Framing Control Software
Installation Procedures

Table of Contents

TABLE OF CONTENTS 2

INTRODUCTION 3

OPERATING ENVIRONMENT 3
ABOUT THE DESCRIPTIONS IN THIS FILE 3
ABOUT REGISTRATION AND REGISTERED TRADEMARKS 3

INSTALLATION OF THE UBUNTU 18.04 LTS 4

DOWNLOADING THE UBUNTU 18.04 LTS 4
INSTALLING THE UBUNTU 18.04 LTS 4

DOWNGRADING OF UBUNTU KERNEL VERSION 10

INSTALLING THE SOFTWARE FOR BLACKMAGIC DECKLINK 18

INSTALLING THE DRIVER FOR TALLY SIGNAL I / O BOARD 19

INSTALLATION OF THE SOFTWARE 23

DOWNLOADING THE SOFTWARE 23
INSTALLING THE SOFTWARE 23

Introduction

Framing Control Software is an application software that operates on Ubuntu 18.04LTS.

Using this software, settings for devices that configure 8K Multi camera system and crop control settings can be done.

This manual describes the installation procedures and setting methods of this software.

Operating Environment

Refer to our company's website (http://panasonic.biz/sav [Support and Download]) for the operating environment of this software.

About the Descriptions in this File

- The illustrations and screen displays in this file may be different from those in reality.
- In this file, a personal computer is mentioned as a "PC".

About Registration and Registered Trademarks

- All other names, company names, and product names are trademarks or registered trademarks of each company. TM and the ® mark are not specified in this manual.

Installation of the Ubuntu 18.04 LTS

To use this software, Ubuntu 18.04 LTS must be installed on your PC.
Follow the steps below to install Ubuntu 18.04 LTS.

Downloading the Ubuntu 18.04 LTS

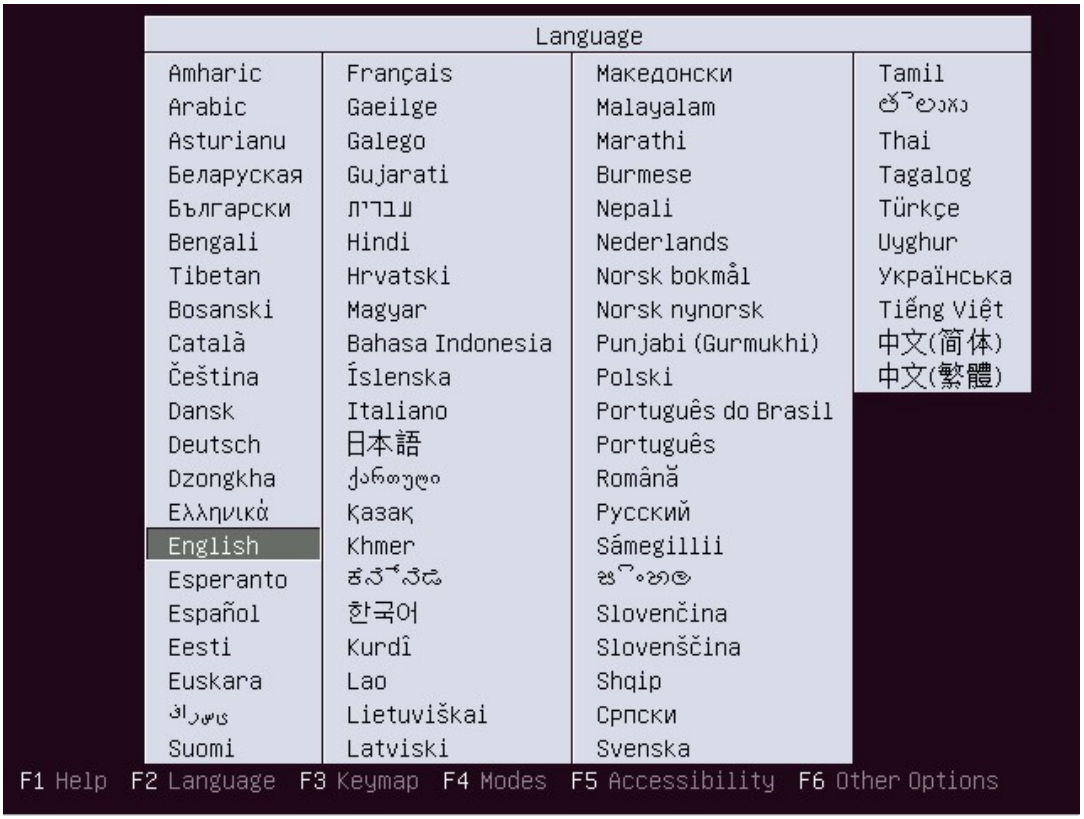
1. Download the Ubuntu 18.04.3 LTS installation image file from the official Ubuntu website (https://www.ubuntu.com/download/desktop).
2. Create the installation media by writing the downloaded installation image file to a USB memory or DVD.

Installing the Ubuntu 18.04 LTS

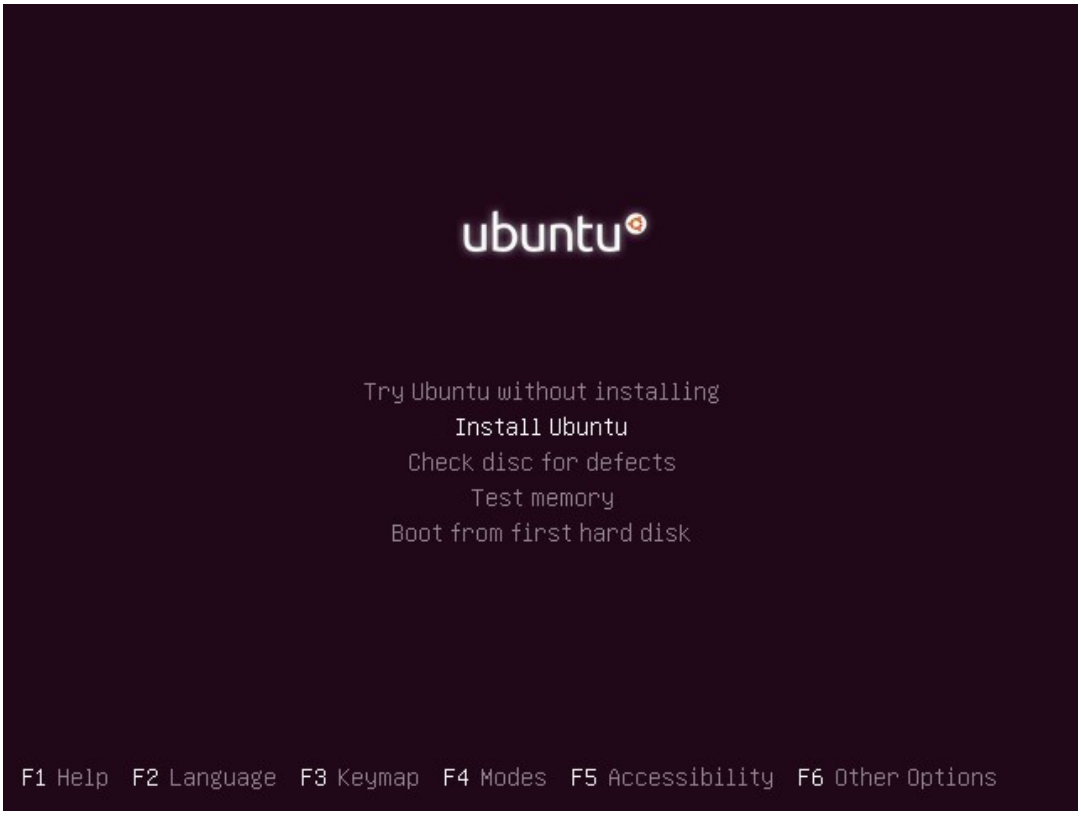
* The displayed screen may vary depending on the PC environment.
* Please install the file with the PC connected to the Internet.

1. Insert the Ubuntu installation media into the PC and start the PC.
2. The language selection screen will be displayed. Select any language.

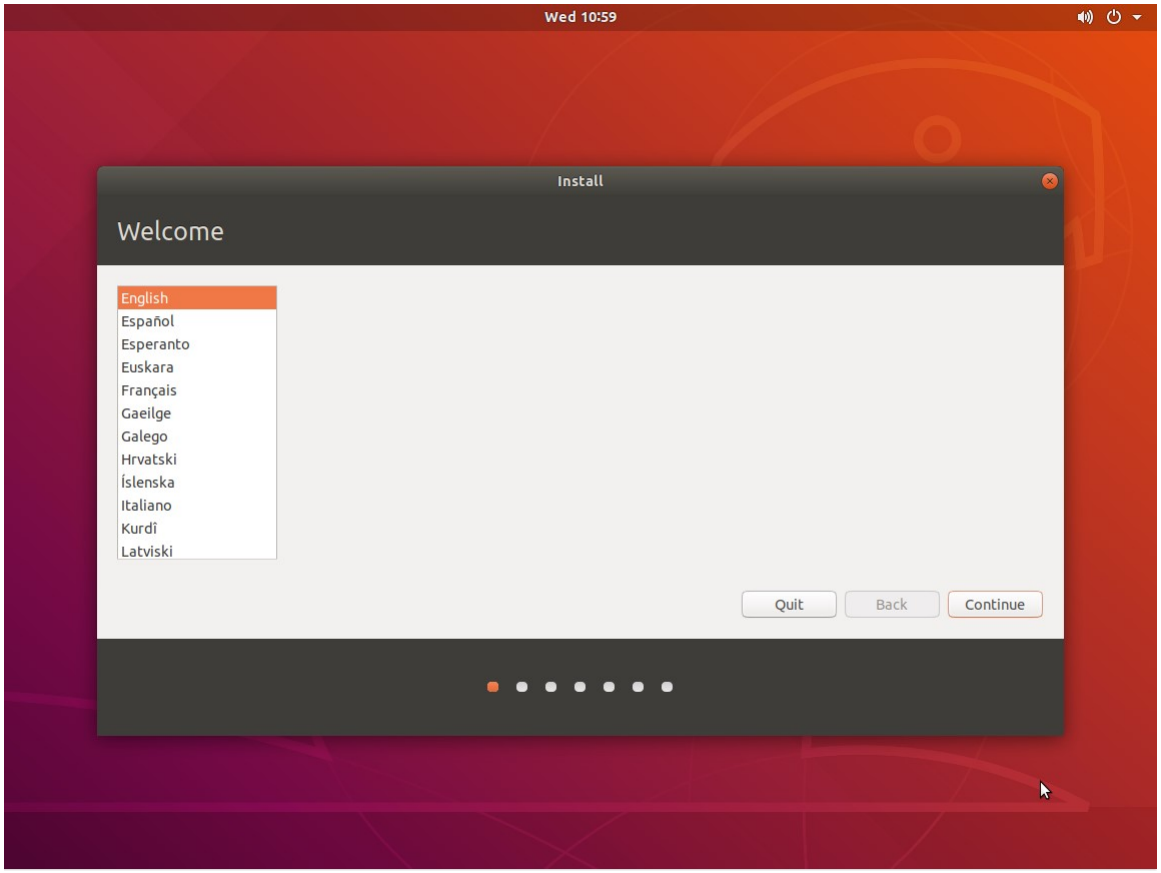
   The rest of this manual is written when English is selected.



