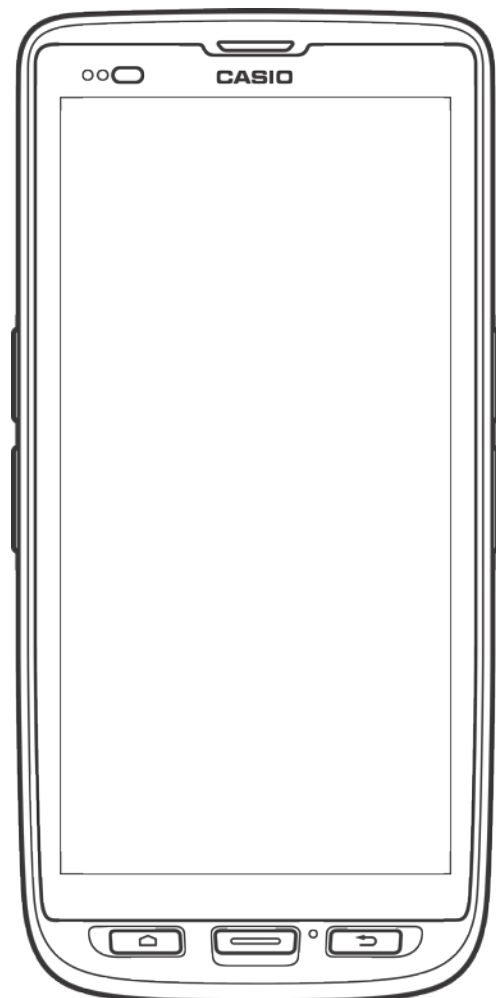


ET-L10 Series

Kitting Manual

This document describes the specifications of Kitting for the ET-L10.



Cautions

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1. Overview

The tasks of doing various settings to the ET-L10, installing applications and preparing them for use in business is called "kitting". This manual describes about the kitting of the ET-L10.

The kitting of the ET-L10 can copy the setting from the master terminal to slave terminals.

Access point is unnecessary because data distribution is done by Wi-Fi Direct between terminals.



Cautions!

OS version of the master terminal and slave terminals should be same because restoration needs same OS version.

1.1 Configuration of Kitting Tools

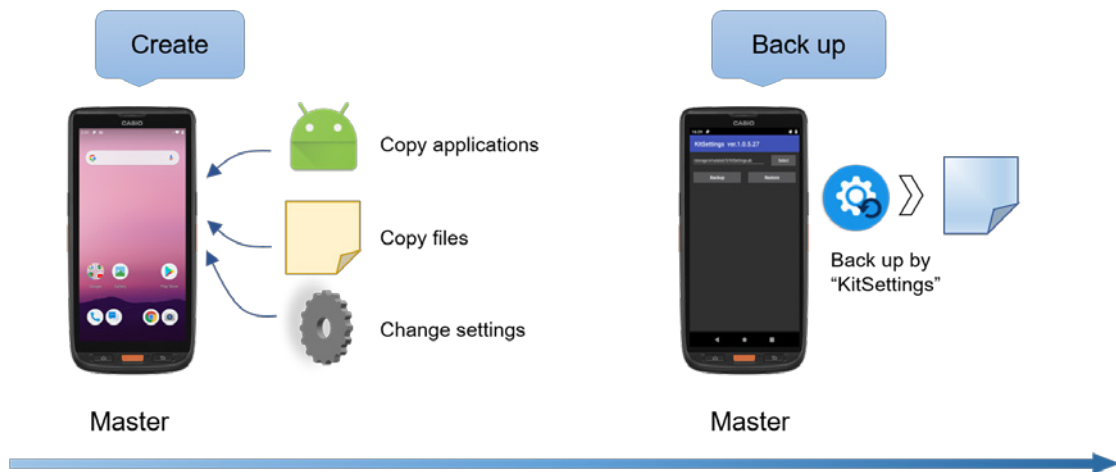
This is a configuration of the kitting tools.

Application name	Description
KitCopy	It is used to deliver files (Backup file, OS image, etc.) on the master to plural receivers via Wi-Fi Direct.
KitSettings	It is used to Backup / Restore terminal settings (part of Android settings).
DeviceBarcodeSetting	It is used to easily configure several settings (WLAN/WAN) using barcodes. (Only on Android 11)
OS Writer	It is used to write the customer-verified version of the OS.

1.2 Kitting procedure

In the Kitting, can copy the master terminal's settings and applications to multiple slave terminals by the following procedure.

[STEP 1]



[Create the master terminal]

- ① Copy applications and files to the master terminal. (Note1)
- ② Change the system setting, key setting, scanner setting etc. of the master terminal. (Note2)
- ③ Backed up settings of the master terminal by "KitSettings".

[STEP 2]



[Deliver applications and files to slave terminals]

- ① Select files to deliver on the master terminal. (Note3)
- ② Start the delivery server with "KitCopy" of the master terminal.
- ③ Start receiving with "KitCopy" of slave terminals.
- ④ If need, should install received applications manually.

[STEP 3]



[Deliver the backup file to slave terminals]

- ① Select files to deliver on the master terminal. (Note3)
- ② Start the delivery server with "KitCopy" of the master terminal.
- ③ Start receiving with "KitCopy" of slave terminals.
- ④ When slave terminals receive the backup file, then restore and restart the terminal.
- ⑤ If need, change the settings manually.
- ⑥ If want to do the configure of WLAN, WAN setting, can easily set them by using "DeviceBarcodeSetting" application.

Note1:

There is no need to install applications to the master.

Note2:

The contents to be backed up / restored depends on the policy of each application, not all "settings". If the expected settings are not backed up / restored, set them manually.

Note3:

If deliver a lot of files, it is possible to efficiently perform kitting by combining files into a single folder and deliver it.

Refer to the following section to see the detailed description of applications.

For KitCopy, refer to the "2 KitCopy (p.6)".

For KitSettings, refer to the "3 KitSettings (p.24)".

For DeviceBarcodeSetting, refer to "4 DeviceBarcodeSetting (p.26)".

2. KitCopy

2.1 Functions

This application distributes files and folders for kitting from the master terminal (server) to several slave terminals (receiver) via Wi-Fi Direct.

KitCopy does not need any WLAN Access point because Wi-Fi Direct is terminal to terminal direct connection.

Once set, delivery takes place one after another automatically. And delivery is done to maximum three terminals at a time.

Note!

Deliver with only one master terminal. Delivery by multiple master terminals is not supported.

The OS file name change depending on the device and model.

This application works on terminal and provide following functions.

Device means the Android-equipped CASIO Handy Terminal (e.g. ET-L10, IT-G400, DT-X400). Model means the ET-L10's model (e.g. WC21, WC21-AO). OS means the OS version of the ET-L10 (e.g. EN_25, CN_25).

Therefore, the function of the OS file deliberation works between different OS versions but can not work between other CASIO Handy Terminals.

Files that are delivered using KitCopy for kitting are OS files, operation files, backup files, etc. Many of them depend on the device and model, which prevents delivery between different devices and models.

Feature	Overview	Device	Model	OS
OS file delivery and update	The master terminal delivers an OS image file, and slave terminals receive it. After receiving, slave terminals start OS update automatically. Master : Internal storage, External storage Slave : Internal storage	Must match	Must match	Any
Folder or Files delivery	Delivery folders and/or files for kitting from the master terminal. Master : Internal storage, External storage Slave : Internal storage	Must match	Must match	Any
Backup file delivery and restoration	The master terminal delivers a Backup file, and slave terminals receive it. After receiving slave terminals start restoration automatically. Master : Internal storage, External storage	Must match	Must match	Must match

	Slave : Internal storage			
Save result log	<p>Save the result log files to internal storage of the master terminals in csv file format.</p> <p>The log file includes delivering result, Receivers' serial number and OS build number. It can be used for checking delivery results and creating terminal management file.</p>	-	-	-

2.2 Procedure

Use functions of this application in following procedures.

