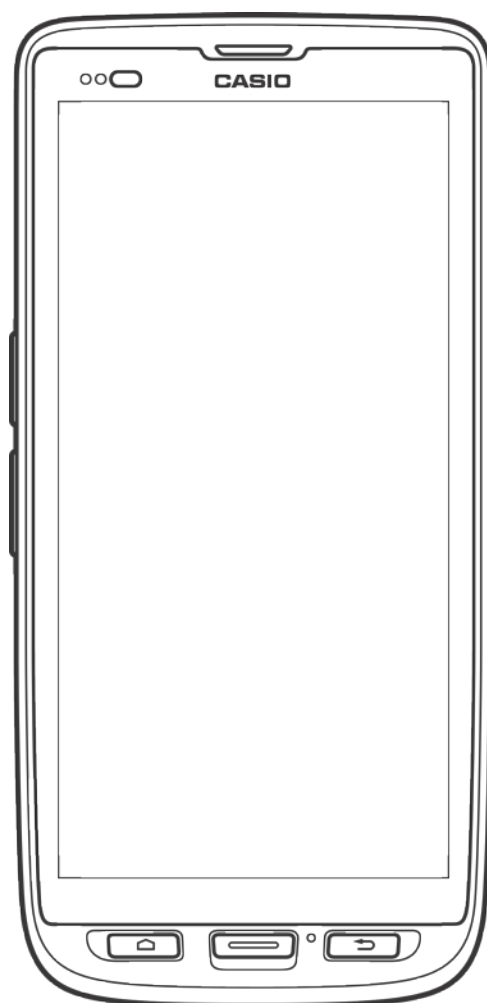


## ET-L10 Series

# Quick Start Guide

This document is a guide book for ET-L10 application developers.



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# 1. Overview

The ET-L10 is the device that is suitable for light work which is located between the conventional rugged handy terminal and a smart phone. This document is a development guidebook written for the ET-L10 application developers.

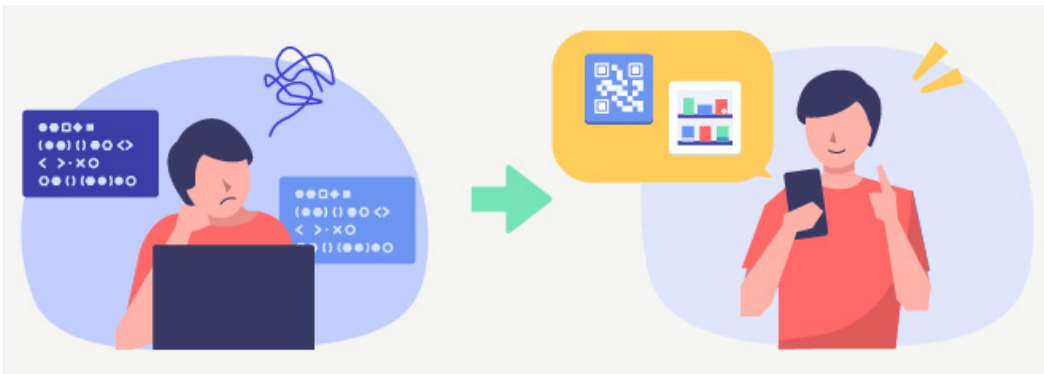
The ET-L10 was developed as the device for customers who want to use smartphones for work but are not satisfied with smartphones.

Conventional rugged handy terminal required specialized knowledge to control barcode scanner, but the ET-L10 does not need it.

From the getting date, it is set to be able to read all barcodes with standard Android application. Customers who want to make advanced settings for the barcode scanner can use the setting tool instead of modifying their application.

Of course, they can control the barcode scanner also from the application by issuing scanner intents.

Refer to the "Barcode scanner control manual" for details on the setting tool and the intent for controlling the barcode scanner from the application.



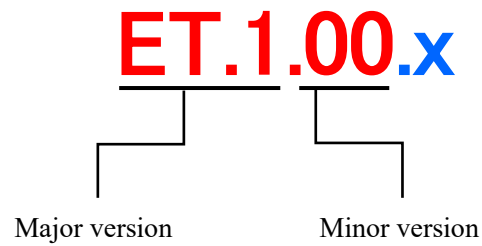
## 1.1 Structure

The following figure shows the structure of this kit. The file name XXXXXXXXXXXX indicates the version.

Folder / File	Description
/MANUAL	This folder contains manuals.
QuickStartGuide.pdf	A guidebook for developers to read first. Describes the application development requirements and development environment.
HardwareManual.pdf	This is a manual for the hardware. Describes a note on handling and operation of the device.
BarcodeScannerControlManual.pdf	This is a manual for the barcode scanner. Describes how to control from the setting tool and how to create a control application.
KittingManual.pdf	This is a manual for the "Kitting". Describes the kitting procedure for making the device ready for business use.
Android 9	Android 9
SoftwareManual.pdf	This is a manual for the installed software in Android 9. Describes the basic specifications of the software.
Android 11	Android 11
SoftwareManual.pdf	This is a manual for the installed software in Android 11. Describes the basic specifications of the software.
/SOFTWARE	This folder contains softwares
/DeviceControl	Device Control folder
OSUpdateServiceXXXXXXXXXX.apk	APK file of OSUpdateService.
/Samples	Samples folder
OSUpdateSample.zip	Sample code for using the OSUpdateService.
SymbolScan.zip	Sample code for controlling the barcode scanner.
Tools	Tools folder
OSWriterXXXXXXXXXX.apk	An application to write the customer-verified version of the OS image.

## 1.2 Version

The version number of this development kit consists of a combination of major version and minor version, as shown below.



The major number represents the version of Device (i.e. ET-L10). If updates manuals etc., its minor version number is increased.

## 1.3 Notes

Notes for using this development kit are as follows.

There is a dependency between the version of Android Studio and the version of the Basic Development Kit. For details, refer to "3.1 Recommended environment (p.6)".

Please contact the distributor to get the latest version of development Kit.

## 2. Development requirement

### 2.1 Required system

#### [Windows]

- Microsoft® Windows® 8/10 (64-bit)
- 3 GB RAM minimum, 8 GB RAM recommended. plus 1 GB for the Android Emulator
- 2 GB of available disk space minimum
- 4 GB Recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution
- For accelerated emulator: Intel® processor with support for Intel® VT-x, Intel® EM64T (Intel® 64), and Execute Disable (XD) Bit functionality

#### [Mac]

- Mac® OS X® 10.10 (Yosemite) or higher, up to 10.13 (macOS Sierra)
- 3 GB RAM minimum, 8 GB RAM recommended; plus 1 GB for the Android Emulator
- 2 GB of available disk space minimum
- 4 GB Recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution

#### [Linux]

- GNOME or KDE desktop
- Tested on Ubuntu® 18.04 LTS, Trusty Tahr (64-bit distribution capable of running 32-bit applications)
- 64-bit distribution capable of running 32-bit applications
- GNU C Library (glibc) 2.19 or later
- 3 GB RAM minimum, 8 GB RAM recommended; plus 1 GB for the Android Emulator
- 2 GB of available disk space minimum
- 4 GB Recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution
- For accelerated emulator: Intel® processor with support for Intel® VT-x, Intel® EM64T (Intel® 64), and Execute Disable (XD) Bit functionality, or AMD processor with support for AMD Virtualization™ (AMD-V™)

#### Note!

The explanation after the next chapter is all for Windows (64bit). If using Mac or Linux as a development environment, responsible for building the environment at own risk.

If using Windows (32bit), make sure Android Studio is working properly on the PC before install this BDK. The final version of Android Studio for Windows (32bit) is 3.6.