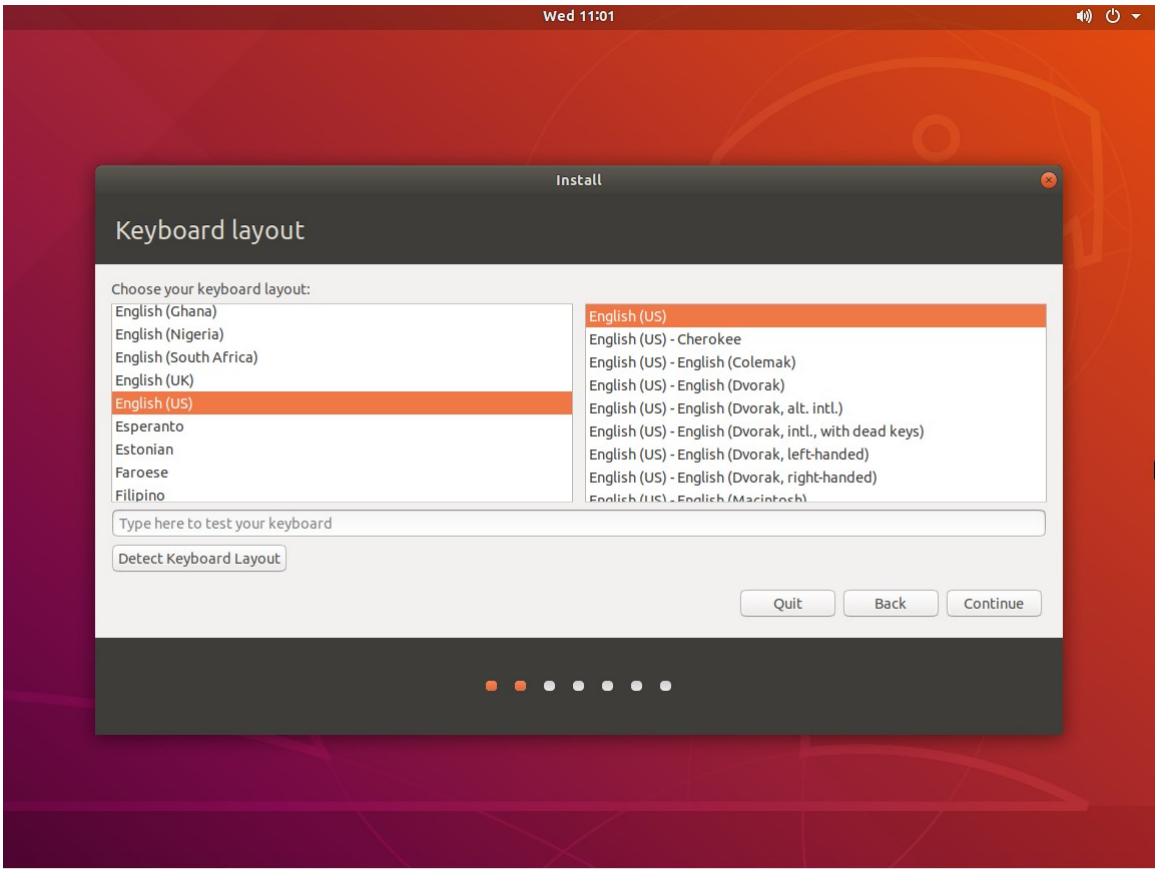
3. The operation selection screen will be displayed. Select “Install Ubuntu”.



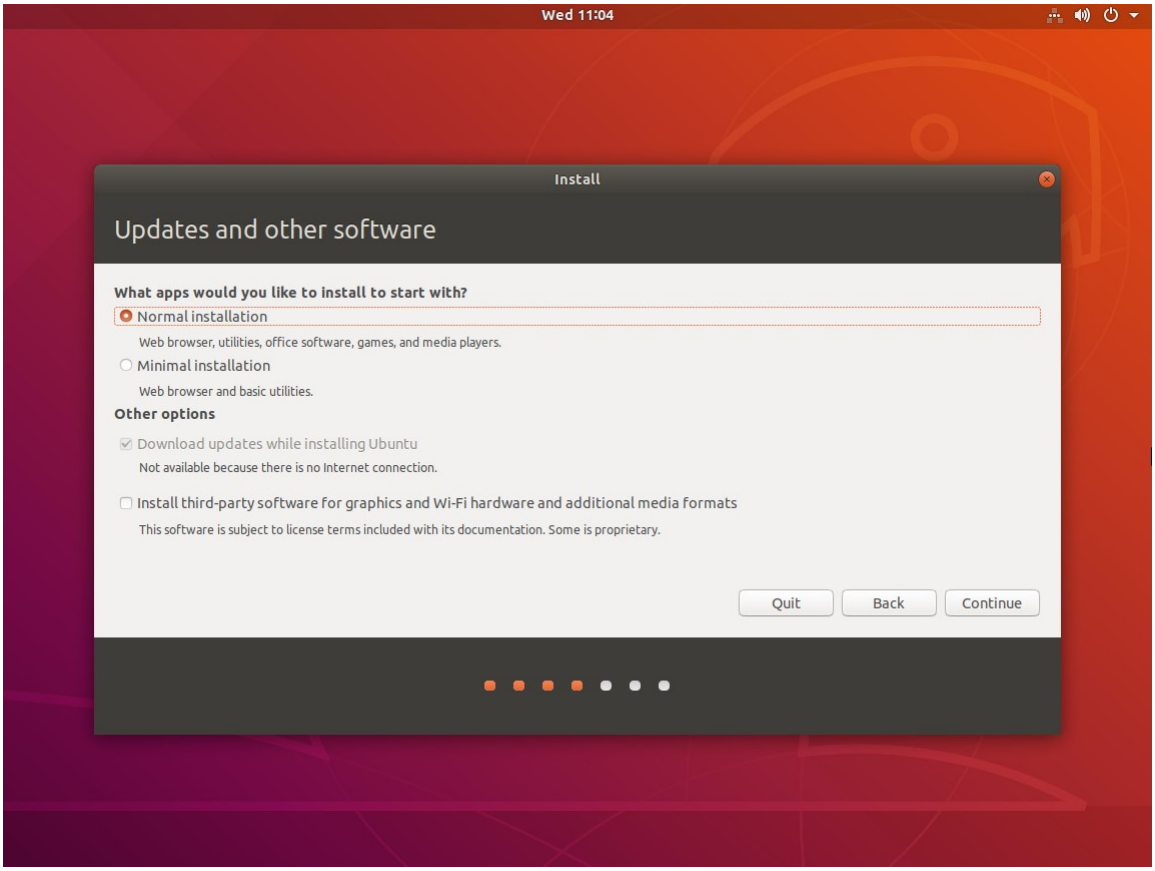
4. The language selection screen will be displayed again. Select any language and click the [Continue] button. The rest of this manual is written when English is selected.



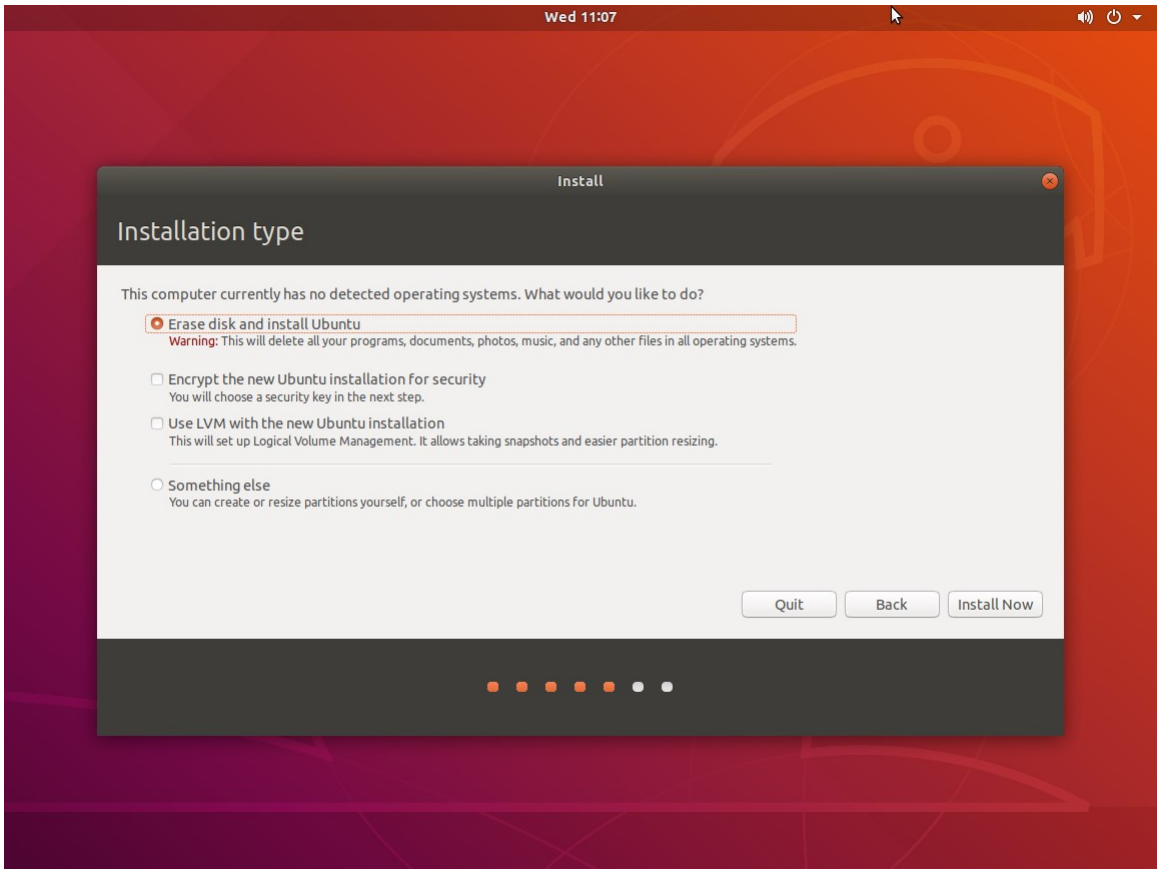
5. The keyboard layout selection screen will be displayed. Select an arbitrary layout and click the [Continue] button.