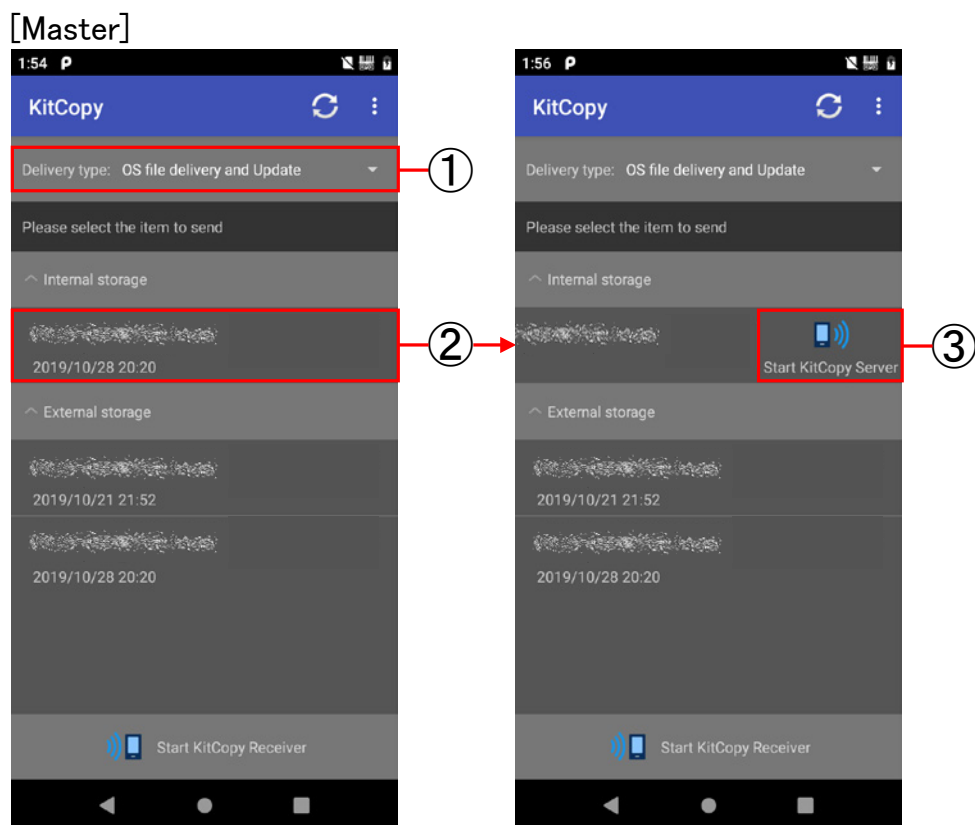
2.2.1 OS file delivery and update procedure

This function can deliver an OS image and update automatically.

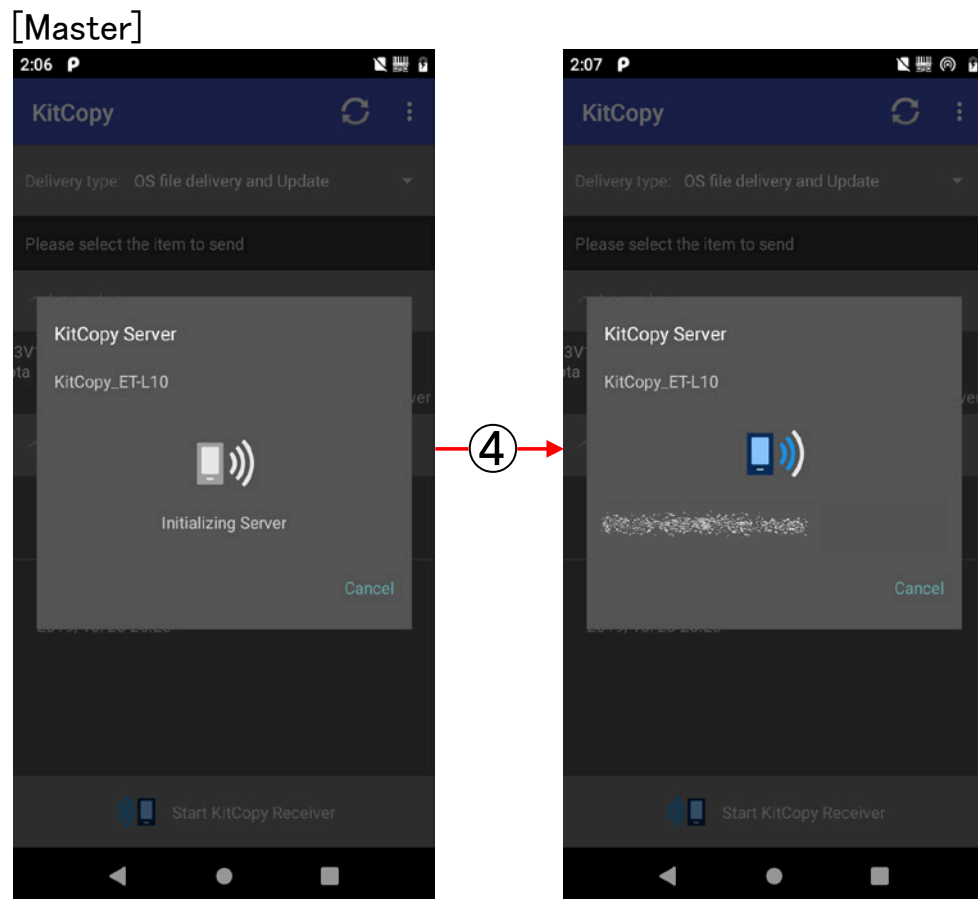
Put the OS image in the root folder of internal storage or external storage (microSD card) of the master terminal.

First, operate the master terminal.

- ① Select the Delivery type to [OS file delivery and Update].
- ② Select the OS image to deliver.
- ③ Touch [Start KitCopy Server].

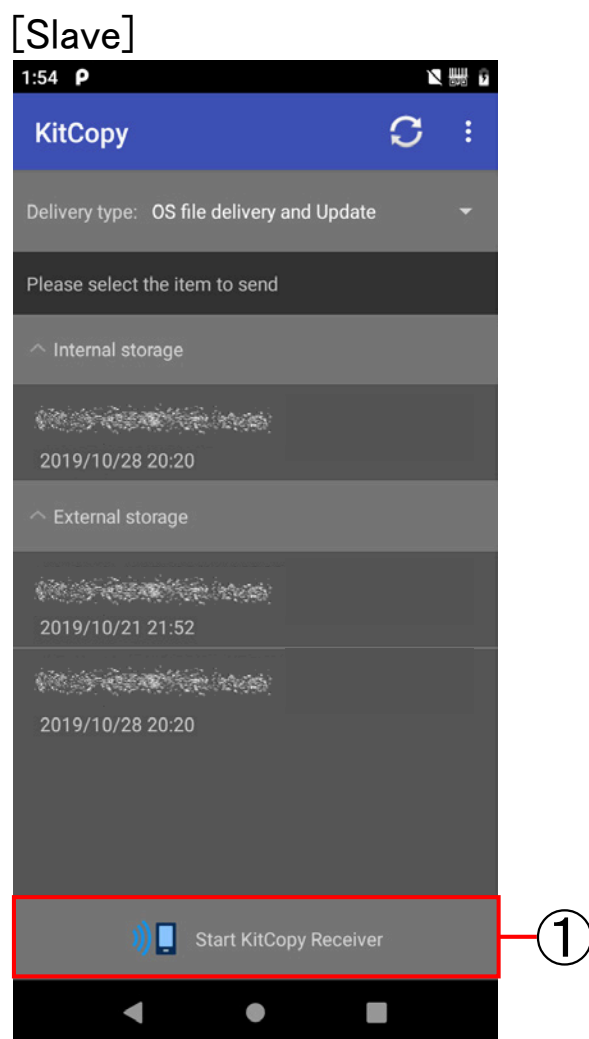


- ④ When ready for delivery, the icon is changed.



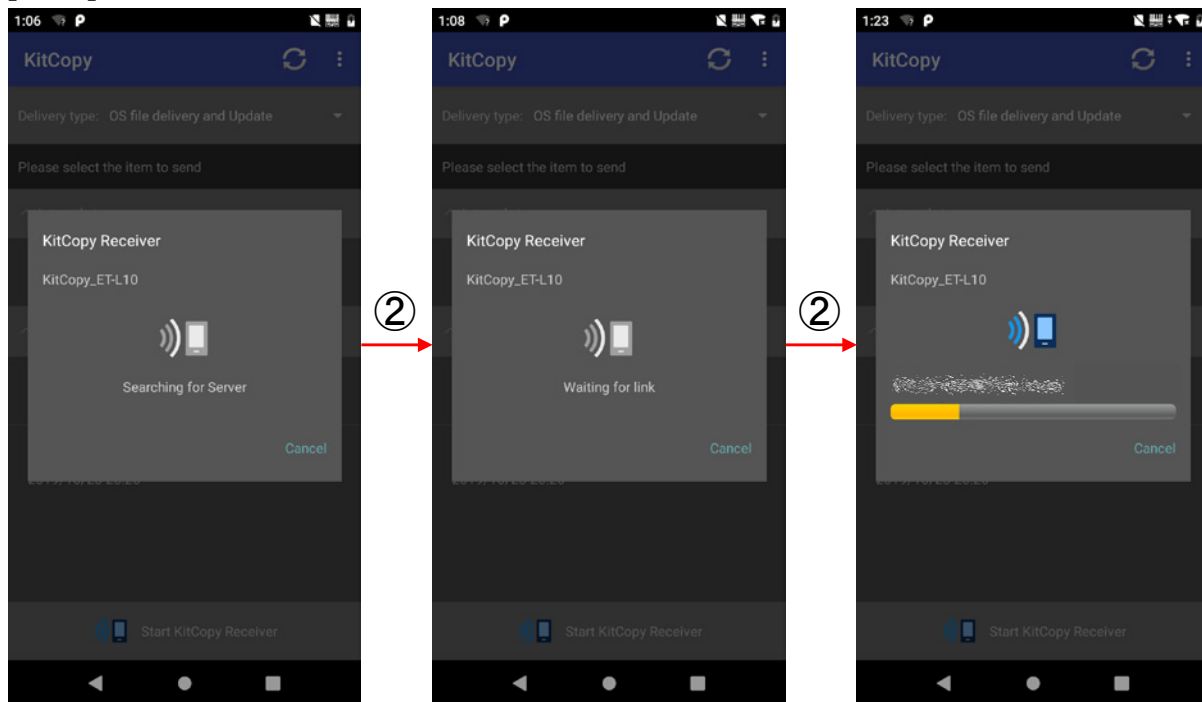
Next, operate a slave terminal.