## 3. Development environment

### 3.1 Recommended environment

To develop the application for the ET-L10, it needs the development environment as follows:

Development language	Development platform (Recommended)
Java	Android Studio 3.0 or above Android SDK (API level 28~30) Google USB driver JDK8 or above (Bundled with Android Studio)

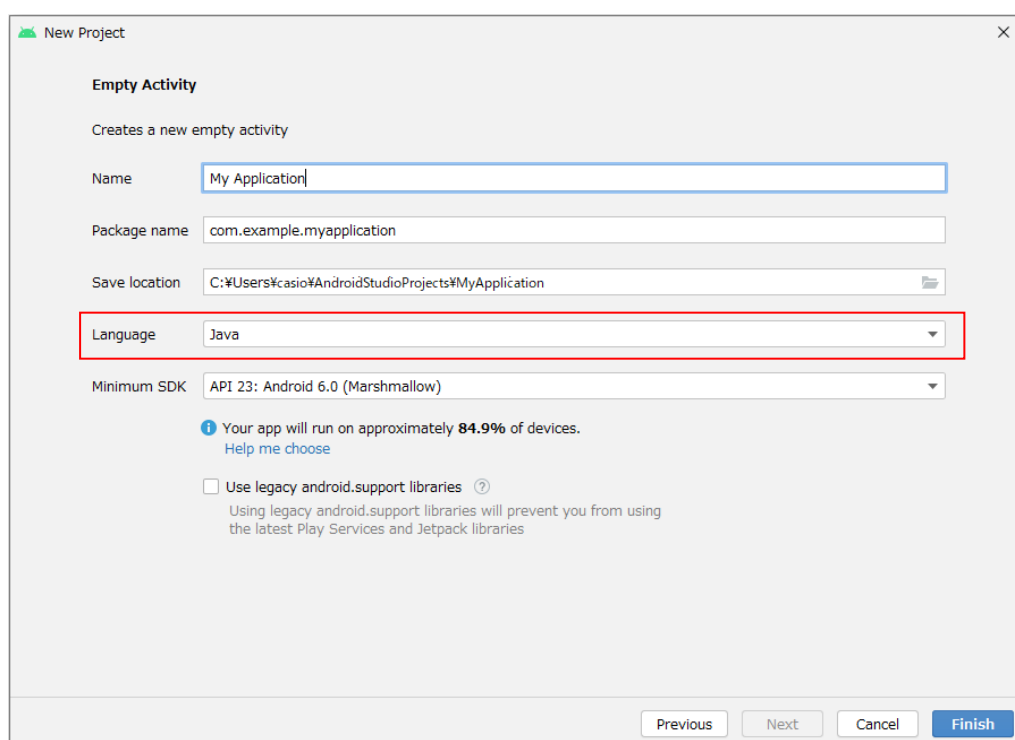
The Basic Development kit has been confirmed to the following Android Studio combination. It is recommended to use the following Android Studio combination.

If there is something wrong with work, try with the confirmed below combination. All released versions of Android Studio are available at the following web site.

<https://developer.android.com/studio/archive>

Software	Version
Android Studio	2020.3.1 Patch 4
Gradle version (Android Studio)	7.0.2
Android Plugin Version (Android Studio)	7.0.4
Development Kit	ET.1.00.X (X means the version)

The development language for Android applications on the ET-L10 is Java. Select Java in case of creating a new project.





To use the sample program in Android 11 device, the following description is required in the gradle.properties of Android Studio.

```
android.useAndroidX=true  
android.enableJetifier=true
```

in gradle.properties of Android Studio.  
If there is no description, please add it.

## **3.2 Construction steps**

The followings are the basic steps to construct the development environment.

Due to version upgrade of Android Studio, environment may not be constructed by the following procedure. In that case, refer to the procedure described on Google's website etc. and construct the environment.

### **(1) Android Studio**

Download and Install the Android Studio to the PC.

About the version of the Android Studio, refer to the "3.1 Recommended environment (p.6)".

Refer to the "3.2.1 Android Studio (p.8)" for the construction method.

### **(2) Android SDK and USB driver**

Download the Android SDK and USB driver from Google via Android Studio.

The Android SDK will be installed automatically after downloading.

The USB driver is installed when the device is connected to the PC for the first time.

About the version of the Android SDK, refer to the "3.1 Recommended environment (p.6)".

Refer to the "3.2.2 Android SDK and USB driver (p.12)" for the construction method.

### **(3) Application development**

Develop an application with the installed Android Studio.

To debug an application, connect the PC and the ET-L10 via the ADB (Android Debug Bridge) interface.

Refer to the "3.2.3 Application development (p.15)" for development.

### 3.2.1 Android Studio

Android Studio can be downloaded from the following site of Google.

<https://developer.android.com/studio/>

Agree to the dialog shown below and start downloading.

Executing the downloaded file, follow the instructions to proceed the installation.

12.1 To the maximum extent permitted by law, you agree to defend, indemnify and hold harmless Google, its affiliates and their respective directors, officers, employees and agents from and against any and all claims, actions, suits or proceedings, as well as any and all losses, liabilities, damages, costs and expenses (including reasonable attorneys fees) arising out of or accruing from (a) your use of the SDK, (b) any application you develop on the SDK that infringes any copyright, trademark, trade secret, trade dress, patent or other intellectual property right of any person or defames any person or violates their rights of publicity or privacy, and (c) any non-compliance by you with the License Agreement.

**13. Changes to the License Agreement**

13.1 Google may make changes to the License Agreement as it distributes new versions of the SDK. When these changes are made, Google will make a new version of the License Agreement available on the website where the SDK is made available.

**14. General Legal Terms**

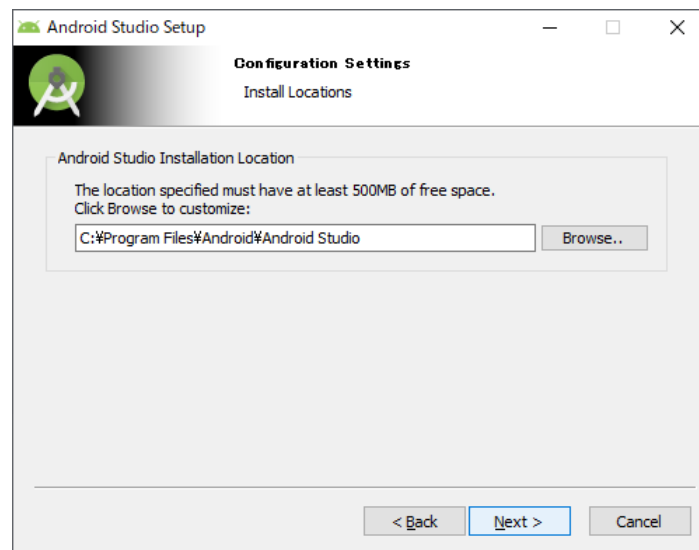
14.1 The License Agreement constitutes the whole legal agreement between you and Google and governs your use of the SDK (excluding any services which Google may provide to you under a separate written agreement), and completely replaces any prior agreements between you and Google in relation to the SDK. 14.2 You agree that if Google does not exercise or enforce any legal right or remedy which is contained in the License Agreement (or which Google has the benefit of under any applicable law), this will not be taken to be a formal waiver of Google's rights and that those rights or remedies will still be available to Google. 14.3 If any court of law, having the jurisdiction to decide on this matter, rules that any provision of the License Agreement is invalid, then that provision will be removed from the License Agreement without affecting the rest of the License Agreement. The remaining provisions of the License Agreement will continue to be valid and enforceable. 14.4 You acknowledge and agree that each member of the group of companies of which Google is the parent shall be third party beneficiaries to the License Agreement and that such other companies shall be entitled to directly enforce, and rely upon, any provision of the License Agreement that confers a benefit on (or rights in favor of) them. Other than this, no other person or company shall be third party beneficiaries to the License Agreement. 14.5 EXPORT RESTRICTIONS. THE SDK IS SUBJECT TO UNITED STATES EXPORT LAWS AND REGULATIONS. YOU MUST COMPLY WITH ALL DOMESTIC AND INTERNATIONAL EXPORT LAWS AND REGULATIONS THAT APPLY TO THE SDK. THESE LAWS INCLUDE RESTRICTIONS ON DESTINATIONS, END USERS AND END USE. 14.6 The rights granted in the License Agreement may not be assigned or transferred by either you or Google without the prior written approval of the other party. Neither you nor Google shall be permitted to delegate their responsibilities or obligations under the License Agreement without the prior written approval of the other party. 14.7 The License Agreement, and your relationship with Google under the License Agreement, shall be governed by the laws of the State of California without regard to its conflict of laws provisions. You and Google agree to submit to the exclusive jurisdiction of the courts located within the county of Santa Clara, California to resolve any legal matter arising from the License Agreement. Notwithstanding this, you agree that Google shall still be allowed to apply for injunctive remedies (or an equivalent type of urgent legal relief) in any jurisdiction. July 27, 2021