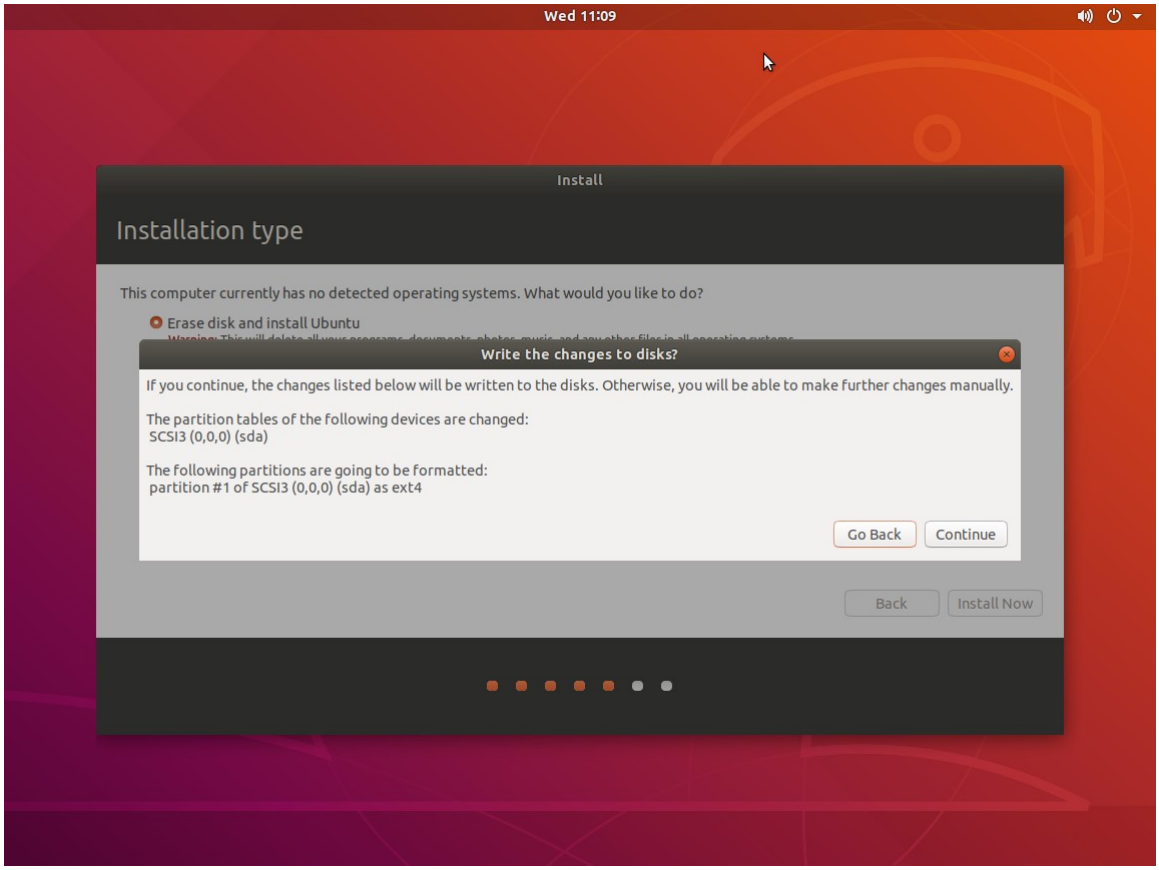
6. The installation setting screen will be displayed. Select “Normal Installation” and click the [Continue] button.



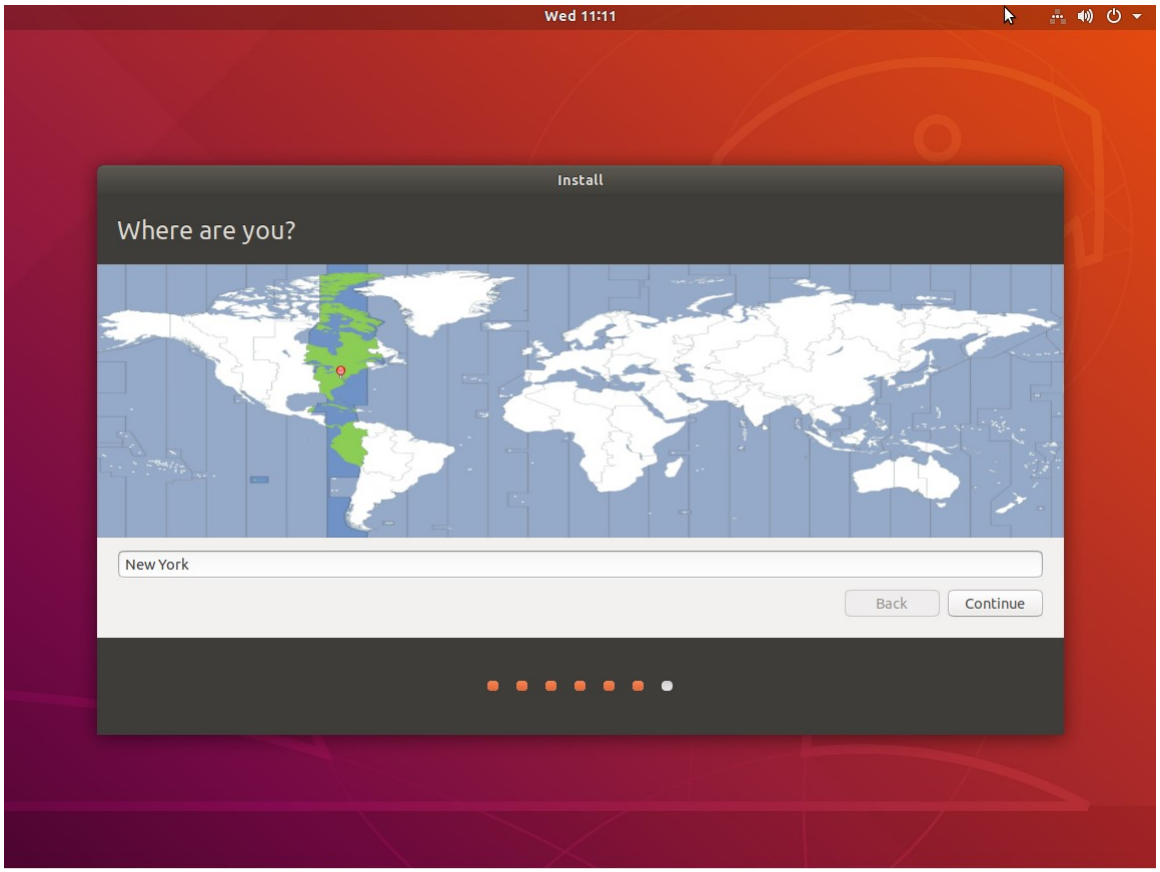
7. The installation type selection screen will be displayed. Select “Erase disk and install Ubuntu” and click the [Install Now] button.



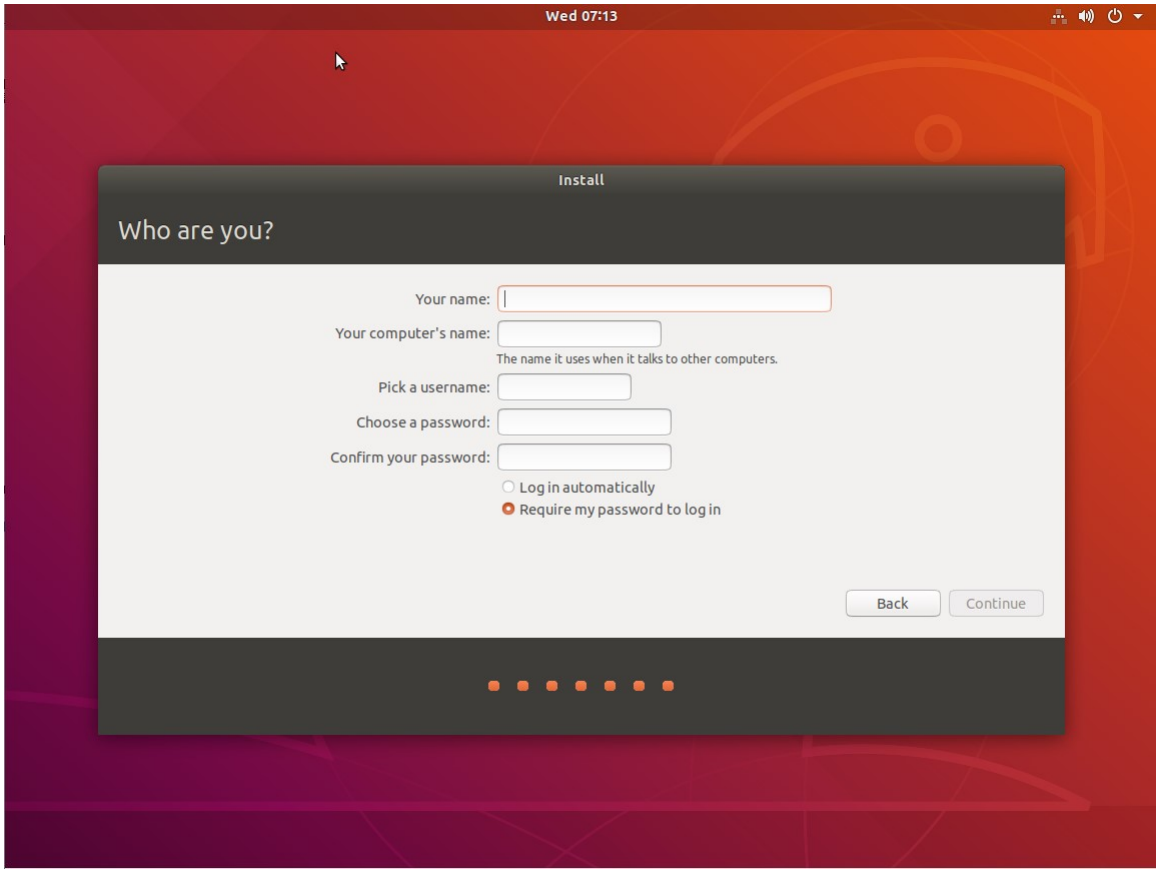
8. When the installation confirmation screen is displayed, click the [Continue] button.



9. The time zone selection screen will be displayed. Select any time zone and click the [Continue] button.

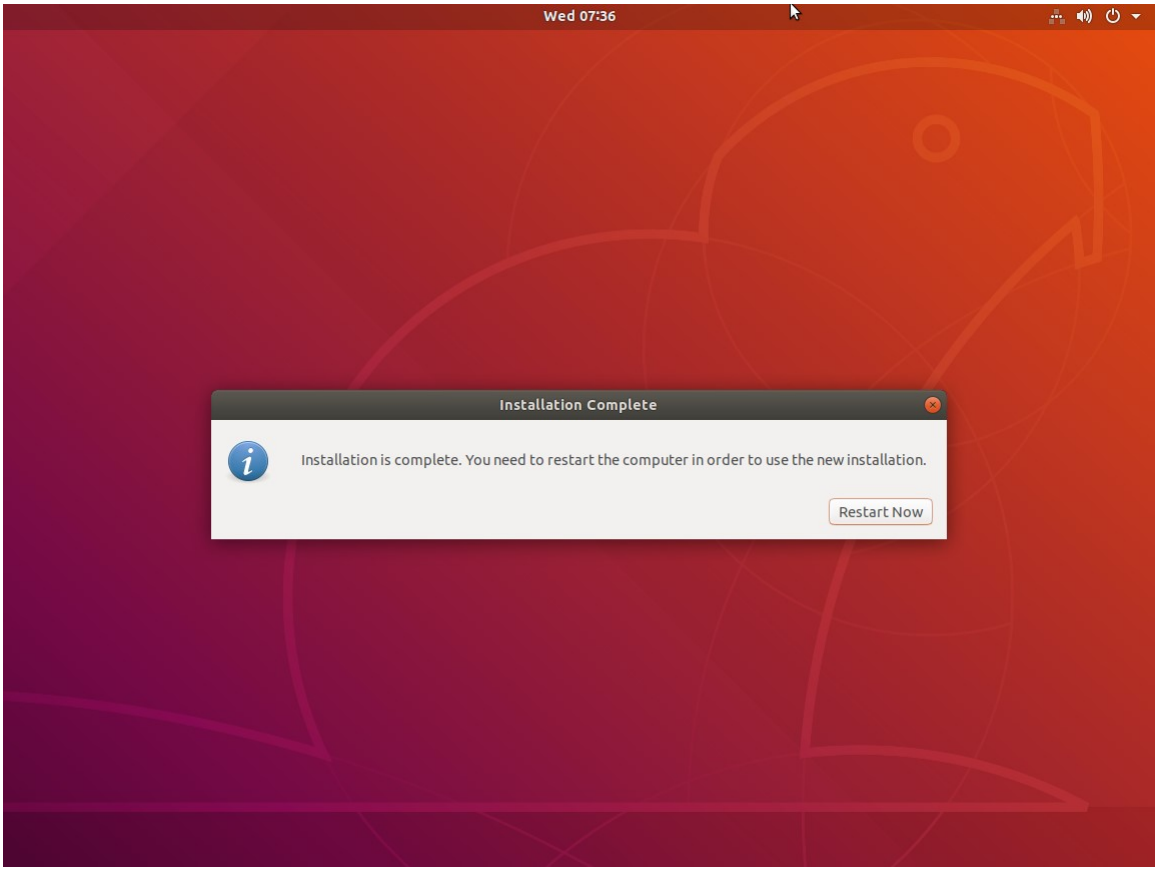


10. The Ubuntu account settings screen will be displayed. Enter your account information and click the [Continue] button.