- ① Touch [Start KitCopy Receiver].



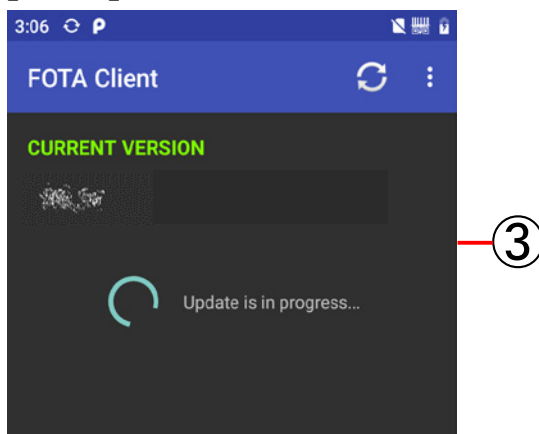
- ② Before starting to receive the OS image, the status dialog changes "Searching for Server" to "Waiting for link". While receiving, the progress bar is displayed. The received OS image is stored in the root folder of the internal storage. In AOSP (Chinese) model, when the WLAN is not turned on, a warning message appears. Select "Allow" to turn on the WLAN.

[Slave]



- ③ OS updating starts automatically. After receiving the OS image, the terminal reboots automatically. Then all procedure is completed.

[Slave]



2.2.2 Folder or files delivery procedure

This function can deliver a folder or files for kitting.

Put the folder or files in the internal storage or external storage (microSD card) of the master terminal.

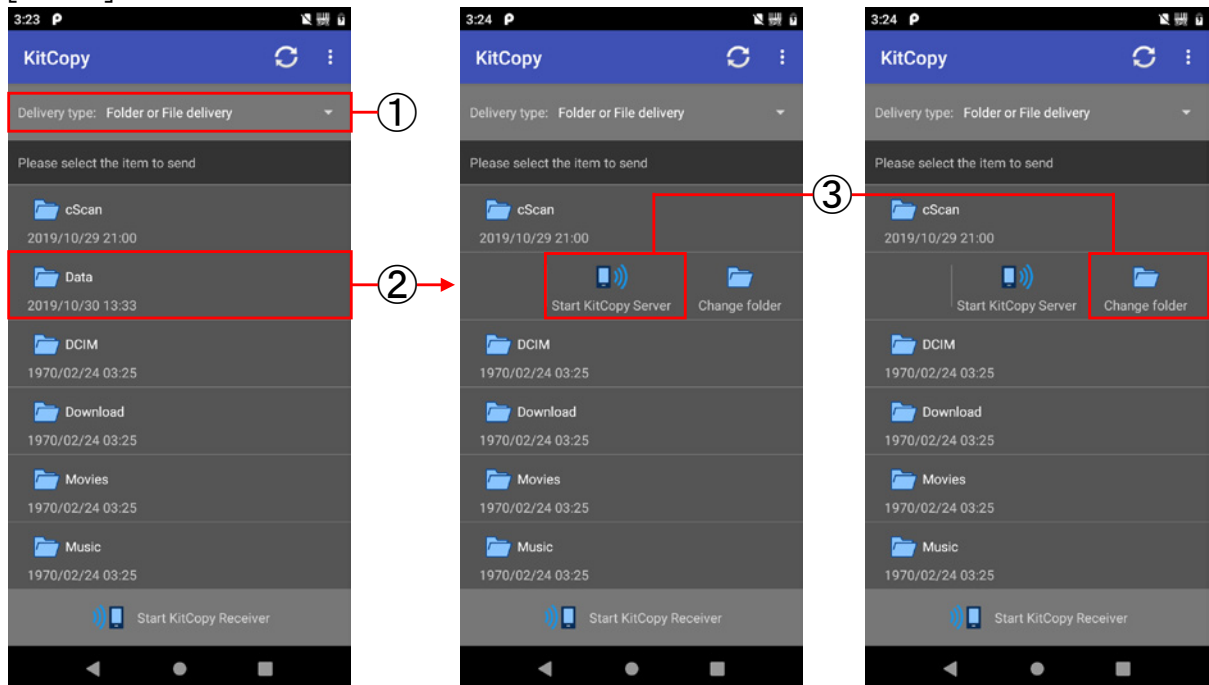
First, operate the master terminal.

- ① Select the Delivery type to [Folder or File delivery].
- ② Select a file or folder to deliver.
- ③ Touch [Start KitCopy Server], start delivering.

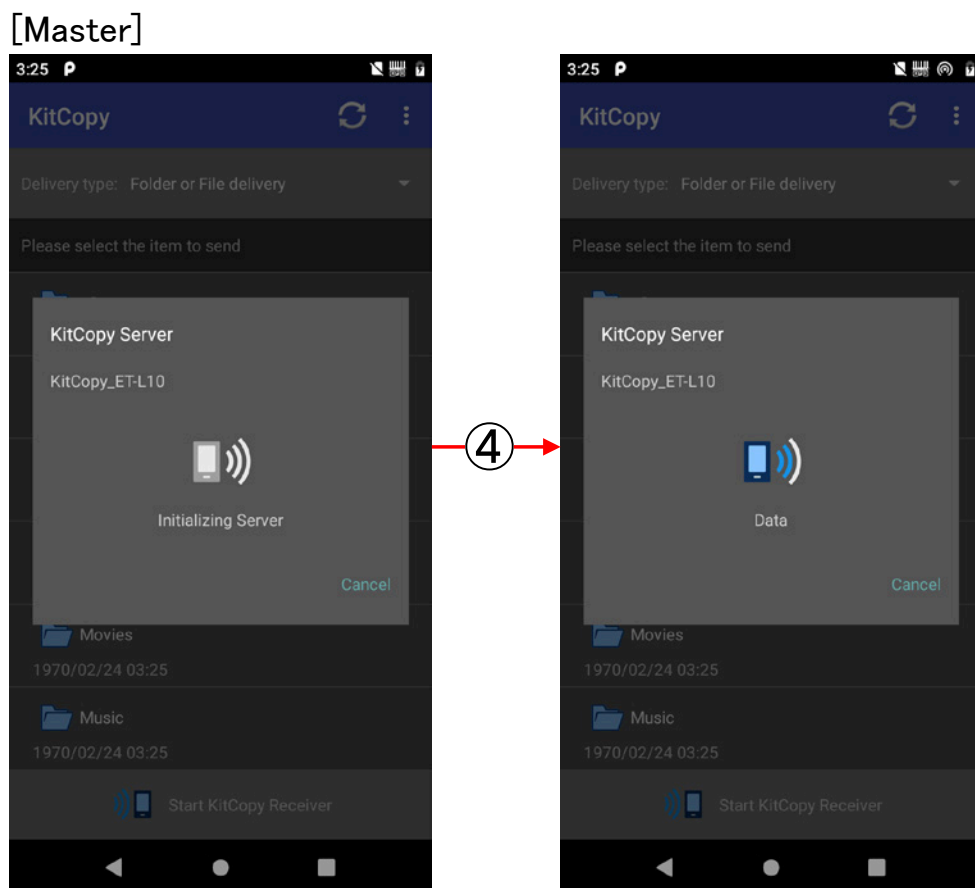
Touch [Changed folder], refer to the file or folder inside current folder.

Touch [..Go up to the parent folder] and [Change folder] to go back to the parent folder.