☒ I have read and agree with the above terms and conditions

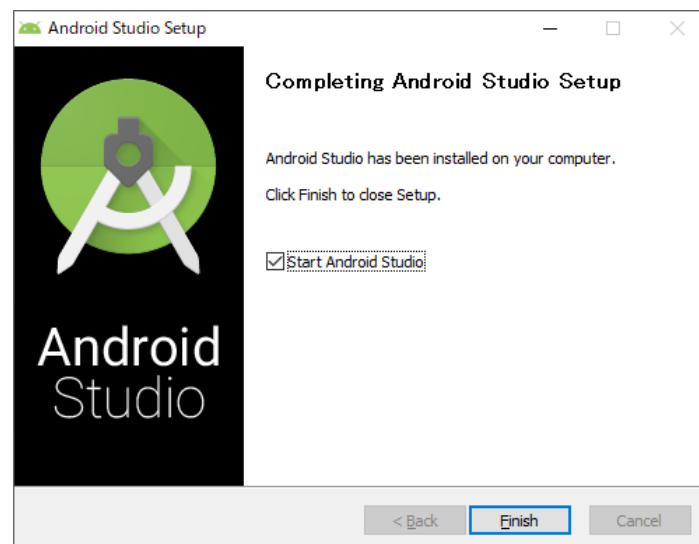
**Download Android Studio 2020.3.1 for Windows**

android-studio-2020.3.1.23-windows.exe

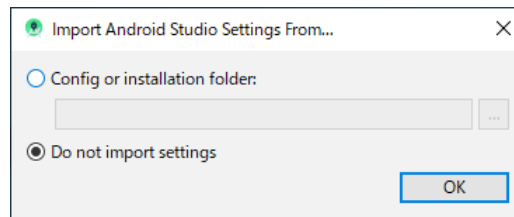
Prompted to specify the installation destination. Change it if necessary.



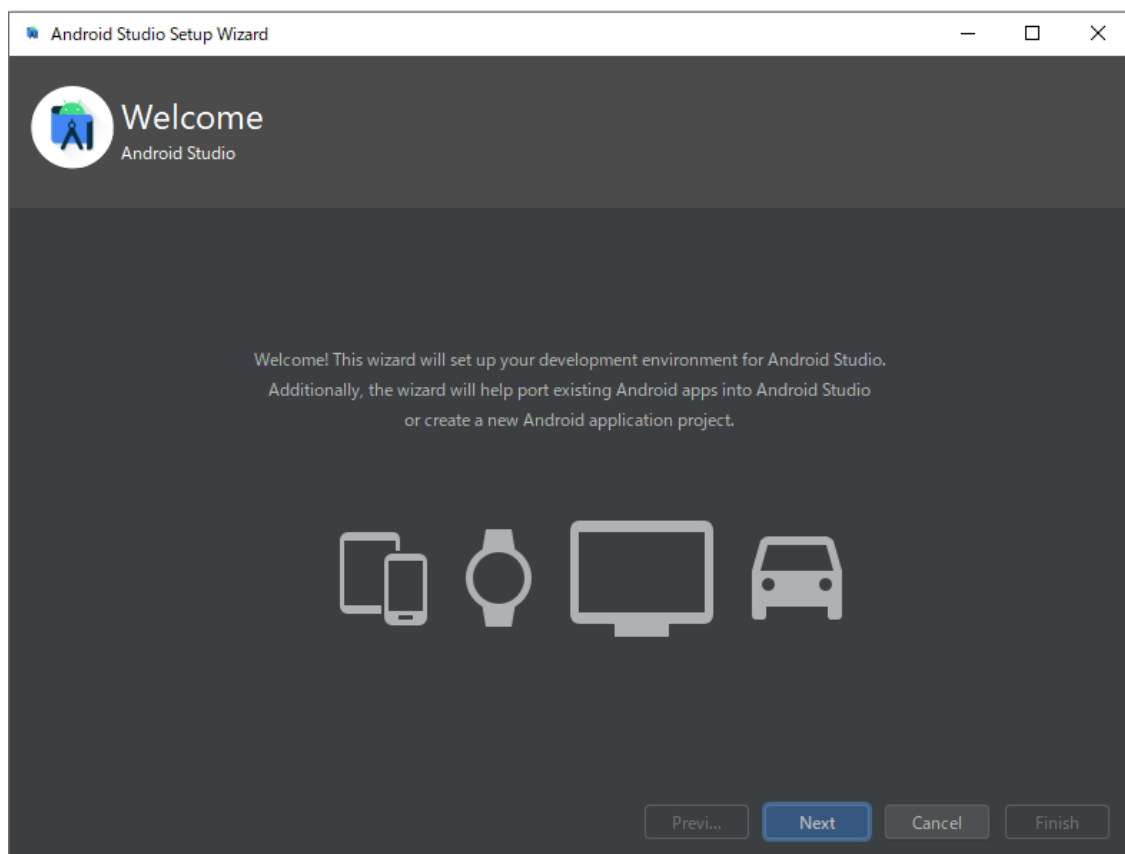
When the below dialog is displayed, installation of Android Studio is completed.



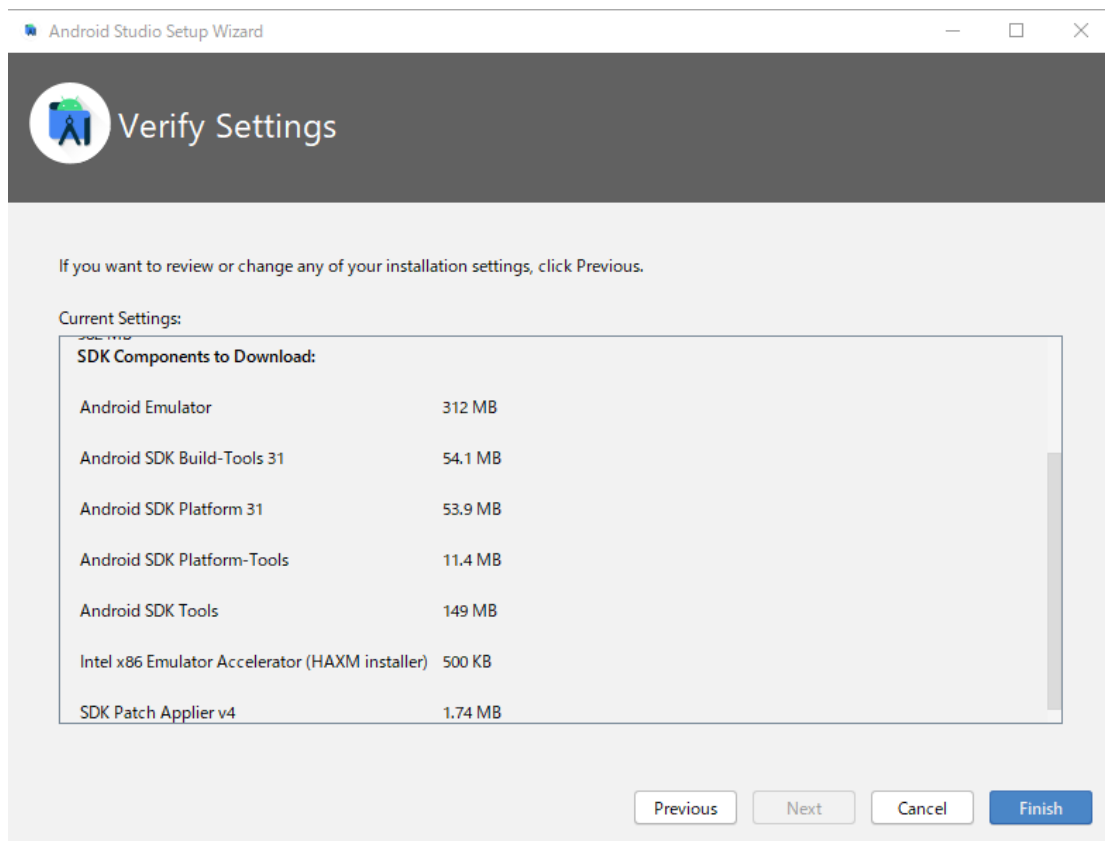
When start the installed Android Studio first time, select whether to use the previous setting or not. If do not want to use the previous setting, select "Do not import settings".