11. If the following screen is displayed, Ubuntu 18.04.3 LTS installation is complete.

    Click the [Restart Now] button to restart your PC.



12. After restarting the PC, log in to Ubuntu and start the terminal.

13. Execute the following command from the terminal to update the Ubuntu software.

    $ sudo apt update

    $ sudo apt upgrade

14. Execute the following command from the terminal to install the software necessary for the operation of this software.

    $ sudo apt install libcurl4-openssl-dev gstreamer1.0-plugins-base gstreamer1.0-plugins-good gstreamer1.0-plugins-bad libpango1.0-dev v4l2loopback-dkms

15. Downgrade the kernel according to the contents of "Downgrading of Ubuntu kernel version" in the next section.

Downgrading of Ubuntu kernel version

Depending on your Ubuntu environment, the kernel version may be automatically updated to 5.x.x, but this software does not support kernel version 5.x.x.

In order to use this software, you need to downgrade the kernel version to 4.x.x with automatic update disabled.

Follow the steps below to disable automatic updates and downgrade the kernel.

- If you are prompted for an administrator password during operation, enter the administrator password.
- If a message confirming the continuation of processing is displayed during operation, enter Y to continue processing.

1. Connect your PC to the Internet.
2. Log in to Ubuntu and start the terminal.
3. Execute the following command in the terminal.

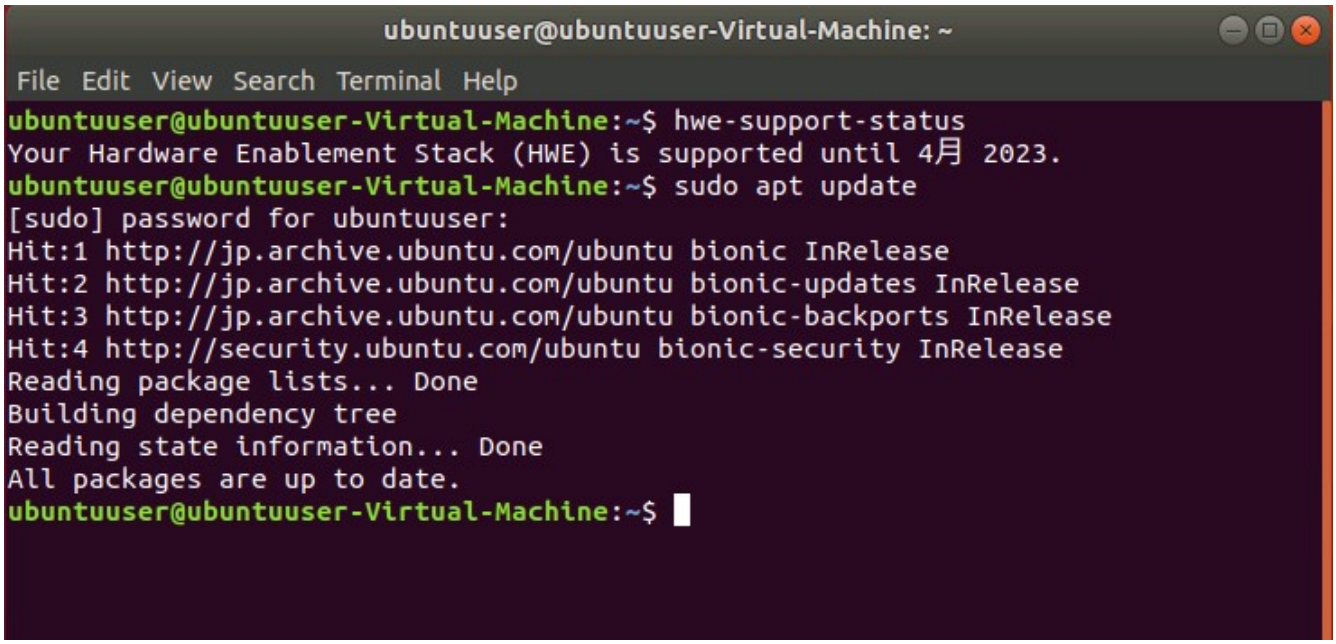
   hwe-support-status

   If the message "Your Hardware Enablement Stack (HWE) is supported until ..." is displayed as a result of executing the command, automatic updating is enabled. Proceed to step 3 and subsequent steps.

   If no message is displayed, automatic updates are disabled. No further steps are required.

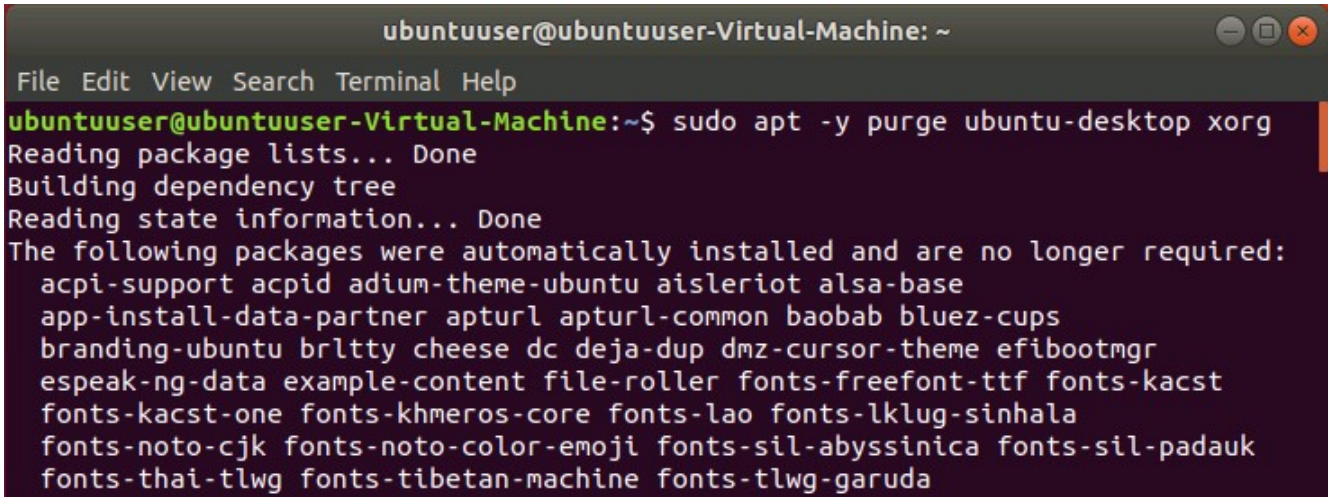
4. Execute the following command in the terminal.

   sudo apt update



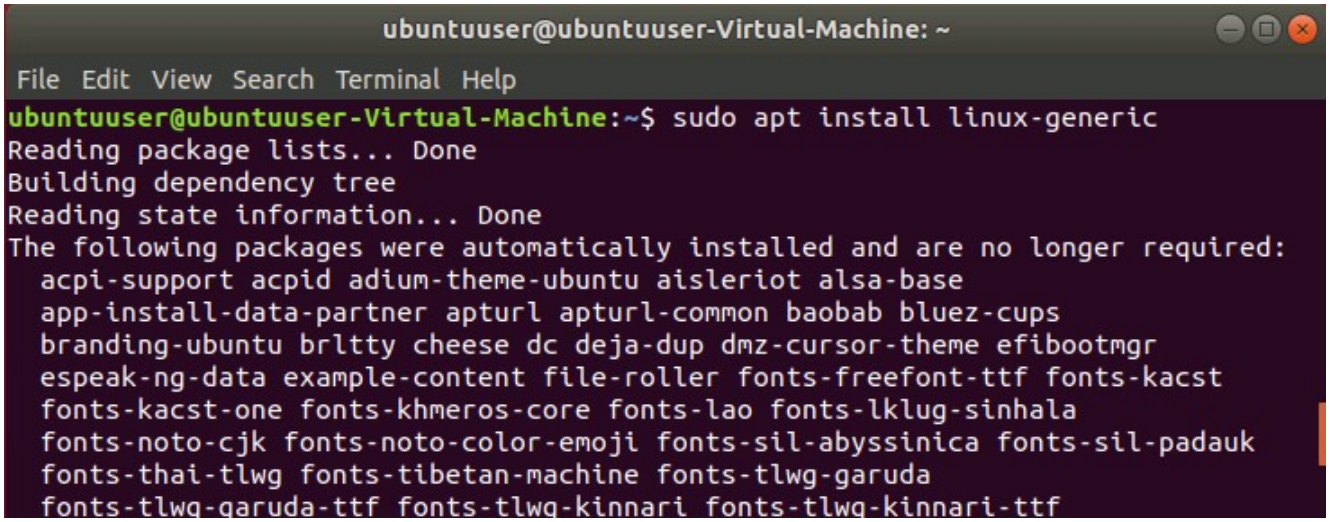
5. Execute the following command in the terminal.