[Master]



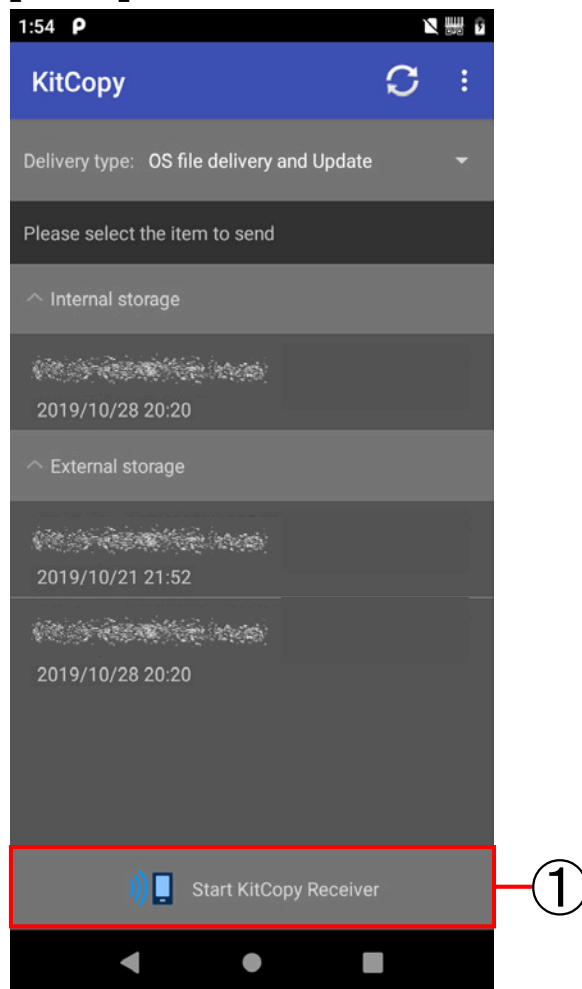
- ④ When ready for delivery, the icon is changed.



Next, operate the slave terminal.

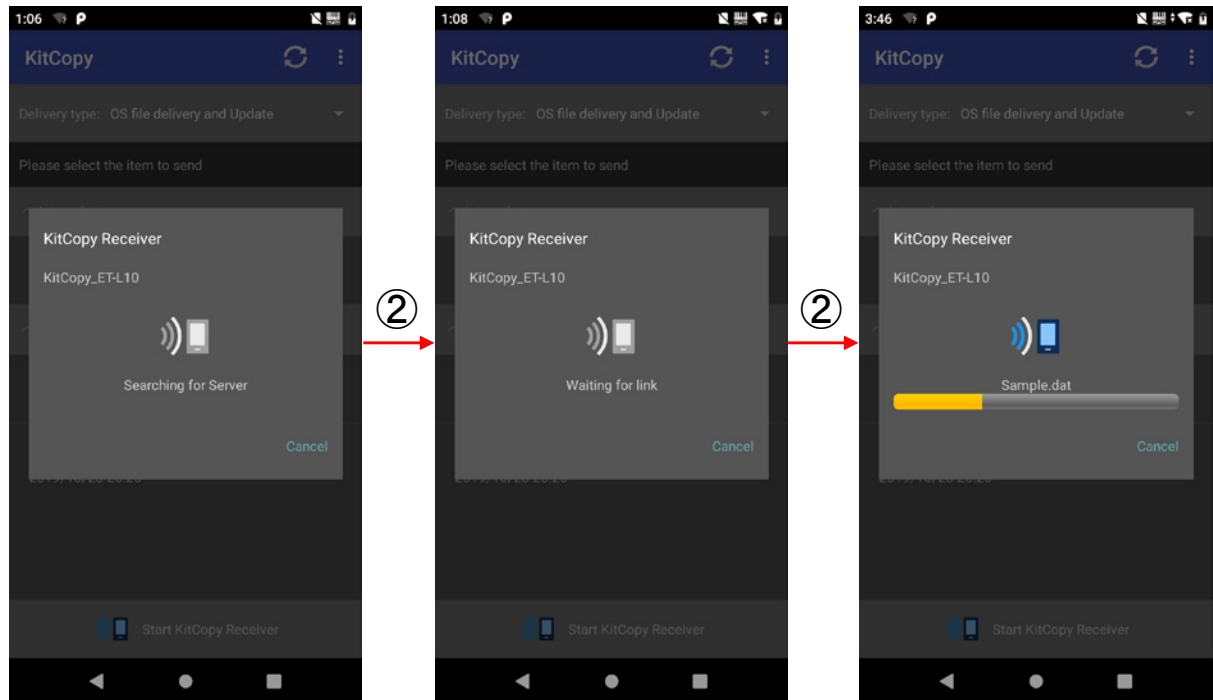
- ① Select [Start KitCopy Receiver].

[Slave]



- ② The status dialog changes, "Searching for Server" > "Waiting for link" before starting receiving file(s). While receiving, the progress bar is displayed. Received file(s) and/or folder is/are stored in root folder of internal storage. When completed, return to the main screen.
In AOSP (Chinese) model, when the WLAN is not turned on, a warning message appears. Select "Allow" to turn on the WLAN.

[Slave]



2.2.3 Backup file delivery and restoration procedure

This function can deliver a Backup file and restoring.

The Backup file should be made by [KitSettings].

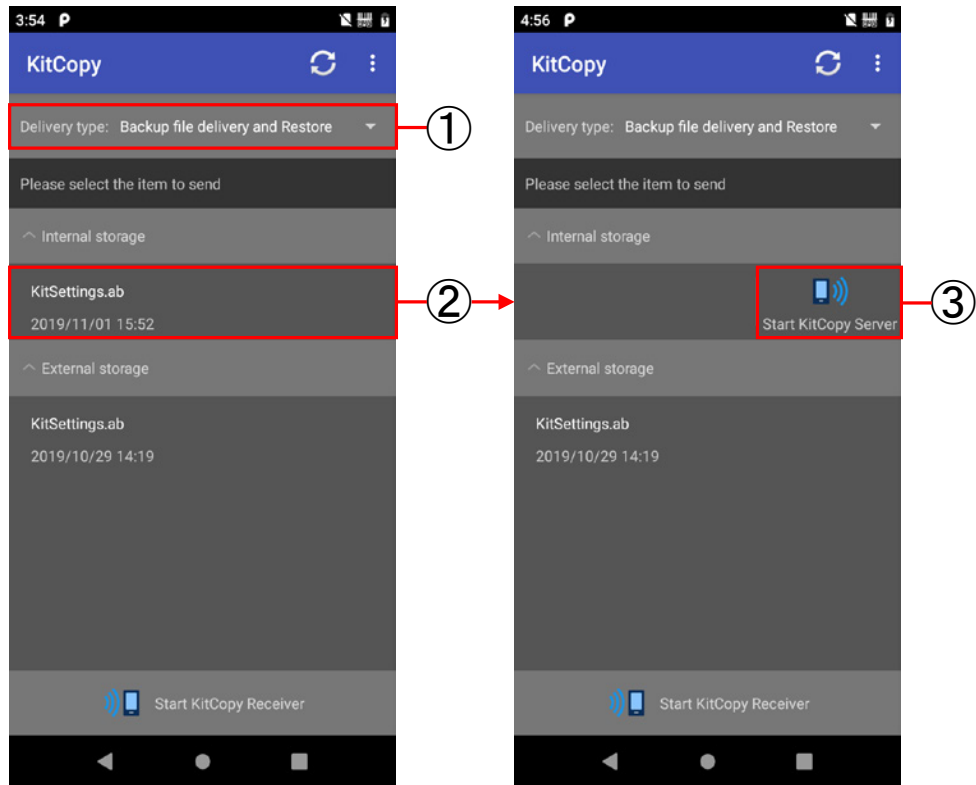
Since the Backup file created above is delivered, please do not change the folder structure.

OS version (OS build number) of the backed up terminal and restoring terminals should be same.