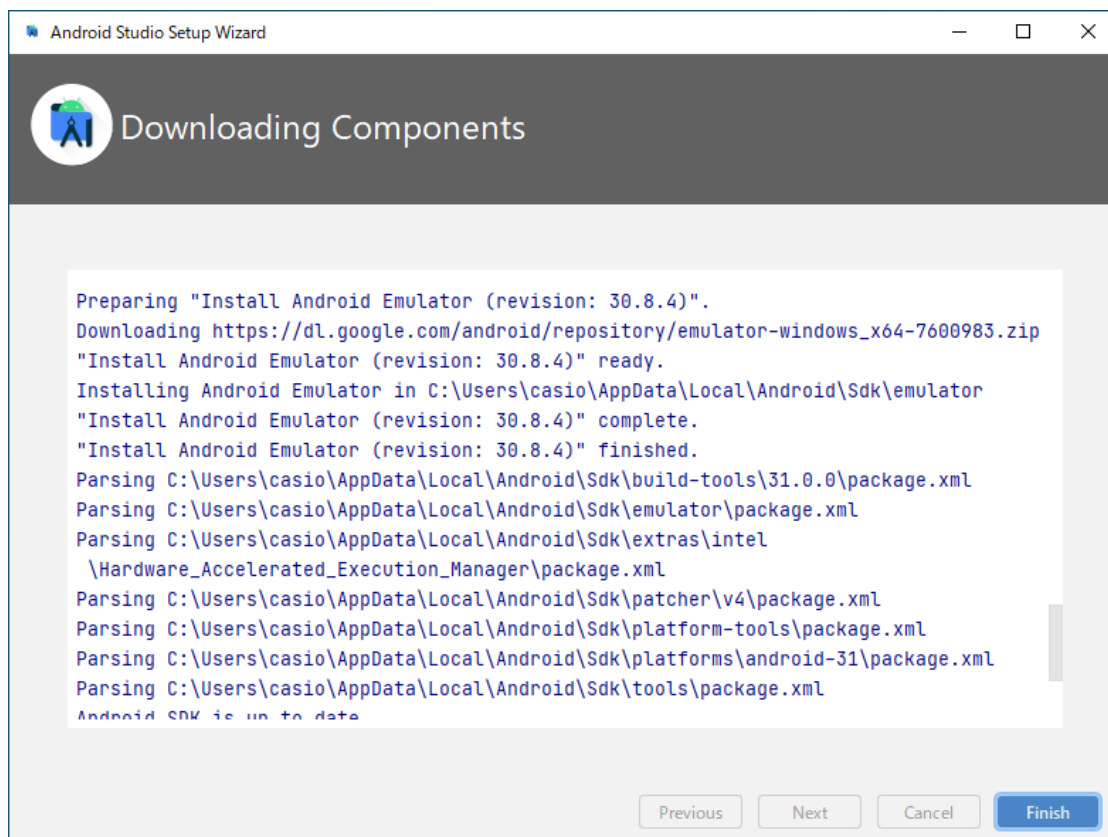
The Setup Wizard will start, so follow the instructions.



If do not have any problem after confirming "Finish".

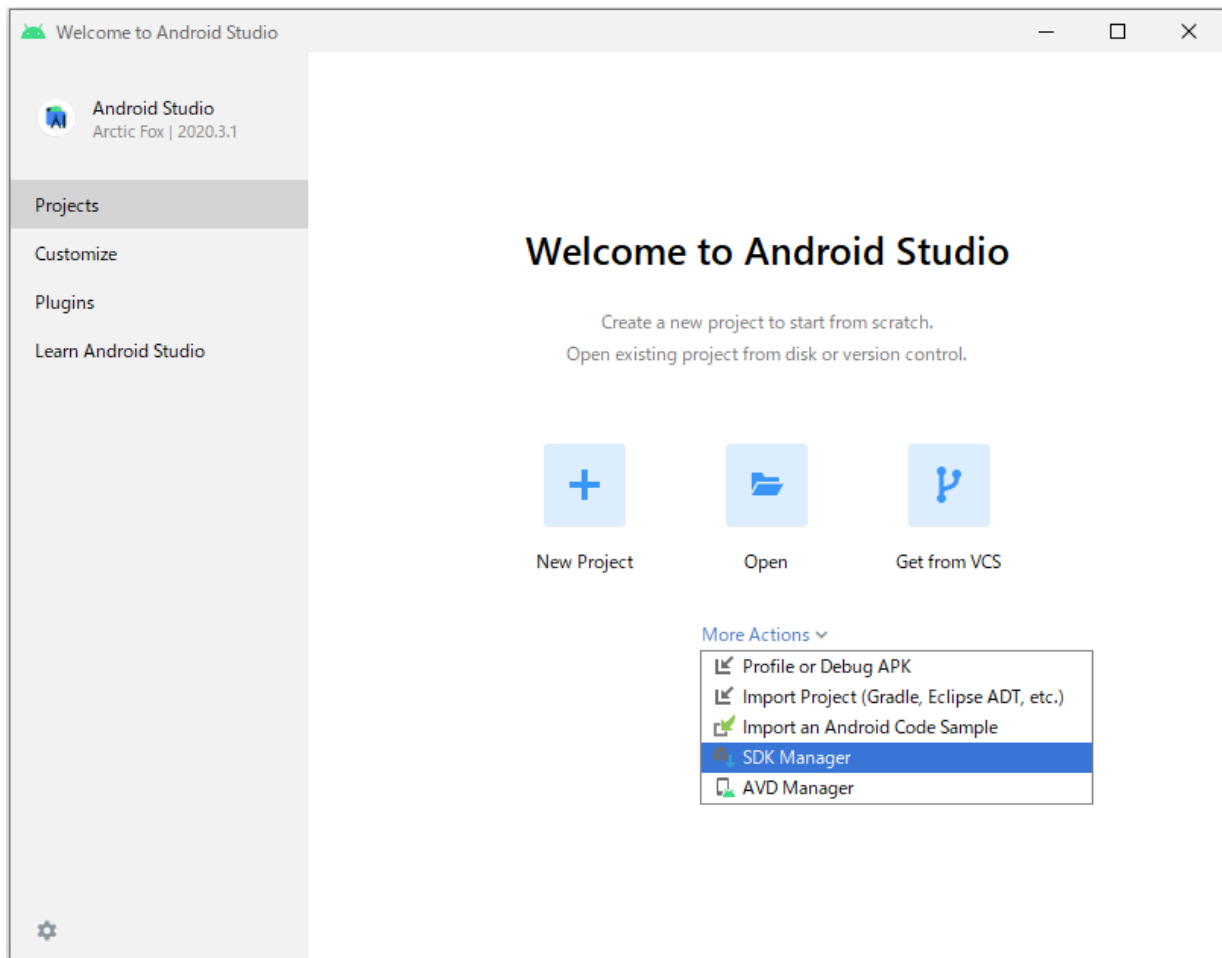


Downloading Components begins. When completed, Android Studio will start up.