sudo apt -y purge ubuntu-desktop xorg



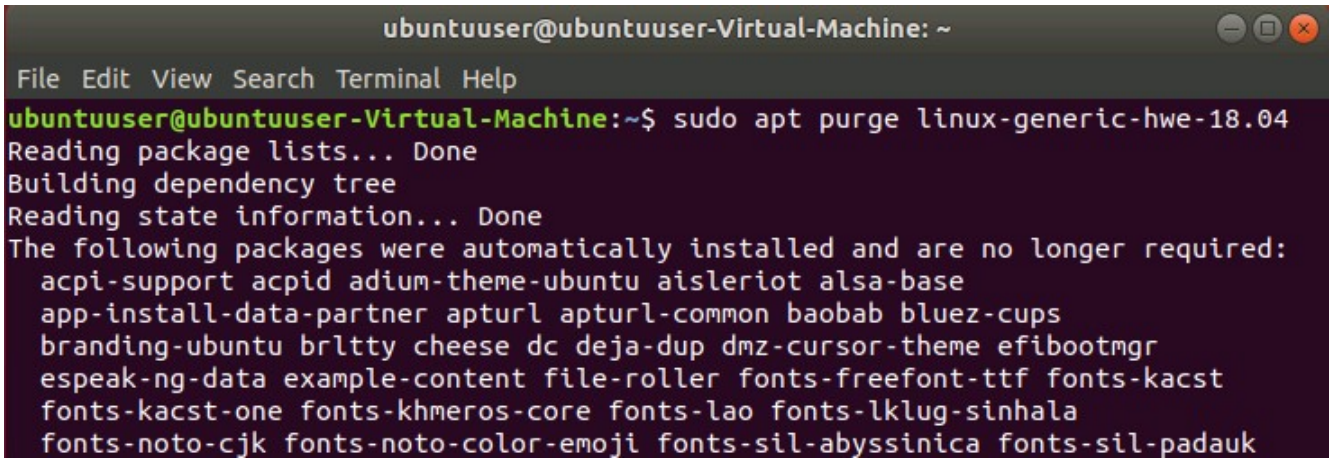
6. Execute the following command in the terminal.

sudo apt install linux-generic



7. Execute the following command in the terminal.

sudo apt purge linux-generic-hwe-18.04

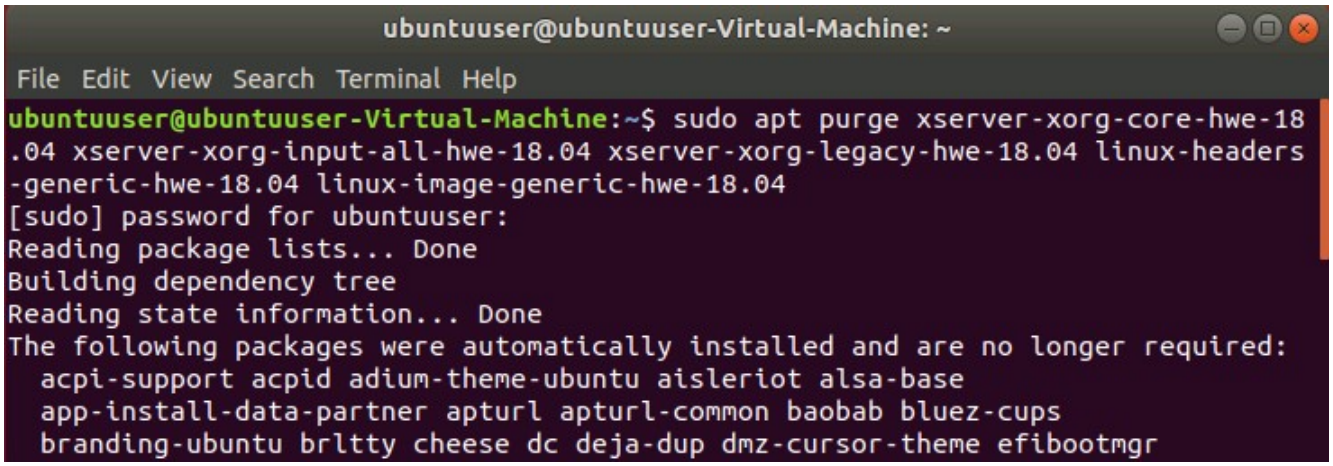


8. Restart your PC.

9. After logging in to Ubuntu, start the terminal.

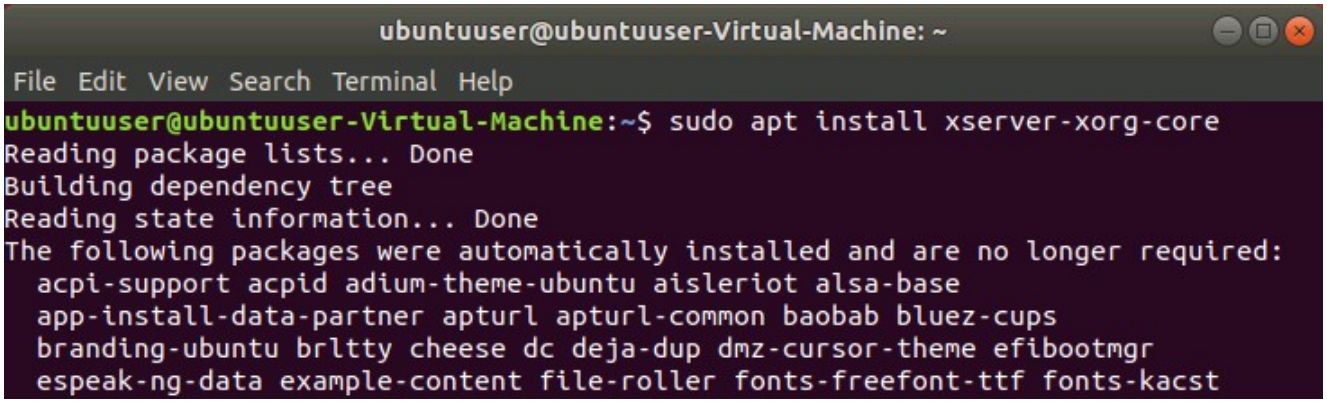
10. Execute the following command in the terminal.

    sudo apt purge xserver-xorg-core-hwe-18.04 xserver-xorg-input-all-hwe-18.04 xserver-xorg-legacy-hwe-18.04 linux-headers-generic-hwe-18.04 linux-image-generic-hwe-18.04



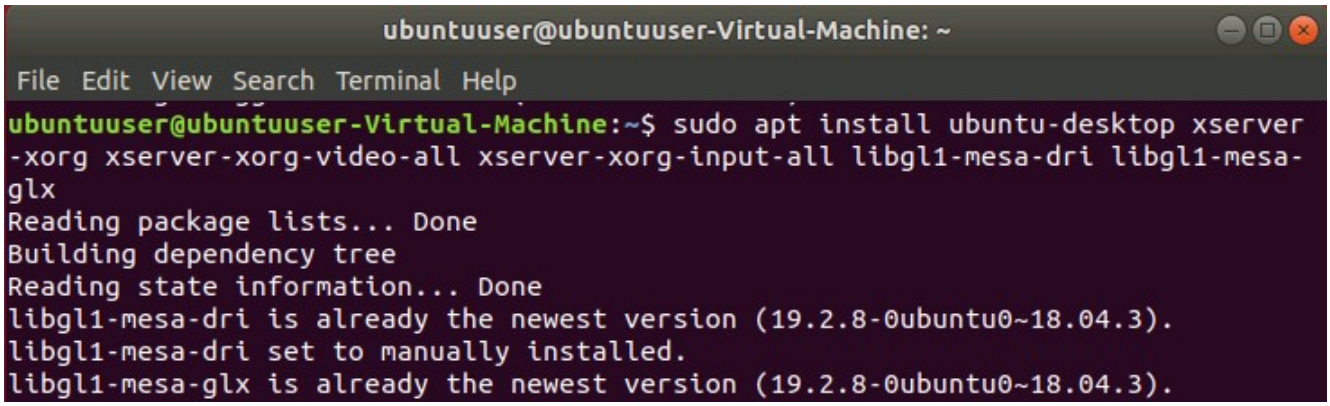
11. Execute the following command in the terminal.

    sudo apt install xserver-xorg-core



12. Execute the following command in the terminal.

    sudo apt install ubuntu-desktop xserver-xorg xserver-xorg-video-all xserver-xorg-input-all libgl1-mesa-dri libgl1-mesa-glx



13. Execute the following command in the terminal.

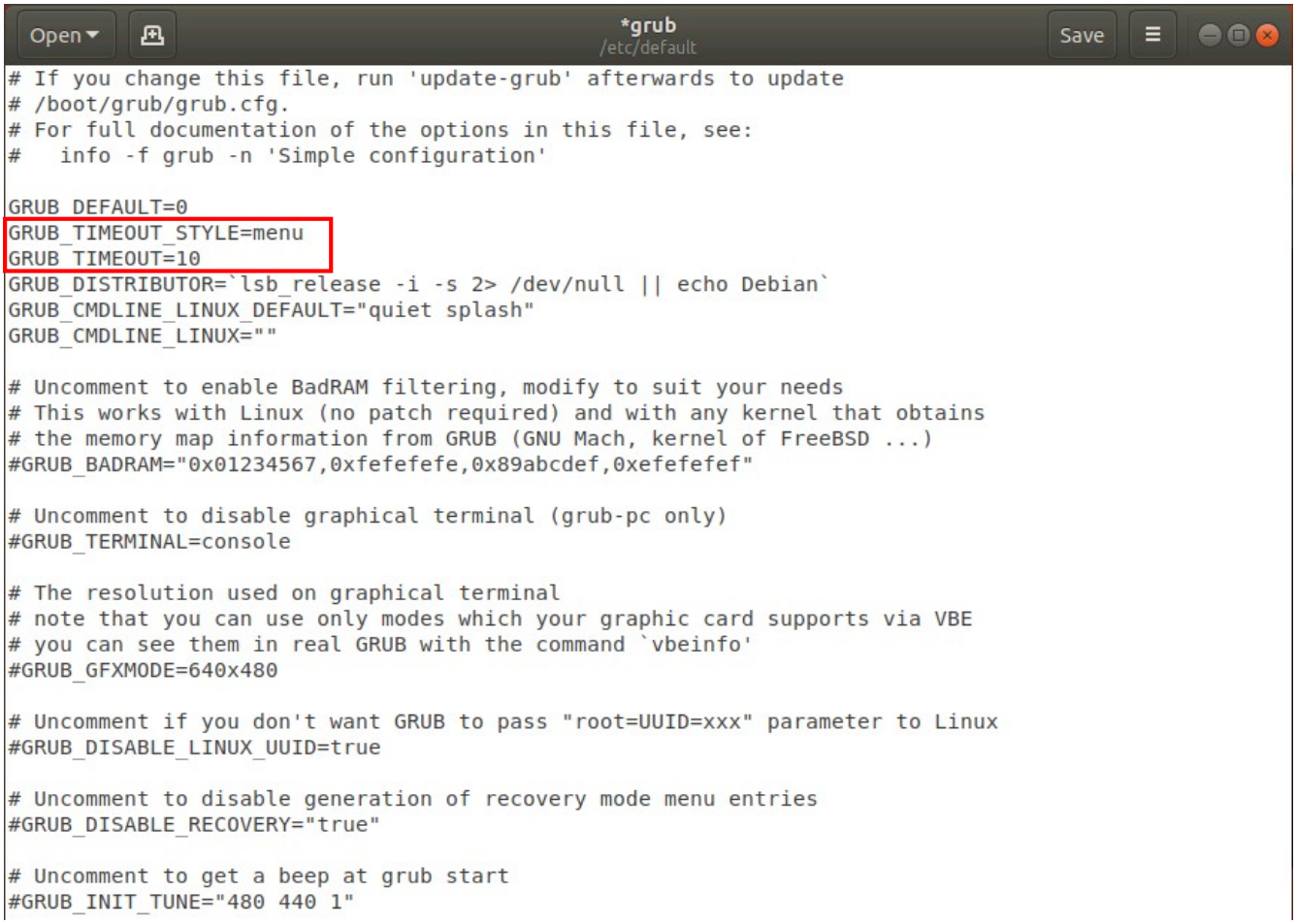
    sudo gedit /etc/default/grub

    After executing the command, the editor screen opens. Change the following items in the editor (Items in the red frame in the figure below)

    GRUB_TIMEOUT_STYLE=hidden → GRUB_TIMEOUT_STYLE=menu

    GRUB_TIMEOUT=0 → GRUB_TIMEOUT=10

    After changing the items, press the "Save" button at the top right of the editor to save the changes, then close the editor window with the X button.

