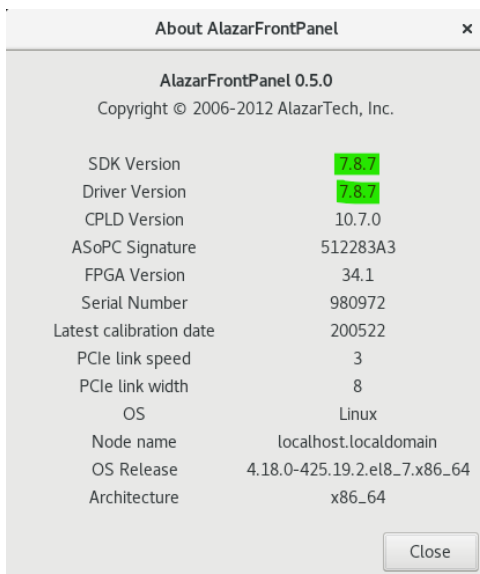
This will output the above list of packages by installation date.

- 4.2) Navigate to the folder /usr/local/AlazarTech/bin where AlazarFrontPanel is located and run the application.

Click on Help → About



This will display the Board Properties to verify that you have successfully installed the version of the Library and Drivers for your product under Ubuntu



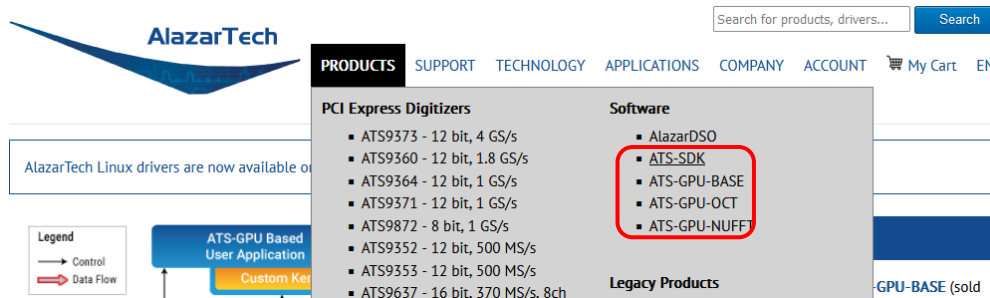
5. Optional: Download ats-license to Install ATS-SDK or ATS-GPU for Linux

If you purchased an ATS-SDK and/or ATS-GPU software license, you will need to download the ats-license installer. At the time of order fulfillment, AlazarTech would have sent a Software eDelivery email containing software license key(s) to the technical contact provided.

Product	Purchased Version	Maintenance Expiration Date (YYYY/MM/DD)	Serial Number	Software License Key
ATS-SDK	24.2.0	2025/08/31	SDK	
ATS-GPU-NUFFT	24.2.1	2025/08/31	GPU	
ATS-GPU-OCT	24.2.1	2025/08/31	GPU	
ATS-GPU-BASE	24.2.1	2025/08/31	GPU	

Note: there is a single license key for ATS-GPU that will allow the installation of any purchased ATS-GPU libraries.

5.1) Go to AlazarTech's website and select ATS-SDK (or ATS-GPU) products from the PRODUCTS drop-down menu.

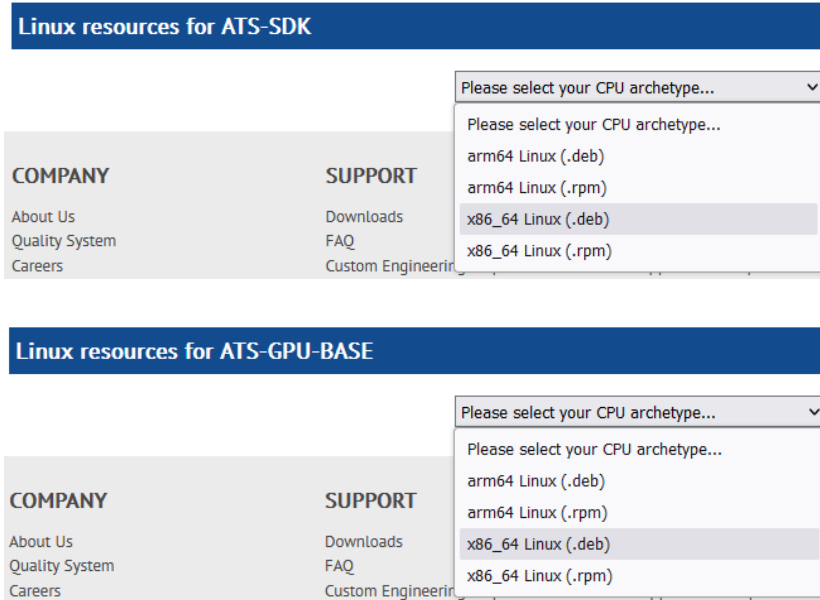


5.2) On the product's page, scroll down to find the Software section and click on **Linux Resources**.