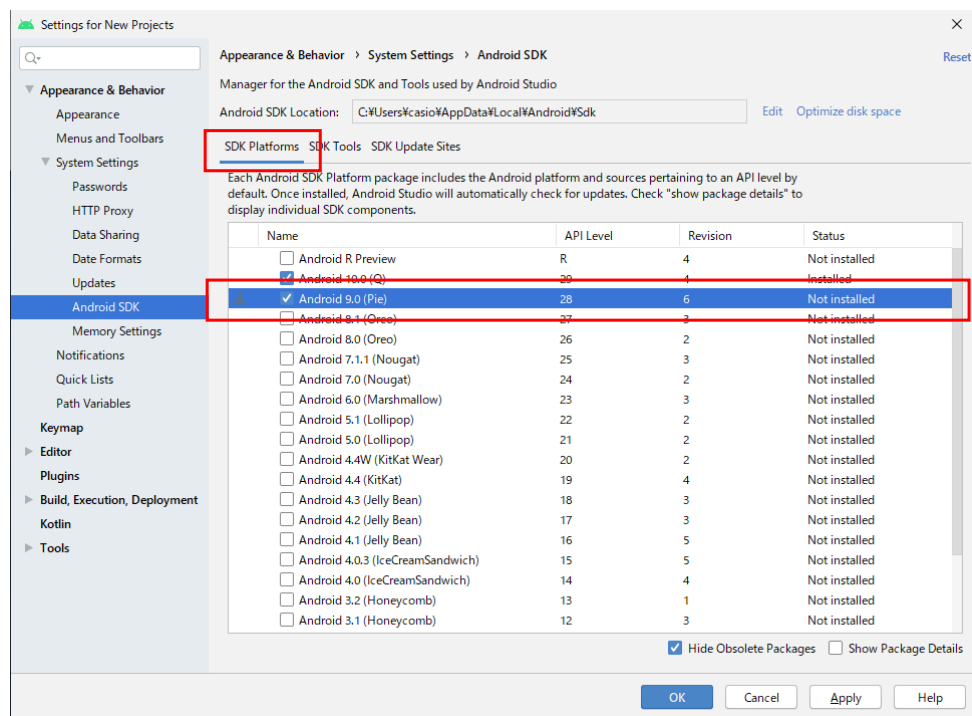


### 3.2.2 Android SDK and USB driver

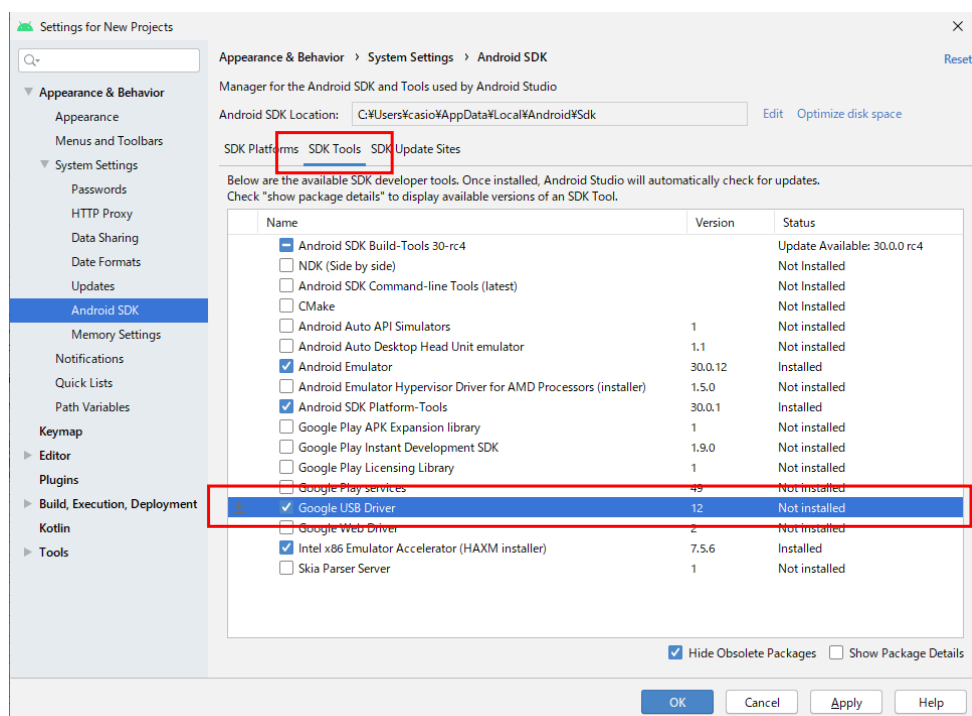
Launch the Android Studio, and chose "SDK Manager" from Configure tab.



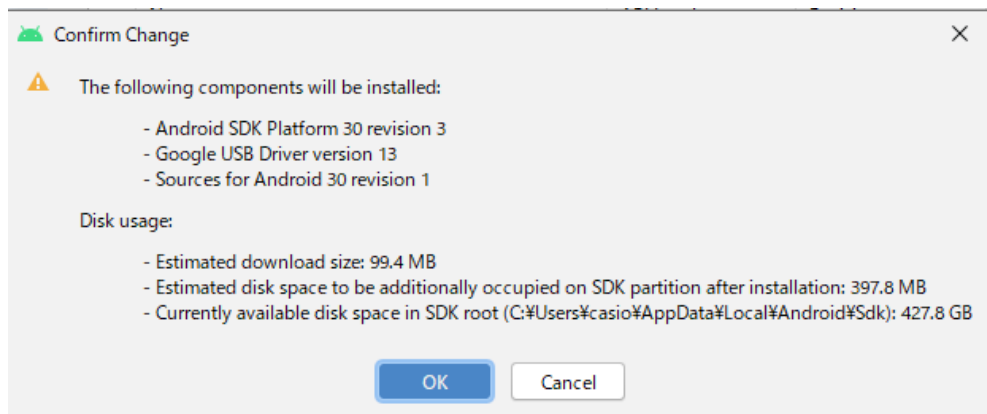
Select "SDK Platform" tab, then check "Android 11 (API Level 30)".



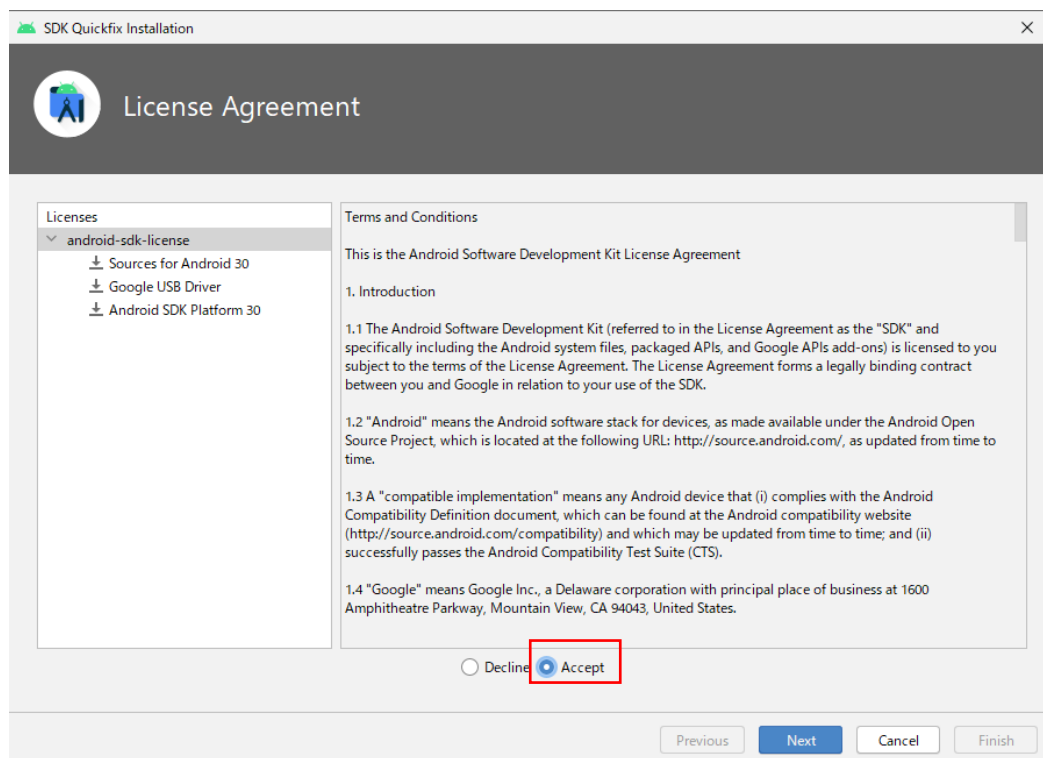
Next, select "SDK Tools" tab and check "Google USB Driver" and press [OK].