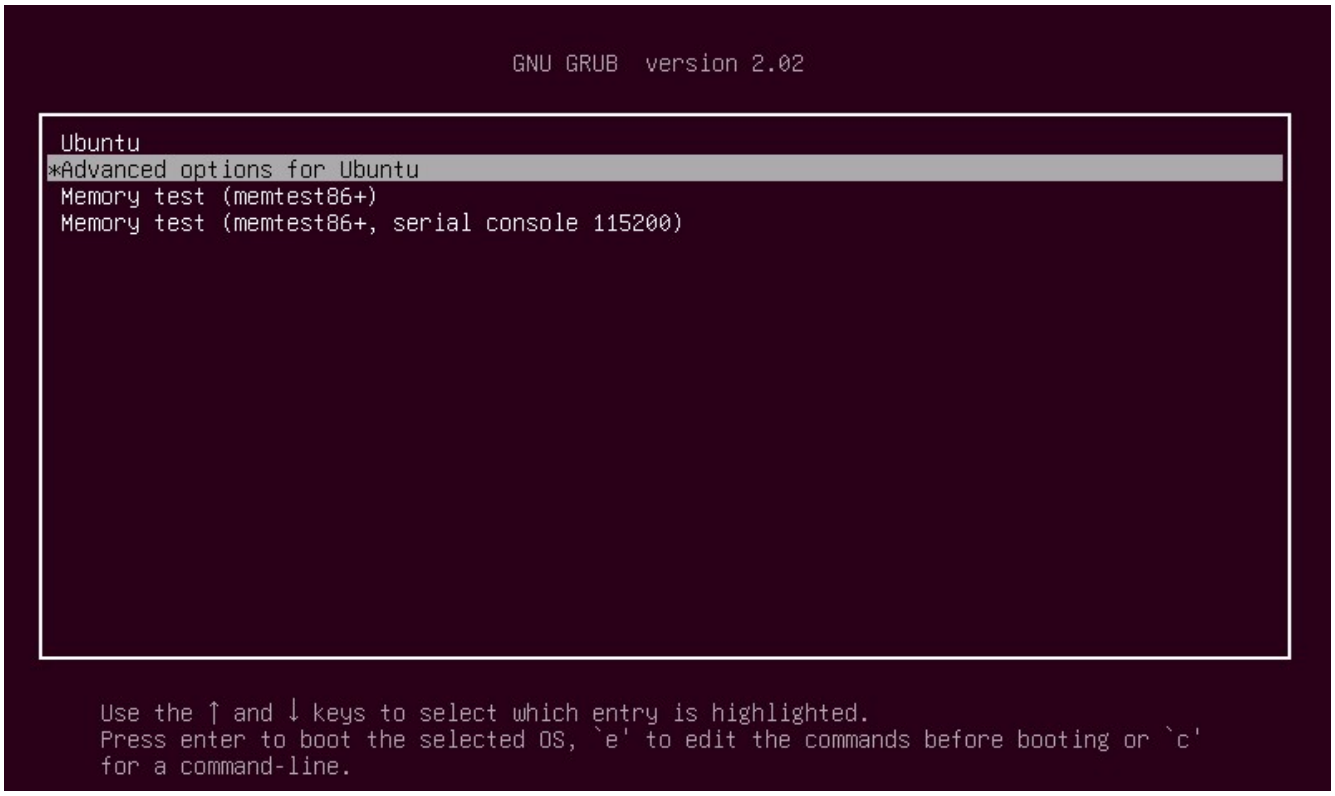


14. Execute the following command in the terminal.

    sudo update-grub

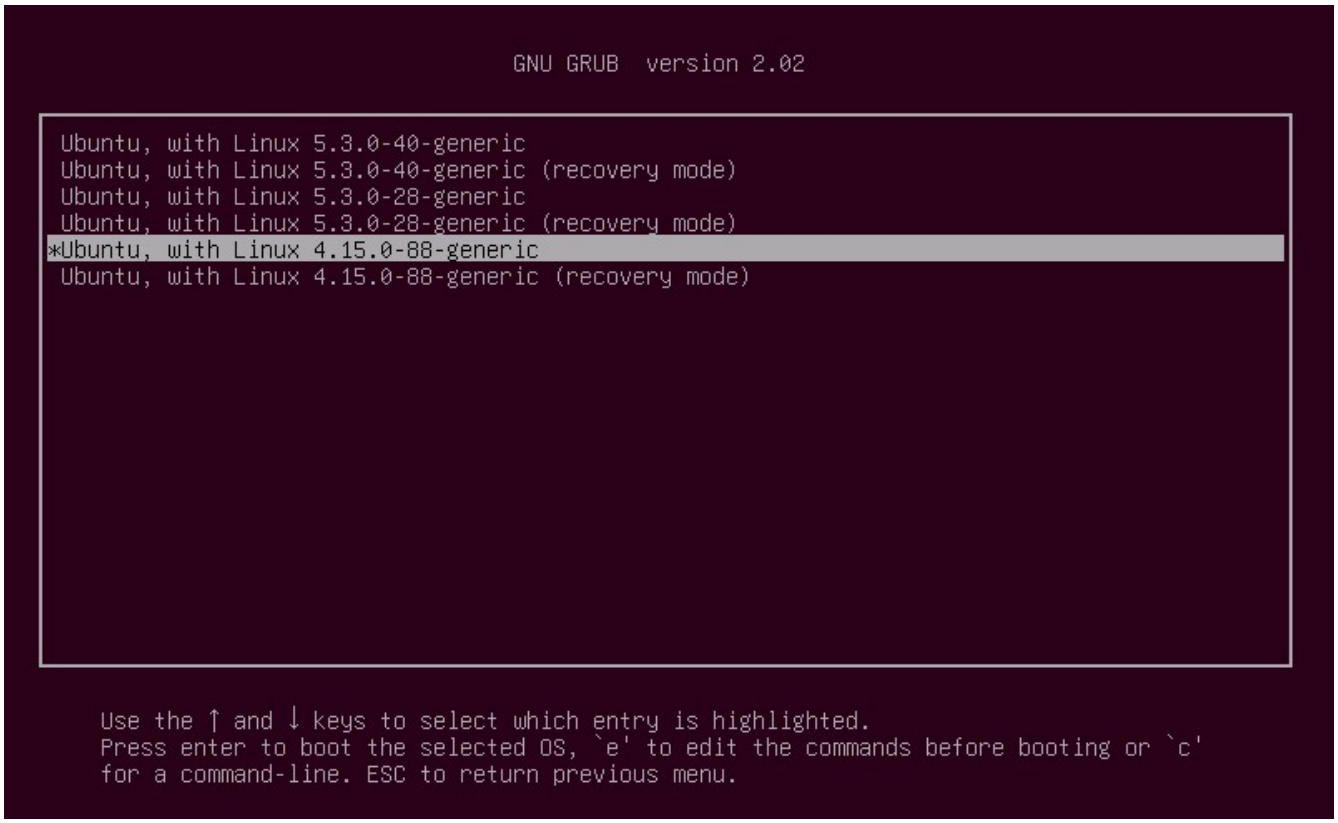
15. Restart your PC.

16. After restarting the PC, the boot selection menu is displayed. Select "Advanced options for Ubuntu" and press the Enter key.



17. An additional boot selection menu is displayed. Select "Ubuntu, with Linux 4.15.0-**-generic" and press the Enter key.

    The value of ** varies depending on the environment. If there is more than one "Ubuntu, with Linux 4.15.0-**-generic", select the one with the highest ** value.



18. After logging in to Ubuntu, start the terminal.

19. Execute the following command in the terminal.

    sudo dpkg -l | grep -e linux-headers

    After executing the command, a list of packages installed on the PC is displayed as shown below.

    (The following list is an example. The packages displayed depend on the environment)

    ii linux-headers-4.15.0-88 4.15.0-88.88

    ii linux-headers-4.15.0-88-generic 4.15.0-88.88

    ii linux-headers-5.0.0-23 5.0.0-23.24~18.04.1

    ii linux-headers-5.0.0-23-generic 5.0.0-23.24~18.04.1

    ii linux-headers-5.3.0-40 5.3.0-40.32~18.04.1

    ii linux-headers-5.3.0-40-generic 5.3.0-40.32~18.04.1

    ii linux-headers-generic

20. Execute the following command in the terminal to delete all the packages in the format of “linux-headers-5.x.x-xx” displayed in step 19.

    sudo apt purge [package name in linux-headers-5.x.x-xx format]

    - If there are multiple packages, list them with a space.

    - Those with the suffix -generic do not need to be specified.

    In the case of the display example in step 19, the command is as follows.

    sudo apt purge linux-headers-5.0.0-23 linux-headers-5.3.0-40

21. Execute the following command in the terminal.

    sudo dpkg -l | grep -e linux-image

    After executing the command, a list of packages installed on the PC is displayed as shown below.

    (The following list is an example. The packages displayed depend on the environment)

    ii linux-image-4.15.0-88-generic 4.15.0-88.88

    ii linux-image-5.0.0-23-generic 5.0.0-23.24~18.04.1

    ii linux-image-5.3.0-40-generic 5.3.0-40.32~18.04.1

    ii linux-image-generic

22. Execute the following command in the terminal to delete all the packages in the format of “linux-image-5.x.x-xx-generic” displayed in step 21.

    sudo apt purge [package name in linux-image-5.x.x-xx-generic format]

    - If there are multiple packages, list them with a space.

    In the case of the display example in step 21, the command is as follows.

    sudo apt purge linux-image-5.0.0-23-generic linux-image-5.3.0-40-generic

23. Execute the following command in the terminal.

    sudo dpkg -l | grep -e linux-modules

    After executing the command, a list of packages installed on the PC is displayed as shown below.

    (The following list is an example. The packages displayed depend on the environment.)

    ii linux-modules-4.15.0-88-generic 4.15.0-88.88

    ii linux-modules-5.0.0-23-generic 5.0.0-23.24~18.04.1

    ii linux-modules-5.3.0-40-generic 5.3.0-40.32~18.04.1

    ii linux-modules-extra-4.15.0-88-generic 4.15.0-88.88

    ii linux-modules-extra-5.0.0-23-generic 5.0.0-23.24~18.04.1

    ii linux-modules-extra-5.3.0-40-generic 5.3.0-40.32~18.04.1

24. Execute the following command in the terminal to delete all the packages in the format of "linux-modules-5.x.x-xx-generic" or "linux-modules-extra-5.x.x-xx-generic" displayed in step 23.

    sudo apt purge [package name in linux-modules-5.x.x-xx-generic format] [package name in linux-modules-extra-5.x.x-xx-generic format]

    - If there are multiple packages, list them with a space.