ATS-SDK:	ATS-GPU-BASE:
<p>Software</p> <p>ATS-SDK Installation Program for Windows Version: 24.1.0 Release Notes</p> <p>Linux Resources Linux ReadMe</p>	<p>Software</p> <p>ATS-GPU-BASE Installation Program for Windows Version: 24.1.0 Release Notes</p> <p>Linux Resources Linux ReadMe</p>

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- 5.3) This will bring you to the Linux resources page for your product. From here, select your CPU archetype.



Linux resources for ATS-SDK

COMPANY
About Us
Quality System
Careers

SUPPORT
Downloads
FAQ
Custom Engineering

Please select your CPU archetype...
arm64 Linux (.deb)
arm64 Linux (.rpm)
x86_64 Linux (.deb)
x86_64 Linux (.rpm)

Linux resources for ATS-GPU-BASE

COMPANY
About Us
Quality System
Careers

SUPPORT
Downloads
FAQ
Custom Engineering

Please select your CPU archetype...
arm64 Linux (.deb)
arm64 Linux (.rpm)
x86_64 Linux (.deb)
x86_64 Linux (.rpm)

- 5.4) After selecting your CPU archetype, click on one of the following to download and save the **ats-license-x.x.x_amd64.deb** installation program for Linux.

From *Linux resources for ATS-SDK*: **ATS-SDK Installation Program for Linux (.deb) xx.x.x**



Linux resources for ATS-SDK

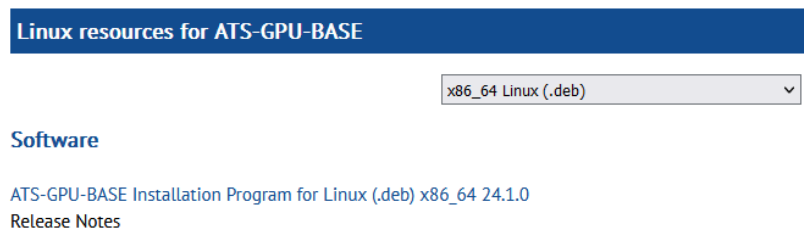
x86_64 Linux (.deb)

Software

[ATS-SDK Installation Program for Linux \(.deb\) 24.1.0](#)
[Release Notes](#)

From *Linux resources for ATS-GPU*:

ATS-GPU-xxx Installation Program for Linux (.deb) x86_64 xx.x.x



Linux resources for ATS-GPU-BASE


x86_64 Linux (.deb)

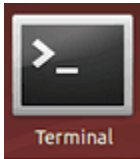
Software

[ATS-GPU-BASE Installation Program for Linux \(.deb\) x86_64 24.1.0](#)
[Release Notes](#)

Note: If installing both ATS-SDK and ATS-GPU, you only need to download the ats-license installer once.

6. Optional: Install ats-license-x.x.x_amd64 to download ATS-SDK or ATS-GPU

- 6.1) Open a Terminal Window or click on the Applications icon  in the bottom left corner to open one in the folder that you saved **ats-license-x.x.x_amd64.deb**



- 6.2) Type the following command in the open terminal at the prompt:

```
sudo dpkg -i ats-license-x.x.x_amd64.deb1,2
```

```
alazar@alazar-HP-Z4-G4-Workstation:~/Downloads$ sudo dpkg -i ats-license-1.2.3_amd64.deb
Selecting previously unselected package ats-license.
(Reading database ... 169294 files and directories currently installed.)
Preparing to unpack ats-license-1.2.3_amd64.deb ...
Unpacking ats-license (1.2.3) ...
Setting up ats-license (1.2.3) ...
alazar@alazar-HP-Z4-G4-Workstation:~/Downloads$
```

This will install the **ats-license-x.x.x** installation package.