The following dialog will be displayed, press "OK".



Agree to the "License Agreement", then press "OK" to start installation.



The USB driver is stored in "extras\google\usb\_driver" under "Android SDK Installation Location".

e.g.) C:\Users\xxx\AppData\Local\Android\Sdk\extras\google\usb\_driver  
(xxx: username of computer)



### 3.2.3 Application development

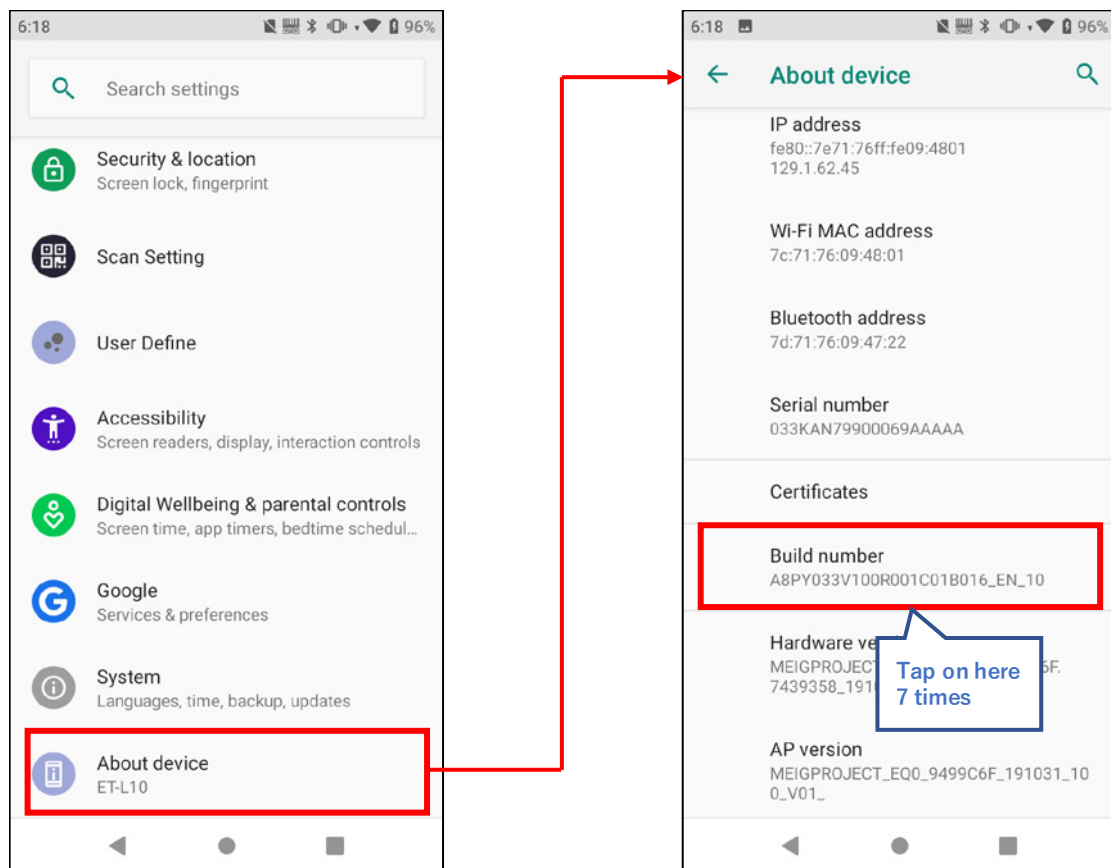
To develop / debug the applications with the ET-L10, the following preparation is necessary.

- (1) Enable USB debugging (ADB connection) of the ET-L10.
- (2) Install the ET-L10 USB driver to the PC.

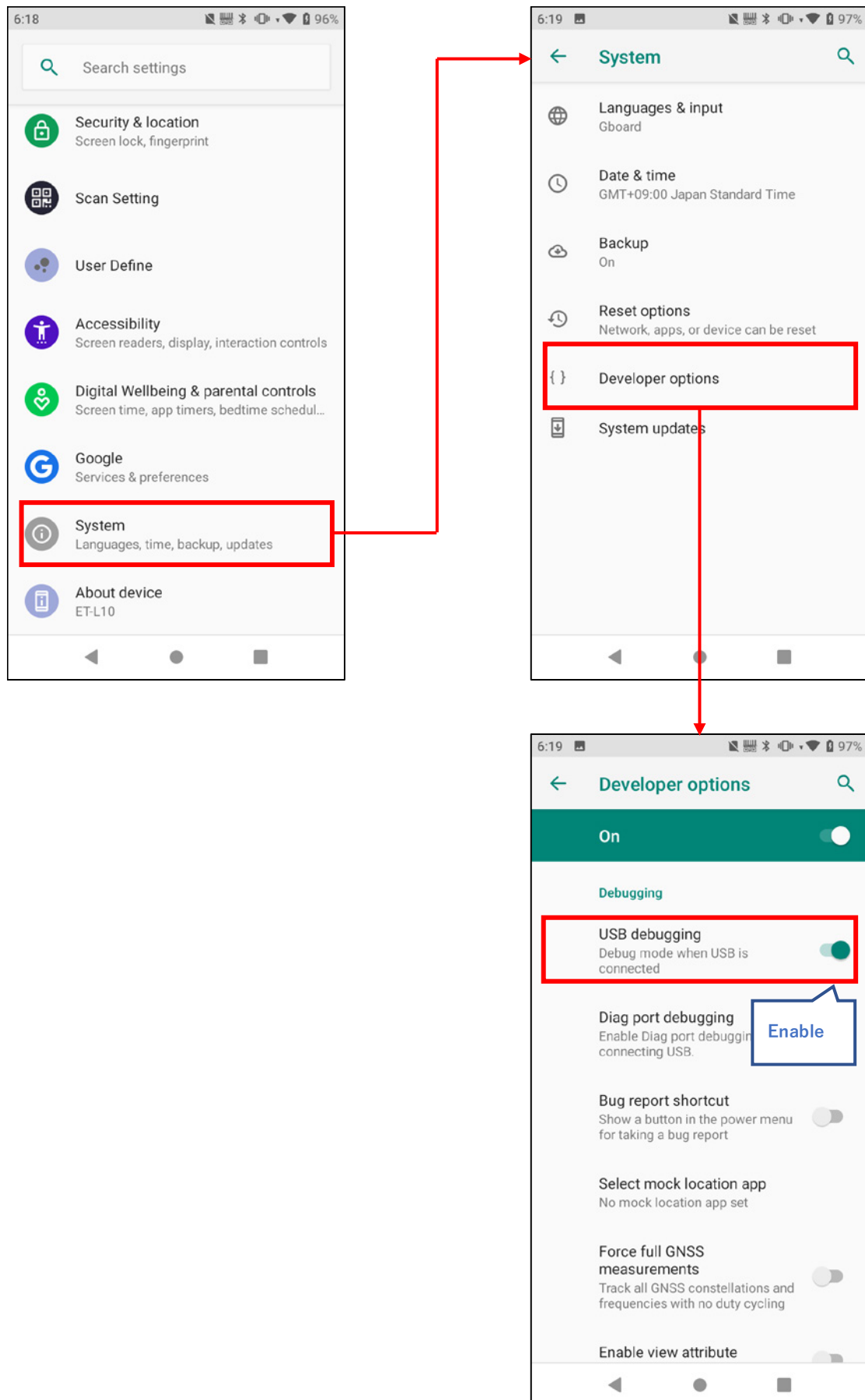
#### Enabling USB debugging

Since USB debugging is a function for developers, need to activate the Developer options by the following procedure first.