    In the case of the display example in step 23, the command is as follows.

    sudo apt purge linux-modules-5.0.0-23-generic linux-modules-5.3.0-40-generic linux-modules-extra-5.0.0-23-generic linux-modules-extra-5.3.0-40-generic

25. Restart your PC.

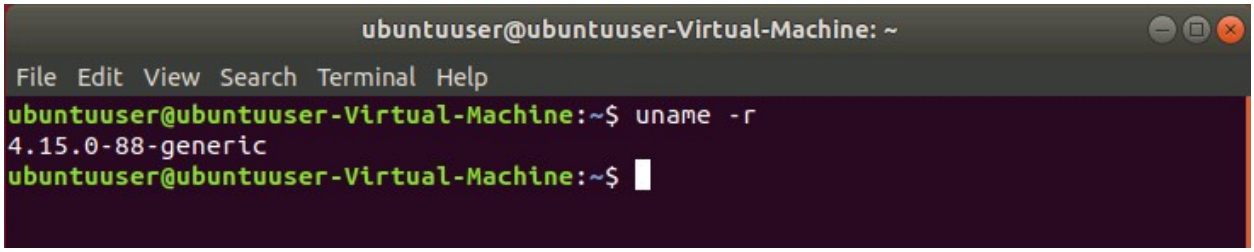
26. After logging in to Ubuntu, start the terminal.

27. Execute the following command in the terminal.

    uname –r

    If "4.xx.x-xx-generic" is displayed after executing the command, the kernel version downgrade has been completed successfully.

    If "5.xx.x-xx-generic" is displayed, check again whether packages in 5.x.x-xx format have been completely deleted in steps 19 to 24.



28. Execute the following command in the terminal.

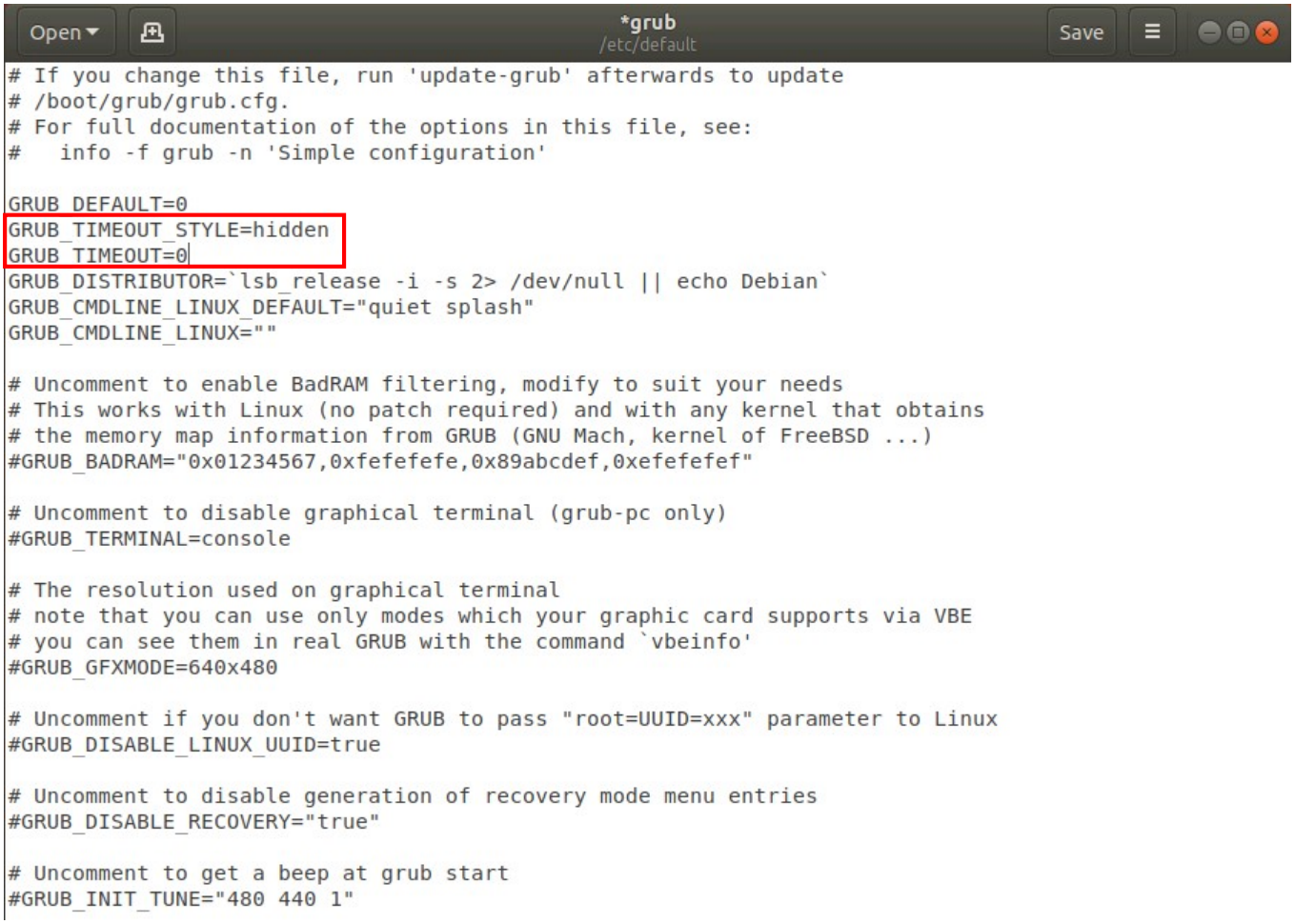
    sudo gedit /etc/default/grub

    After executing the command, the editor screen opens. Change the following items in the editor (Items in the red frame in the figure below)

    GRUB_TIMEOUT_STYLE=menu → GRUB_TIMEOUT_STYLE=hidden

    GRUB_TIMEOUT=10 → GRUB_TIMEOUT=0

    After changing the items, press the "Save" button at the top right of the editor to save the changes, then close the editor window with the X button.



29. Execute the following command in the terminal.

    sudo update-grub

30. The kernel version downgrade process is complete.

Installing the software for Blackmagic Decklink

If you are using a Blackmagic Decklink capture board, follow the steps below to install the Desktop Video software.

1. Download the latest Desktop Video software from the BlackMagic support site (https://www.blackmagicdesign.com/support/).

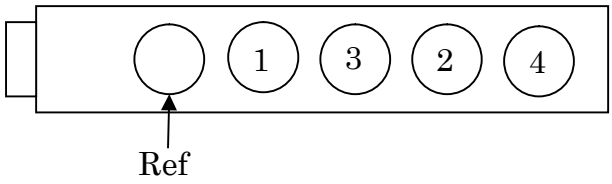
2. Execute the following commands in order from the Ubuntu terminal.

   *This command is an example when the version of the Desktop Video software downloaded in step 1 is 11.3. If the version of the Desktop Video software is different, replace the 11.3 part of the command accordingly.

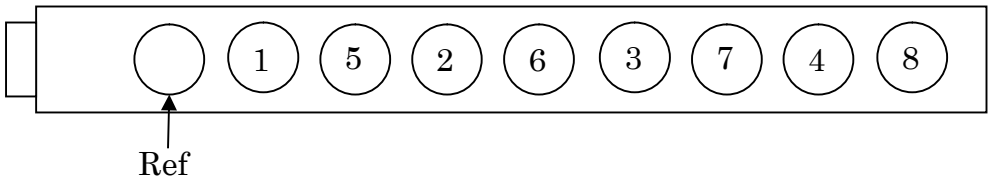
```
$ tar xvzf Blackmagic_Desktop_Video_Linux_11.3.tar.gz
$ cd Blackmagic_Desktop_Video_Linux_11.3/deb/x86_64
$ sudo dpkg -i *.deb
$ BlackmagicFirmwareUpdaterGui
```

Reference: BlackMagic board port number assignment

・DeckLink Duo 2



・DeckLink Quad 2



Installing the driver for Tally signal I / O board

If you are using a CONTEC DIO-3232B-PE board as a Tally signal input / output board, follow the steps below to install the driver software.

1. Go to CONTEC's support site and download the software with

   "Linux version digital input and output driver API-DIO (LNX) development environment (full set) Ver. *. **."

   https://www.contec.com/download/donwload-list/?itemid=df3d7b93-be43-423c-a4f5-70b778eaaa41#software

   * The software version number is entered in *. ** at the end of the software name.
   In this document, it is assumed that the software of Ver. 6.80 (file name lzf826diol_680F.tgz) has been downloaded.

2. Execute the following commands in order from the Ubuntu terminal.

   *This command is an example when the file name of the software downloaded in step 1 is lzf826diol_680F.tgz. If the software file name is different, replace the command file name as appropriate and execute.

   $ tar xvzf lzf826diol_680F.tgz

   $ cd contec/cdio

   $ make

   $ sudo make install

3. Execute the following commands in order from the terminal.

   $ cd config

   $ sudo ./config

   After executing the command, a menu screen is displayed on the terminal.

   If the board is recognized correctly, a device named DIO000 will be displayed on the menu as shown in the following image.

   If the device is not displayed, check that the board connection is correct.

```
guest@Gigabyte: ~/AK-SFC101/contec/cdio/config
File  Edit  View  Search  Terminal  Help
cp amd64/config ./
make[1]: Leaving directory '/home/guest/AK-SFC101/contec/cdio/config'
guest@Gigabyte:~/AK-SFC101/contec/cdio$ cd config/
guest@Gigabyte:~/AK-SFC101/contec/cdio/config$ sudo ./config
---------------------------------
CONTEC API-DIO(LNX) Configuration
---------------------------------
Message : Auto detecting devices.
.....................................................................
.....................................................
.
---------------------------------------------------------------------
 Devices list
---------------------------------------------------------------------
    DeviceName   Product Name       ID              IP/Master IP    Status

[1]:+ DIO000     DIO-3232B-PE       0

---------------------------------------------------------------------
[#]:Select device       [o]:List sort          [r]:Redetect devices list
[d]:Delete device       [a]:Add device manually
[s]:Save settings       [q]:Exit
Please select the device to set up.
Please input >
```

4. In the menu screen of step 3, enter the S key and Enter key of the keyboard in order.

   A save confirmation message will be displayed.

   Enter the Y key and Enter key on the keyboard in order to execute the save.

   After saving, enter the Q key and Enter key on the keyboard in order to exit the menu screen.

```
guest@Gigabyte: ~/AK-SFC101/contec/cdio/config
File  Edit  View  Search  Terminal  Help
[d]:Delete device       [a]:Add device manually
[s]:Save settings       [q]:Exit
Please select the device to set up.
Please input >s
*************************************************************************
Save OK?(y/n):y
Message : Setting file is 'contec_dio.conf'.
Message : Start script file is 'contec_dio_start.sh'.
Message : Stop script file is 'contec_dio_stop.sh'.
Confirm(y):y
.
```

5. Execute the following commands in order from the terminal.

   $ sudo cp -f contec_dio.conf /usr/local/etc/contec_dio.conf

   $ sudo cp cdio.ko /lib/modules/`uname -r`/kernel/drivers/char/

   $ sudo depmod

6. Execute the following command in the terminal.

   $ sudo gedit contec_dio_start.sh

   After executing the command, the editor screen opens. Make the following changes in the editor.