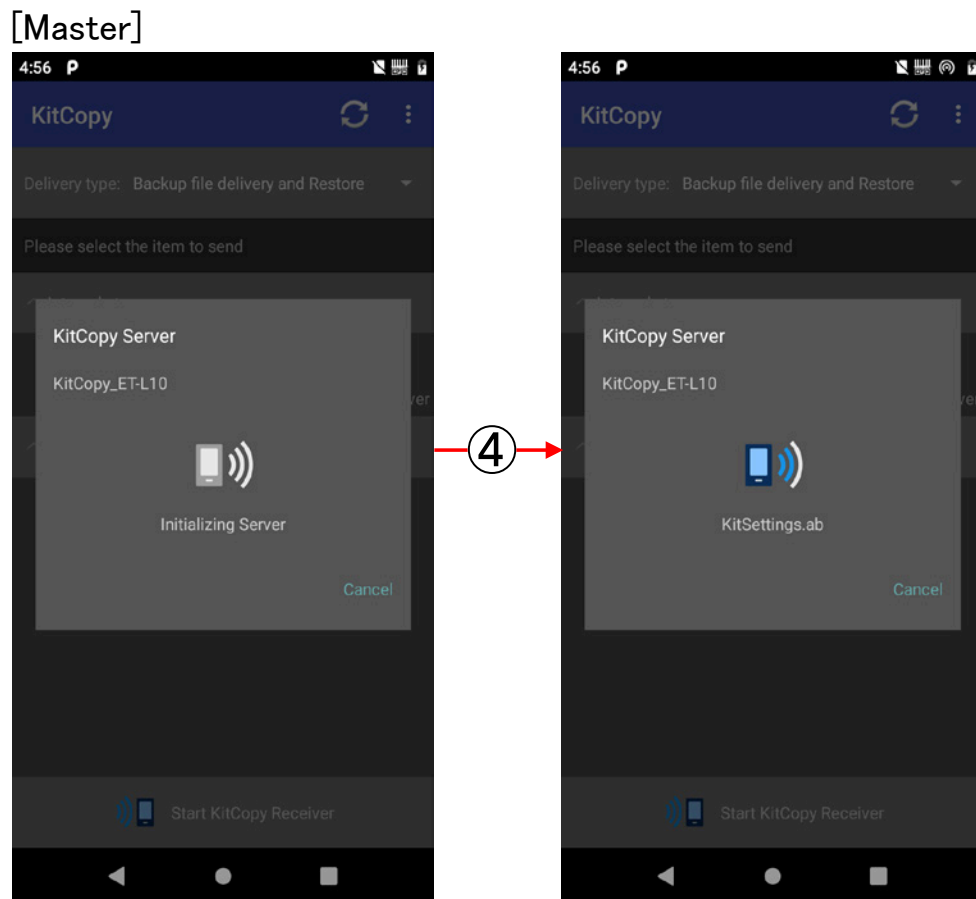
First, operate the master terminal.

- ① Select the Delivery type to [Backup file delivery and Restore].
- ② Select a Backup file to deliver.
- ③ Touch [Start KitCopy Server].

[Master]

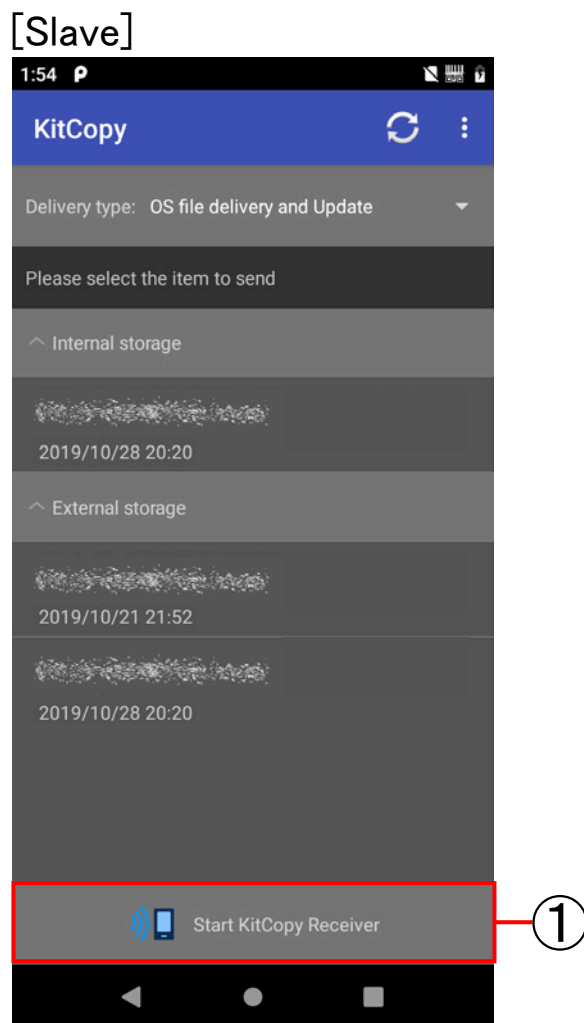


- ④ When ready for delivery, the icon is changed.



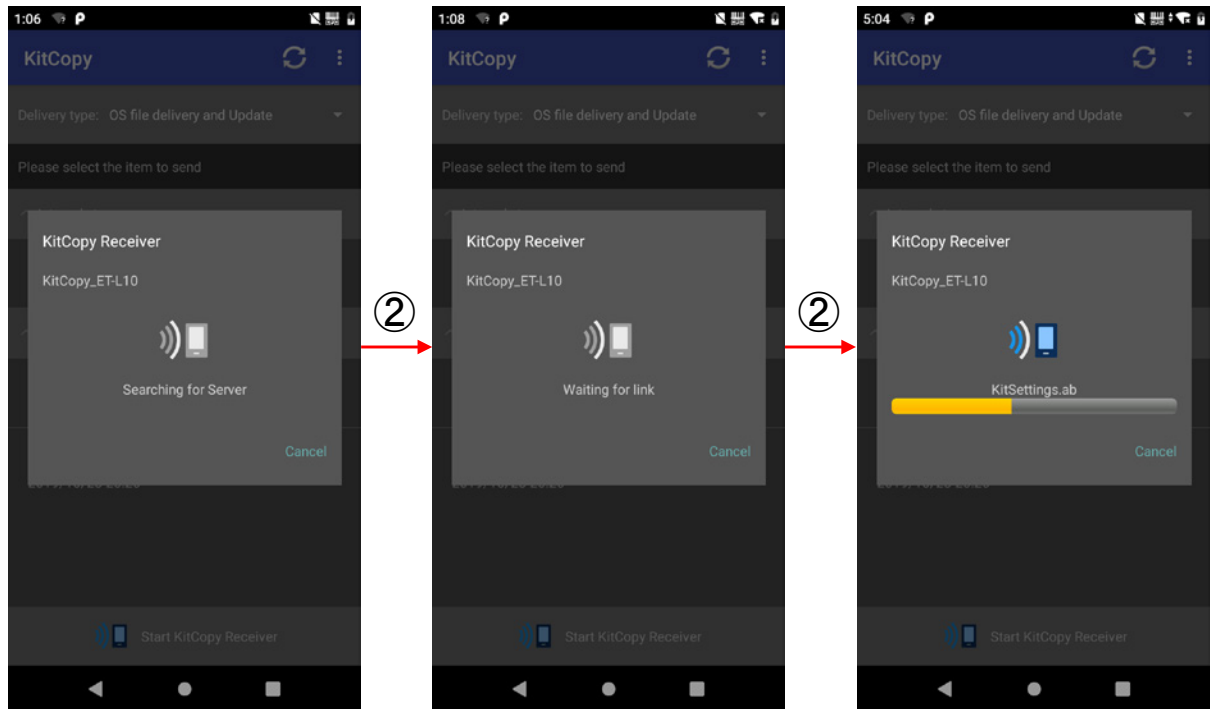
Next, operate the slave terminal.

- ① Touch [Start KitCopy Receiver].

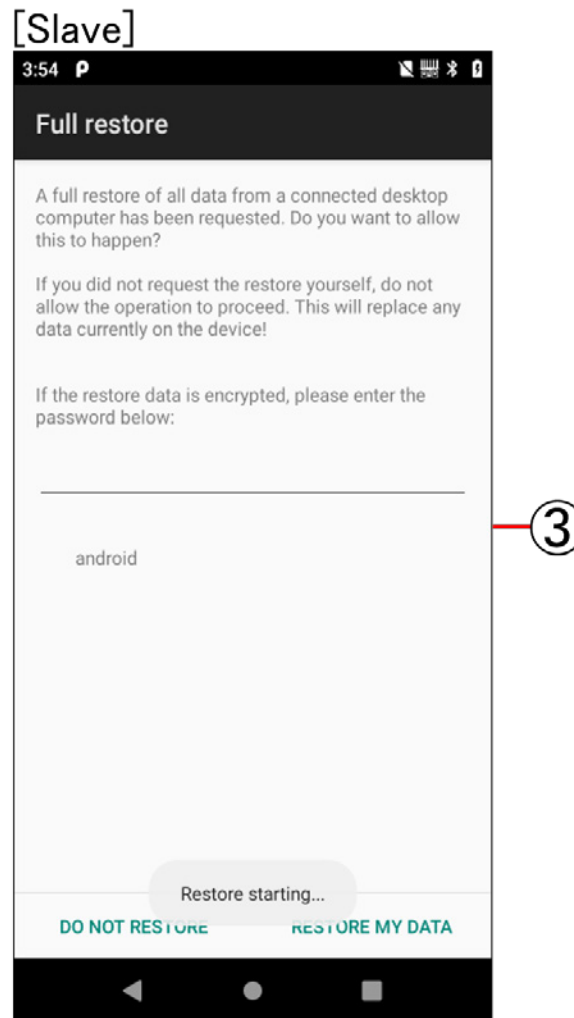


- ② Before starting to receive the image, the status dialog changes "Searching for Server" to "Waiting for link". While receiving, the progress bar is displayed. Received backup file is stored in root folder of internal storage. In AOSP (Chinese) model, when the WLAN is not turned on, a warning message appears. Select "Allow" to turn on the WLAN.