Open [Settings] -> [About device] and tap "Build number" on the bottom line seven times, [Developer options] is added above [Settings] -> [System] .



Open [Settings] -> [System] -> [Developer options] (※ For Android11, [Settings] → [System] → [Advanced] → [Developer options]) and enable "USB debugging".



## Installing USB driver

Install the USB driver for connecting the ET-L10 and PC with the ADB (Android Debug Bridge) protocol.

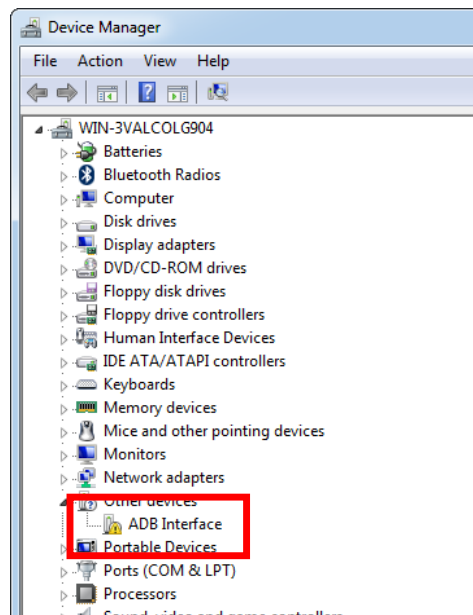
Files necessary for installation are downloaded as described in "3.2.2 Android SDK and USB driver (p.12)".

Skip from this procedure to "Debugging on the ET-L10 (p.21)" in case of recognizing the ET-L10 as ADB on the PC.

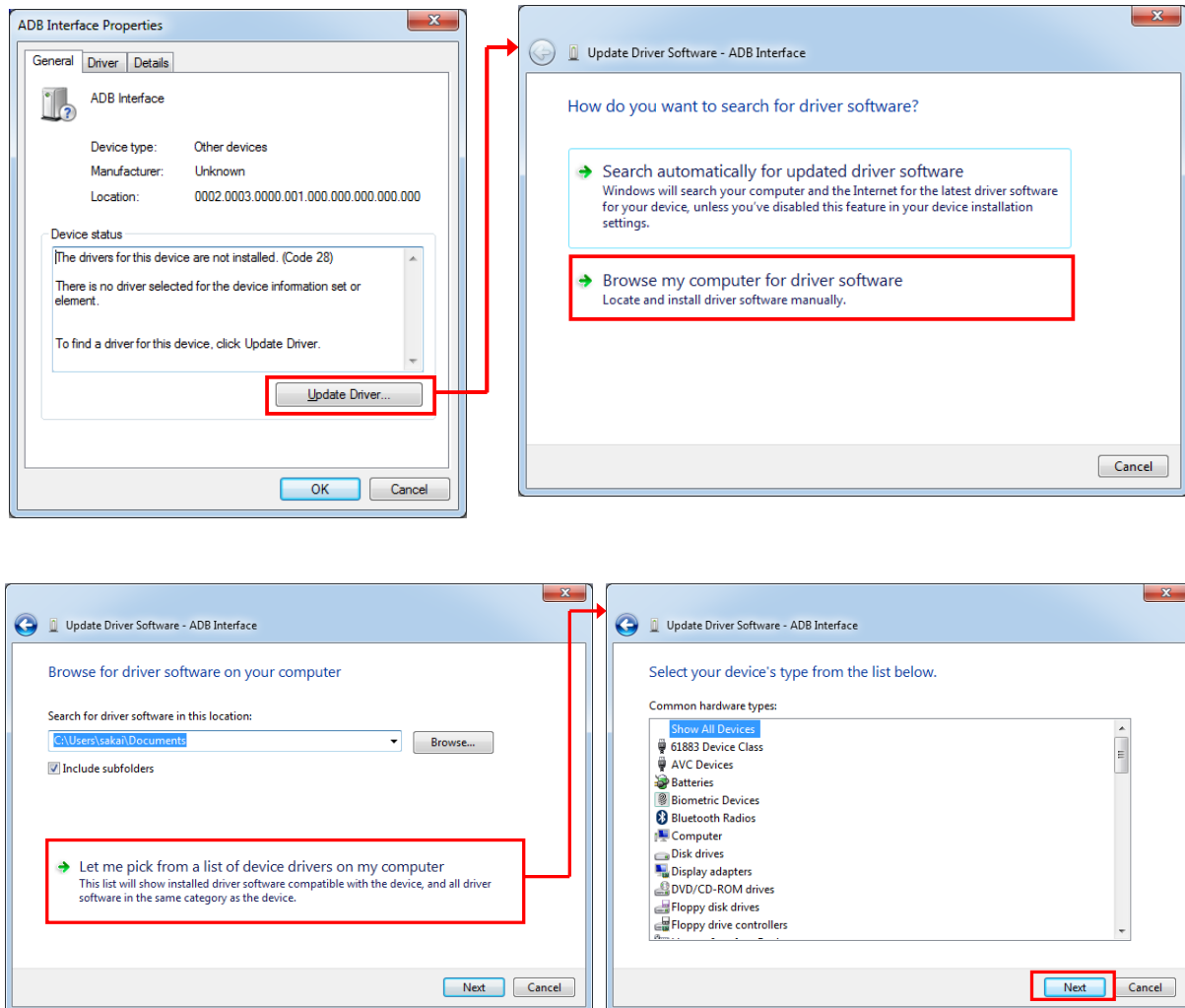
Connect the ET-L10 to the PC using a USB cable.

Then, open the Device Manager by [Control Panel] -> [Hardware and Sound] -> [Device Manager].