Navigate to the folder **/usr/local/AlazarTech** and open a terminal window to enter the ATS-SDK license key from the AlazarTech Software eDelivery email as shown in the screenshot below:

```
alazar@alazar-HP-Z4-G4-Workstation:/usr/local/AlazarTech$ ./ats-license-1.2.3
Enter command to run (install-license/decrypt-license/download-product) : download-product
Enter CPU architecture (x64/arm64) : x64
Enter OS type (windows/debian/redhat) : debian
Enter license : [REDACTED]

The following packages are available :
[ 1] ats-sdk-amd64-deb_v24.2.0.zip
Enter the desired package number : 1
```

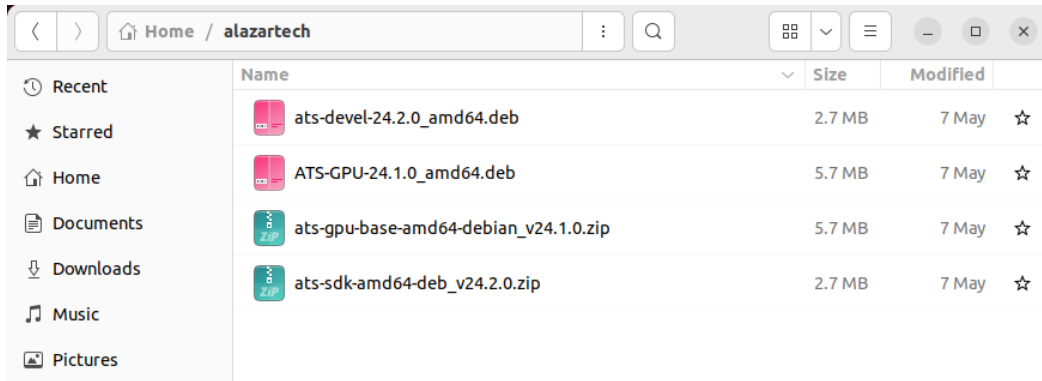
(repeat the process with ATS-GPU license key if installing ATS-GPU)

```
alazar@alazar-HP-Z4-G4-Workstation:/usr/local/AlazarTech$ ./ats-license-1.2.3
Enter command to run (install-license/decrypt-license/download-product) : download-product
Enter CPU architecture (x64/arm64) : x64
Enter OS type (windows/debian/redhat) : debian
Enter license : [REDACTED]

The following packages are available :
[ 1] ats-gpu-base-amd64-debian_v24.1.0.zip
Enter the desired package number : 1
```

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The respective ATS-SDK or ATS-GPU products will be downloaded to **/Home/alazartech** as shown in the following screenshot:



Note:

¹You may be prompted for a password request; this is a security measure to prevent malware from getting automatically installed on the computer.

²Output screen content may differ on other Linux distributions

7. Optional: Install Downloaded ATS-SDK or ATS-GPU product

7.1) Open a terminal window in Home/alazartech to begin installation of either:

- a) ATS-SDK (ats-devel-xx.x.x_amd64.deb)
- b) ATS-GPU-xx.x.x_amd64.deb (or GPU-OCT-xx.x.x_amd64.deb or GPU-NUFFT-xx.x.x_amd64.deb)

7.2) Type the following command in the open terminal at the prompt:

- a) `sudo dpkg -i ats-devel-xx.x.x_amd64.deb`^{1,2}

```
alazar@alazar-HP-Z4-G4-Workstation:~/alazartech$ sudo dpkg -i ats-devel-24.2.0_amd64.deb
[sudo] password for alazar:
Selecting previously unselected package ats-devel.
(Reading database ... 169295 files and directories currently installed.)
Preparing to unpack ats-devel-24.2.0_amd64.deb ...
Unpacking ats-devel (24.2.0) ...
Setting up ats-devel (24.2.0) ...
```

Once installed, the ATS-SDK (ats-devel) directory can be found in /usr/local/Alazar/samples

- b) `sudo dpkg -i ATS-GPU-xx.x.x_amd64.deb`^{1,2}

```
alazar@alazar-HP-Z4-G4-Workstation:~/alazartech$ sudo dpkg -i ATS-GPU-24.1.0_amd64.deb
[sudo] password for alazar:
Selecting previously unselected package ats-gpu.
(Reading database ... 198107 files and directories currently installed.)
Preparing to unpack ATS-GPU-24.1.0_amd64.deb ...
Unpacking ats-gpu (24.1.0) ...
Setting up ats-gpu (24.1.0) ...
alazar@alazar-HP-Z4-G4-Workstation:~/alazartech$
```

Once installed, the ATS-GPU directory can be found in /usr/local/Alazar/ATS-GPU/xx.x.x, where xx.x.x is the Version number.

Note:

¹You may be prompted for a password request; this is a security measure to prevent malware from getting automatically installed on the computer.

²Output screen content may differ on other Linux distributions.

8. Appendix A – Equivalent commands for other distributions

<u>Task</u>	Ubuntu	RHEL/Fedora
Install a package from a repository	<code>sudo apt-get install dkms</code>	<code>sudo yum install dkms</code>
Install a package file	<code>sudo dpkg -i package_name.deb</code>	<code>sudo rpm -i package_name.rpm</code>
Display recently installed files	<code>grep installed /var/log/dpkg.log</code>	<code>sudo rpm -qa --last tac</code>