[Slave]



- ③ The restoration confirmation screen is displayed.
After receiving the backup file, the terminal reboots automatically by restore process. Then all procedure is completed.



2.2.4 Save Result Log

Save the delivering result to each slave terminal in the csv file format on the internal storage of the master terminal.

The log file includes delivery results, Receivers' serial number and OS build number.

File location: /storage/emulated/0/KitCopyResult.csv

Note!

The result is recorded only when the connection of master and slave is successful.

If the error or the connection canceled occurs before completing the connection, Server cannot recognize the status of slave terminal. In that case, the result is not recorded.

Data Format of log file:

"Date","Time","Delivery type","delivery file name or folder name","Receiver's serial number","Receiver's OS build number","Result"

e.g.)

```
"20190101","082236","OS","ETL10-V001B09-EN_16.ota","1528689","A8ETL10V100R001C001B016_EN_16","SUCCESS"
"20190101","082400","OS","ETL10-V001B07-EN_14.ota","1528689","A8ETL10V100R001C001B016_EN_16","CANCEL"
"20190101","112927","FOLDER","Data","1528689","A8ETL10V100R001C001B016_EN_16","SUCCESS"
"20190101","113000","FOLDER","Data","1528689","A8ETL10V100R001C001B016_EN_16","CANCEL"
"20190101","113030","FILE","test.zip","1528689","A8ETL10V100R001C001B016_EN_16","FAILURE"
"20190101","113045","FILE","test.zip","1528689","A8ETL10V100R001C001B016_EN_16","SUCCESS"
"20190101","113128","BACKUP","KitSettings.ab","1528689","A8ETL10V100R001C001B016_EN_16","SUCCESS"
"20190101","113338","BACKUP","KitSettings.ab","1528689","A8ETL10V100R001C001B016_EN_16","CANCEL"
```

Delivery type

The following table shows kinds of "Delivery type".

Delivery type	Description
OS	OS image file delivery by "OS file delivery and Update"
FOLDER	Folder delivery by "Folder or File delivery"
FILE	File delivery by "Folder or File delivery"
BACKUP	Backup file delivery by "Backup file delivery and Restore"

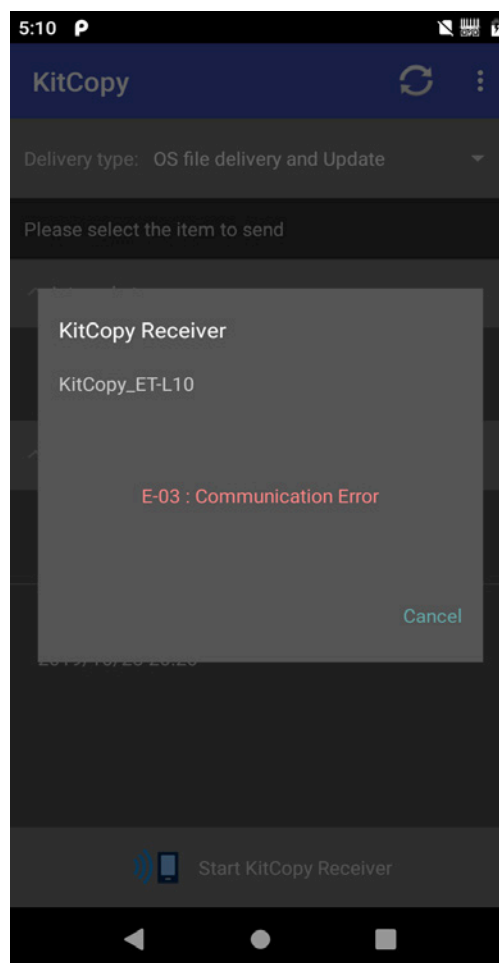
Result

The following table shows kinds of "Result".

Result	Description
SUCCESS	Receiver received all data successfully.
FAILURE	Receiver failed to receive data because of some errors.
CANCEL	Transaction is canceled while transferring at Server side or Receiver side.

Error Indication

The following dialog is displayed on the slave terminal when an error happens.



There are seven kind of errors as shown below table.

Error Code	Error Indication	Description	Countermeasure
E-03	Communication Error	Connection fault or data error is detected.	Put the slave terminal near the master terminal and retry connection.
E-04	Communication Timeout	Slave terminal does not receive the data within appropriate time.	Put the slave terminal near the master terminal and retry receiving.
E-05	File Write Error	Slave terminal fails to save a file. The internal storage might be full.	Check the free space of slave's internal storage.
E-06	Check Sum Error	The checksum of received file is mismatch.	Put the slave terminal near the master terminal and retry receiving.
E-07	Disk Full	Free space of internal storage is not enough to store the received file.	Check the free space of slave's internal storage.
E-08	Server Cancel	Communication is cancelled by master terminal.	Check the master terminal.
E-09	Not applicable OS file	Received the OS file that cannot be updated.	Check the OS version of the slave terminal and OS file.

3. KitSettings

3.1 Functions

Save the terminal settings to a storage and restore these settings.

Notes!

Restore the backup data to the same device, same model, and same OS version as the backup source.

After setting, the slave terminal is automatically restarted.

This application works on the terminal and provides the following functions.

Device means the Android-equipped CASIO Handy Terminal (e.g. ET-L10, IT-G400, DT-X400). Model means the ET-L10's model (e.g. WC21, WC21-AO). OS means the OS version of the ET-L10 (e.g. EN_25, CN_25).

Therefore, the restore function can not work between other CASIO Handy Terminals, other ET-L10's model, other OS version of the ET-L10.

Feature	Overview	Devcie	Model	OS
Backup	Create a backup file from the selected backup target.	-	-	-
Restore	Restore from the backup file.	Must match	Must match	Must match

The settings targeted by this application are shown in the table below.

Target of Backup/Restore	Description
Settings	The settings in the "Settings" are targeted. For the detail, confirm the following "Notes".
Home display	Save shortcuts placed on the home screen and contents displayed in the application list. Save only on Android 9.
Scan Settings	The settings of the "ScanSetting" in the "Settings". "ScanSettings" is an application for controlling barcode scanner.
User Define	The settings of the "User Define" in the "Settings". "User Define" is the application for used to assign another function to the side key.

Notes!

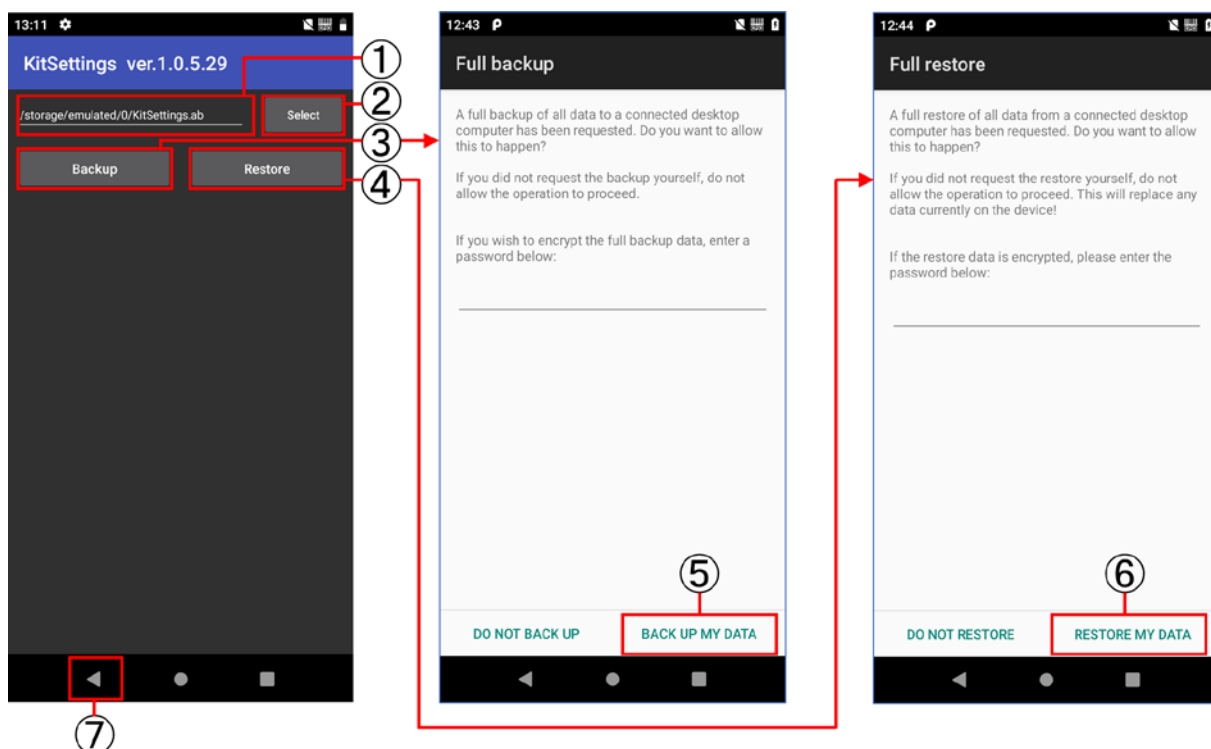
"Backup / Restore" by KitSettings is calling the backup function via "Android's Backup Manager Service".