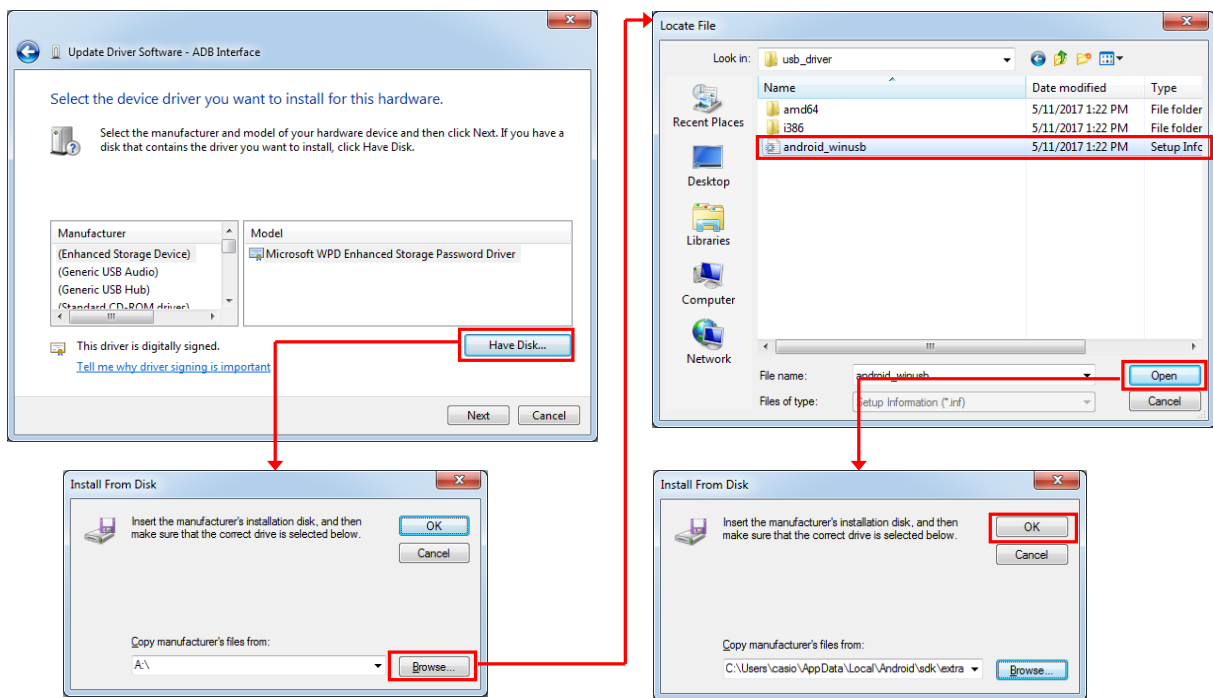
In the Device Manager, "ADB Interface" is displayed as an unknown device as shown below. By right-click the red frame ("Android") in the above figure, displays its properties, and press [Update Driver].



Press "Let me pick from a list of drivers on my computer " at the bottom. In the driver list, with "Show All Devices" is highlighted and press [Next].

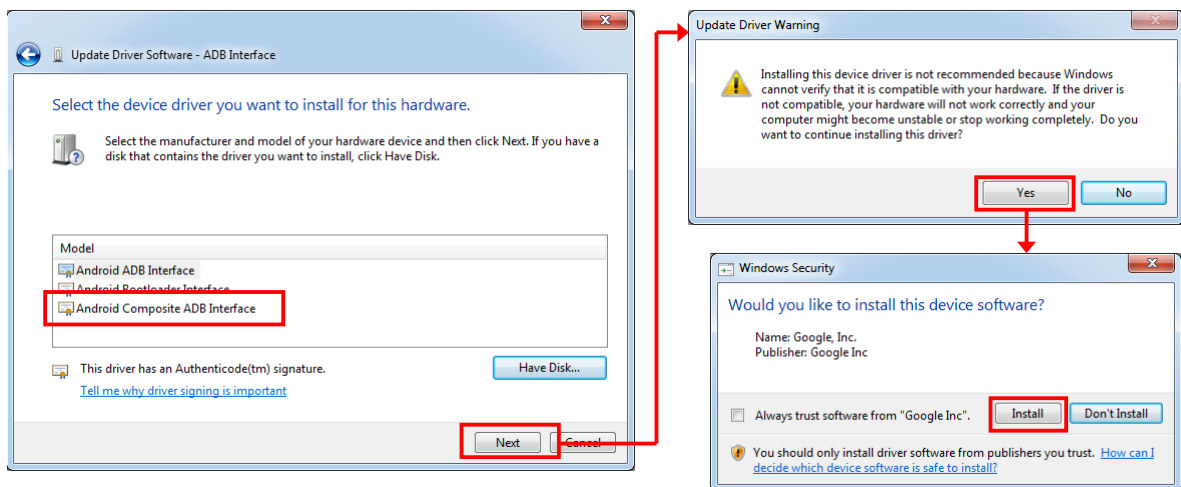


When click [Hard Disk...] in the displayed dialog, a dialog box for specifying the location of the driver opens, so click [Browse...] to open the file dialog box. In the file dialog box, specify the downloaded USB driver in "3.2.2 Android SDK and USB driver (p.12)". (e.g. "extras\google\usb\_driver\android\_winusb.inf")

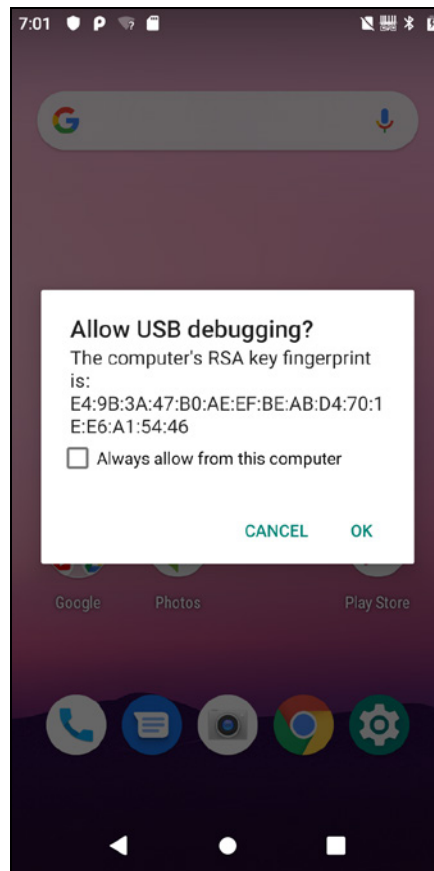


The following driver selection screen will appear. Select "Android Composite ADB Interface" and press [Next].

Answer "Yes" to "Driver Update Warning" and press "Install" of "Windows Security" dialog.

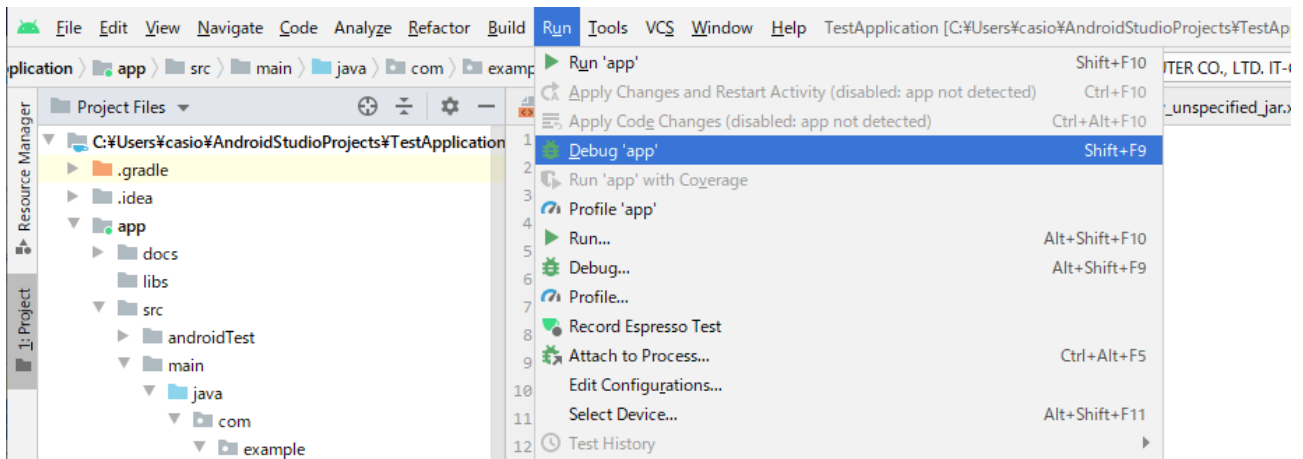


By the above, the installation of the USB driver for ADB protocol was completed.  
Press "OK" when the follow dialog is shown on the ET-L10.



## Debugging on the ET-L10

Select "Run" -> "Debug 'app'" on Android Studio after connected PC with the ET-L10.



When the follow dialog is shown, select "CASIO COMPUTER CO., LTD. ET-L10" from "Available Devices" and press "Run". Start to debug an application on the ET-L10.