   Delete "cp -f contec_dio.conf /usr/local/etc/contec_dio.conf" line

   Change "insmod cdio.ko" line to "modprobe cdio"

   The screen after the change is as follows.

```
#! /bin/sh
modprobe cdio
major=`cat /proc/devices | awk '$2=="cdio" { print $1 }'`
mknod /dev/cdio000 c $major 0
cat /usr/local/etc/contec_dio.conf > /proc/contec_dio.conf
#end
```

   After changing the items, press the "Save" button at the top right of the editor to save the changes, then close the editor window with the X button.

7. Execute the following command in the terminal.

   $ sudo cp contec_dio_start.sh contec_dio_stop.sh /usr/local/bin

8. Execute the following command in the terminal.

   $ sudo gedit /etc/systemd/system/contec-cdio.service

   After executing the command, the editor screen opens. Add the following content in the editor.

   [Unit]

   Description=Contec CDIO

   Before=framing-ctrl.service

   [Service]

   ExecStart=/usr/local/bin/contec_dio_start.sh

   ExecStop=/usr/local/bin/contec_dio_stop.sh

   RemainAfterExit=yes

   Type=oneshot

   [Install]

WantedBy=multi-user.target

The screen after adding the content is as follows.

```
[Unit]
Description=Contec CDIO
Before=framing-ctrl.service

[Service]
ExecStart=/usr/local/bin/contec_dio_start.sh
ExecStop=/usr/local/bin/contec_dio_stop.sh
RemainAfterExit=yes
Type=oneshot

[Install]
WantedBy=multi-user.target
```

After changing the items, press the "Save" button at the top right of the editor to save the changes, then close the editor window with the X button.

9. Execute the following commands in order from the terminal.

   $ sudo systemctl daemon-reload

   $ sudo systemctl enable contec-cdio.service

   $ sudo systemctl start contec-cdio.service

10. The driver software installation process is complete.

Installation of the Software

Install this software according to the operation described below.

Downloading the Software

1. Download this software from our website (http://panasonic.biz/sav “Support & Download”).
2. Unzip the downloaded file to a suitable location.

Installing the Software

1. Open the unzipped folder of this software and double-click the FCSInstaller icon to start the installer. Click the [Next] button.

* The installer may not be able to be executed due to execution permission problems.

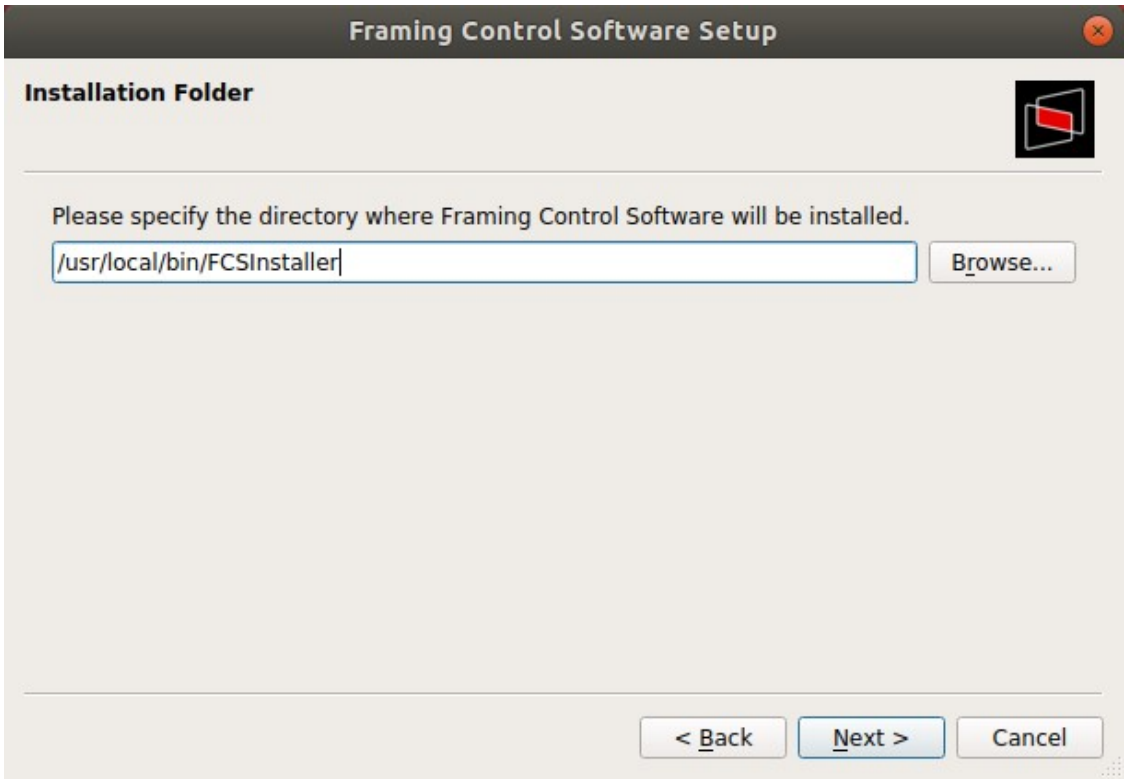
In that case, grant execution authority according to the following procedure.

1. Right-click on the FCSInstaller icon and select Properties
2. Select the Permissions tag
3. Check the Execute checkbox

Or execute the following command in the terminal.

$ chmod + x FCSInstaller

2. The installation folder setting screen for this software will be displayed. Click [Next].

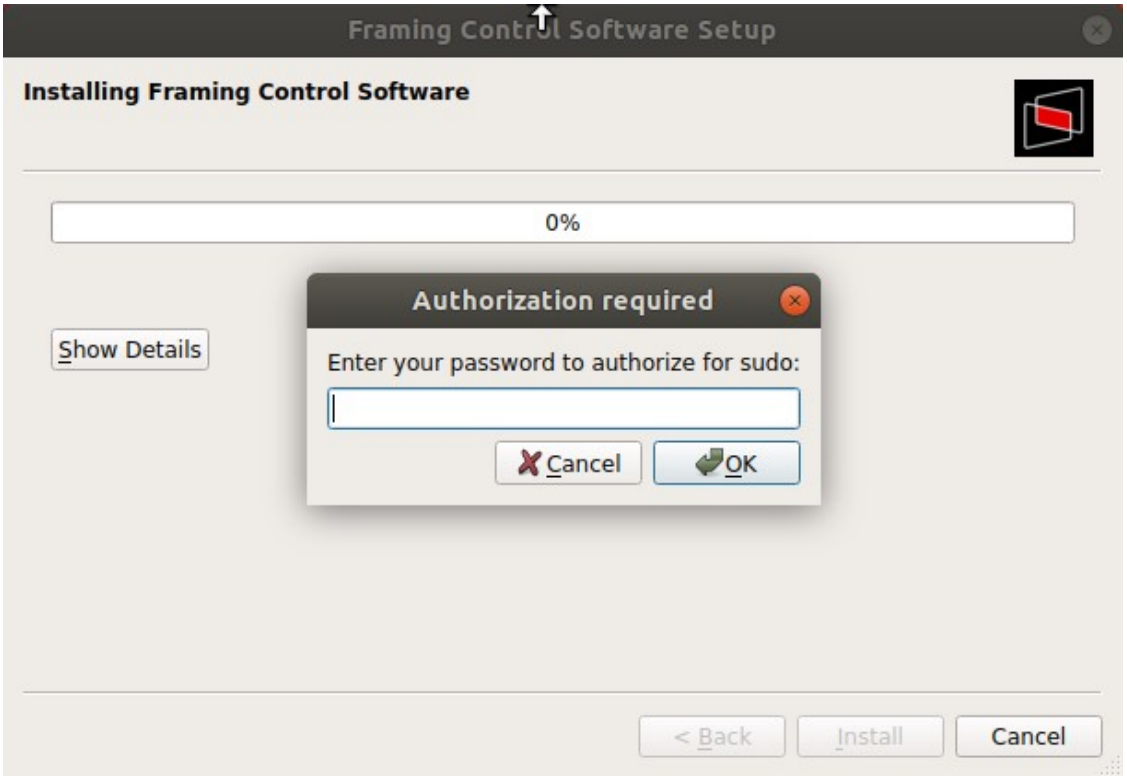


3. The license agreement for this software will be displayed.
Check the contents, and if there are no problems, select “I accept the license” and click [Next].

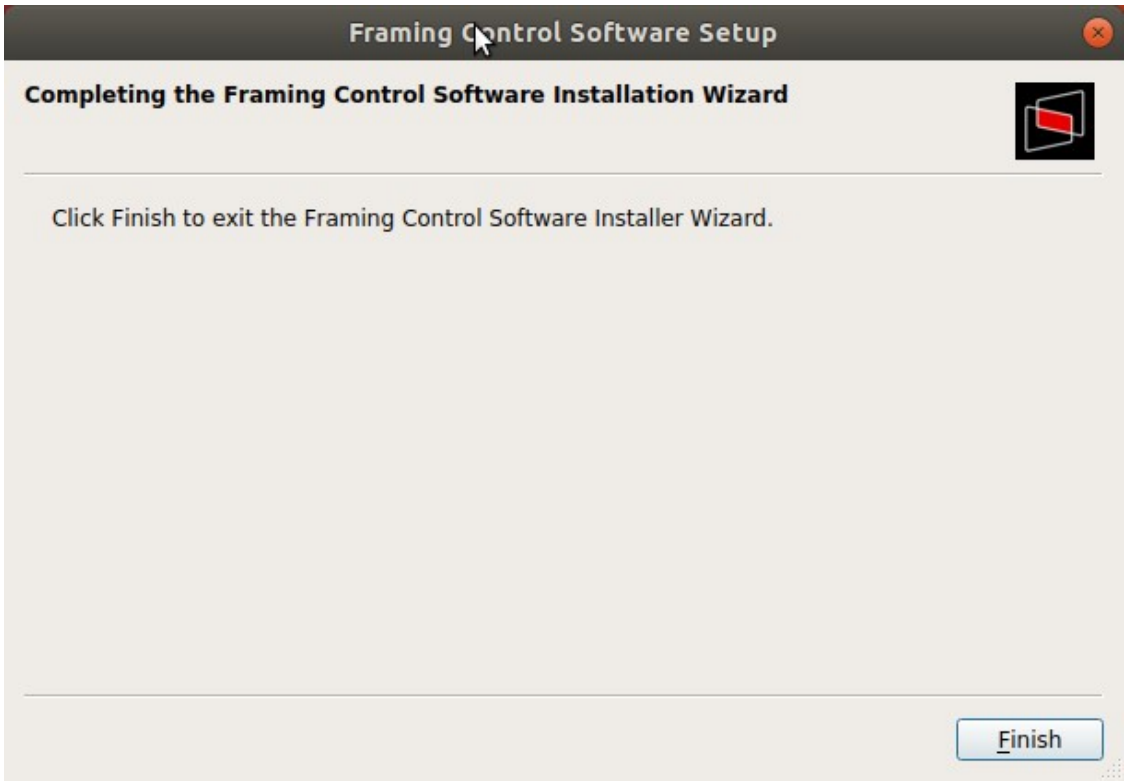
4. When the screen to start installation is displayed, click [Install].

5. The following window will be displayed.

   Enter the Ubuntu administrator account password to start the installation



6. When installation is complete, the following screen will be displayed.
   Click the [Finish] button to close the dialog.



7. This completes the software installation procedure.