Therefore, the contents to be backed up / restored depends on the policy of each application, not all "settings". If the expected settings are not backed up / restored, set them manually.

3.2 Procedure

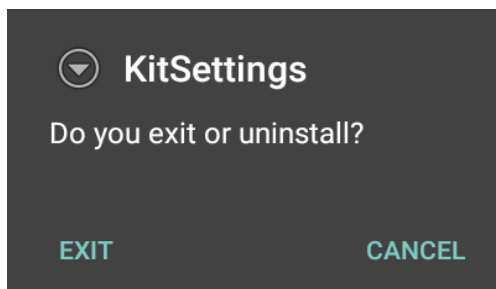
Use functions of this application in following procedures.

3.2.1 Backup/Restore procedure



- ① This text box shows the file path for backup or restore.
- ② Touch [Select] to select the file.
- ③ Touch [Backup] to start backup of data.
- ④ Touch [Restore] to start restoring data.
- ⑤ Automatically start backup of data (cannot set a password).
- ⑥ Automatically start restoring data (cannot input a password).
- ⑦ Touch return button, it shows finishing display. Touch [EXIT], this application is finish.

This application is the system application of the ET-L10, since the uninstall function does not work.



4. DeviceBarcodeSetting

DeviceBarcodeSetting is an application for easily configuring several settings using barcodes.

DeviceBarcodeSetting is only available on Android 11.

"WLAN Setting Barcode Print Tool" makes several barcodes about the setting for the terminal. And change the settings of the terminal by reading these barcodes.

For use of "WLAN Setting Barcode Print Tool", contact sales.



Note!

This application differs from the application provided for Windows CE in some specifications. Therefore, in the Android version, specifications of "WLAN security type", "User certificate", "CA certificate" are different from Windows CE version. Specify other than "Space" in "Terminator" on ScanSetting in case of using this application.

WLAN security type

The type of security that can select with "WLAN Setting Barcode Print Tool" is the same as the type supported by the Windows CE version, but some security settings are not supported on Android.

Refer to "4.1 Functions (p.28)" for its details.

User certificate (EAPCertificate)

"User certificate" is the setting specified in the "EAP certificate" column of "WLAN Setting Barcode Print Tool".

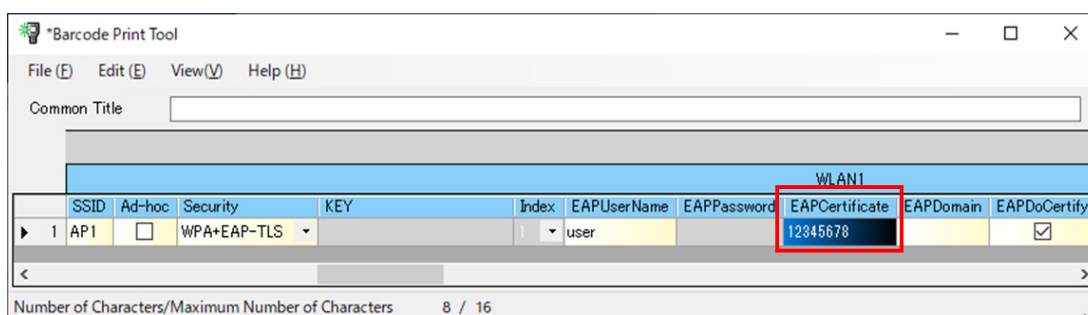
In the Windows CE version, the user installed the user certificate manually to the terminal, but in the Android version this application automatically installs the user certificate which found in a specific folder.

The user certificate (.pfx) which found first from external / internal storage is used.

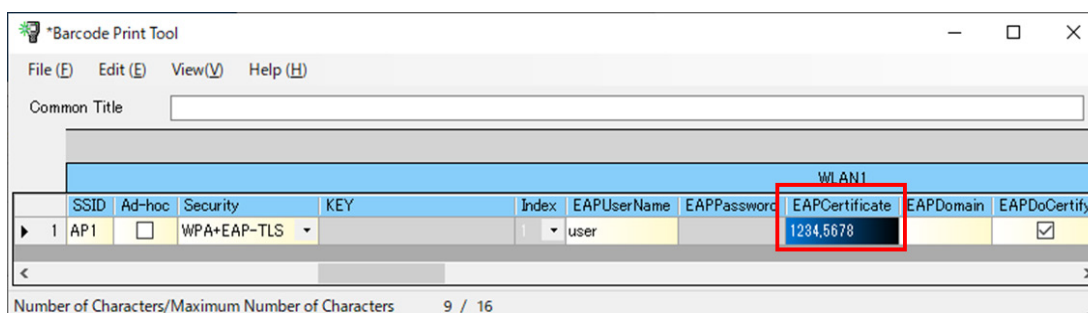
The certificate is searched in the order microSD (/storage/????-????/WLANCERT), and internal storage (/storage/emulated/0/WLANCERT).

And, to automatically install the user certificate, it is necessary to specify the password of the user certificate in the "EAP certificate" column of "WLAN Setting Barcode Print Tool".

If the certificate (pfx) and private key (pvk) have the same password, specify one password.



If the password of the certificate (pfx) and private key (pvk) are different, specify it in the format of "pfx password, pvk password". In this case, can specify up to 16 characters including ",".



CA certificate (EAPDoCertify)

"CA certificate" is the setting specified in the "EAPDoCertify" column of "WLAN Setting Barcode Print Tool".

In the Android version, can specify any CA certificate besides using the certificate in the terminal (system certificate). The CA certificate that can be used is ".cer".

To use an arbitrary CA certificate, copy the CA certificate to a specific folder of external / internal storage.

The certificate is searched in the order microSD (/storage/????-????/WLANCERT), and internal storage (/storage/emulated/0/WLANCERT).

4.1 Functions

This application works on terminal and provide following functions.

Item	Description
WLAN	Configure WLAN / NTP settings. (Note1) (Note2) (Note3) (Note4)
WAN	Configure WAN settings. SIM card is necessary for setting. (Note5)

Note1:

Following settings and DHCP / Static IP settings are settable. Proxy setting is not available.

- No security
- WEP, 64 / 128 bit, OPEN / Shared
- WPA / WPA2, PSK
- WPA / WPA2, PEAP/TLS/TTLS, MSCHAPv2/GTC

Note2:

PEAP 0, PEAP 1 are set as PEAP.

Note3:

If set for an access point already registered in the terminal, the security method will not be changed. Only fixed IP settings will be overwritten.

Note4:

If set an access point using this application, all other registered access point information in the terminal will be deleted.

Note5:

Can set the following authentication methods.

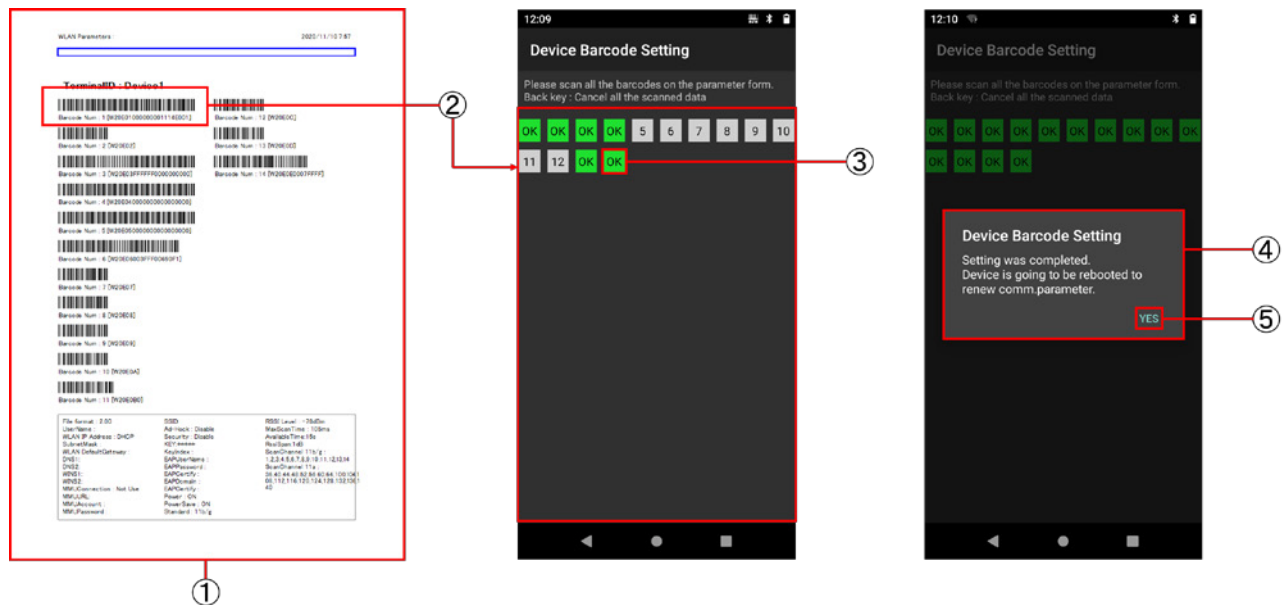
- None
- PAP
- CHAP

4.2 Procedure

4.2.1 Setting procedure

When launch this application, it will automatically configure the scanner.

When exit this application, scanner settings will return to the state before this application was launched.



1. Create the barcode seat by "WLAN Setting Barcode Print Tool".

2. Launch this application and read the setting barcode. If even one barcode for setting is read, the confirmation field displayed.

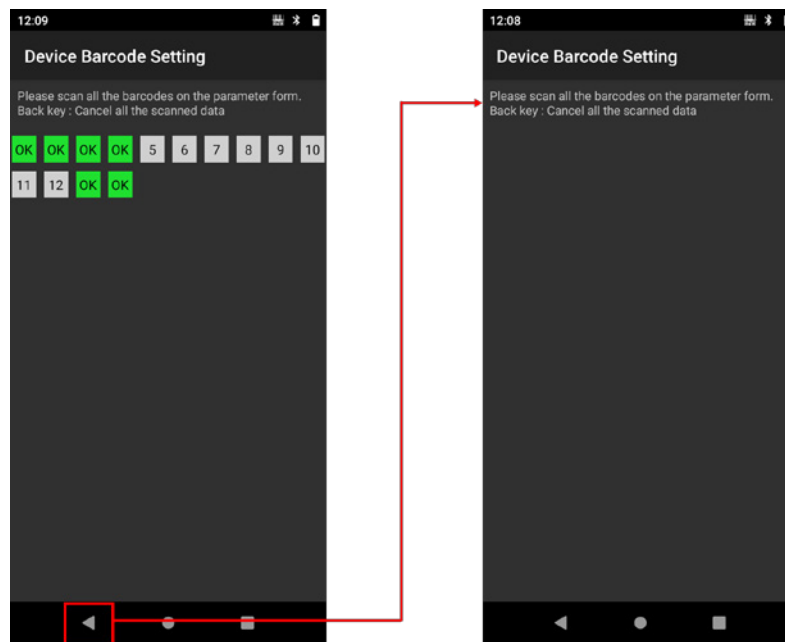
The order of reading barcode is arbitrary, however it is necessary to read all printed barcodes.

3. When barcode reading is successful, the number of read barcodes will change to "OK" and turns green.

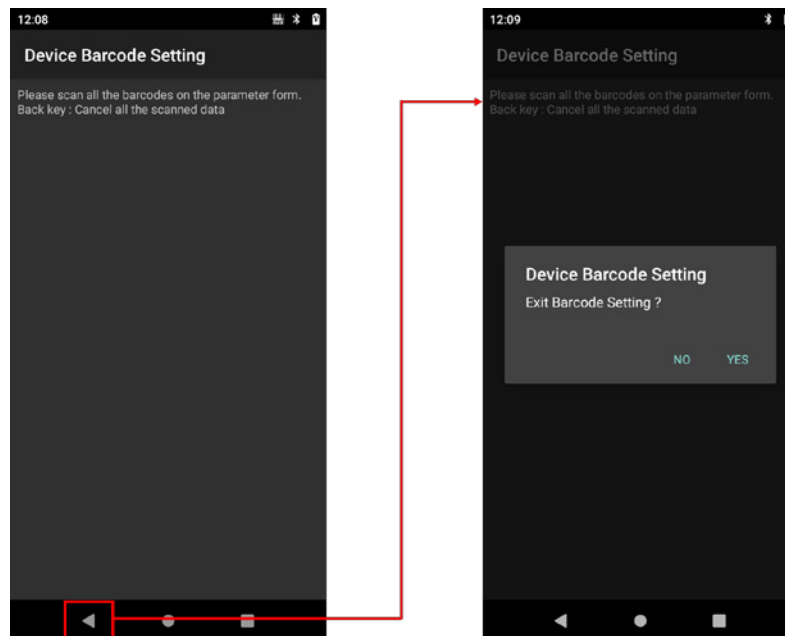
4. After reading all the barcodes, the settings will be set to the terminal and a confirmation dialog will be displayed.

5. After touching [YES], the terminal will restart.

When after launch or no read, nothing is displayed in the barcode confirmation field.
Then pressing "Back button" will display an exit confirmation dialog.



If press "Back button" with more than one barcode read, it discards all the barcode data read and returns to the state after launch.
After setting, the terminal is automatically restarted.



5. OS Writer

5.1 Functions

"OS Writer" is a tool to write the customer-verified version of the OS including downgrade (only on Android 9).

This application works on the terminal and provides the following functions.

Item	Description
OS Write	Writes the selected OS image.

Cautions!

It is not possible to downgrade to all older OS. After the OS will be modified to support EOL hardware parts replacement, it is not possible to downgrade to the older version.

The downgrade lower limit is shown on this tool.

OS Writer does not support downgrading OS on Android 11.

Upgrades from Android 9 to Android 11 are only possible with Android 11 full images that are at or above the current Android 9 security patch level.

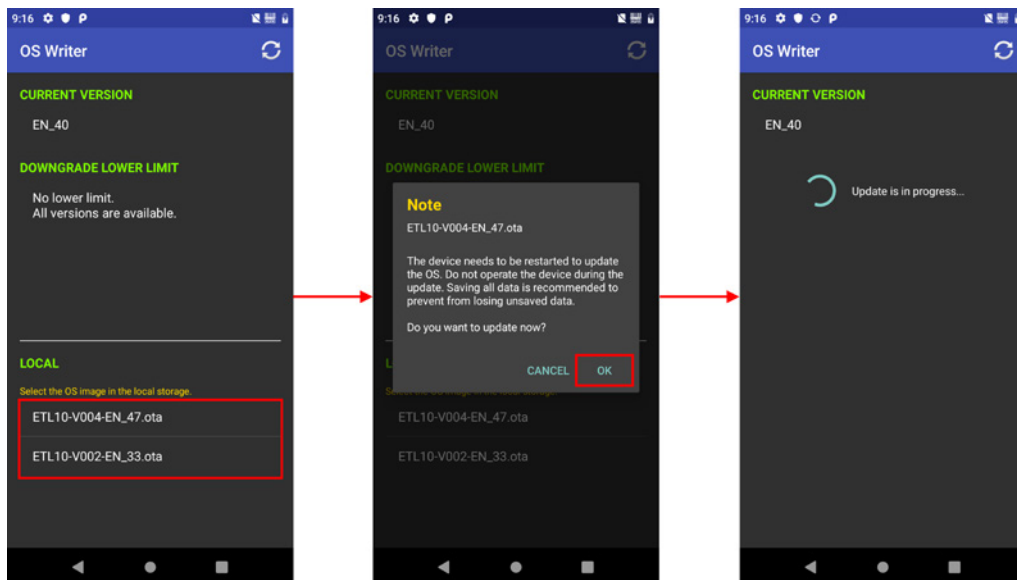
After upgrading to Android 11, cannot revert to Android 9.

5.2 Procedure

Use the functions of this application in the following procedure.

5.2.1 OS Writing procedure

1. Put the OS image to be written in the root folder of the internal storage or external storage (microSD card / USB memory).
2. If the OS image is put in the external storage, insert the external storage into the terminal.
3. Install OSWriterXXXXXXXXXX.apk in the terminal. (The file name XXXXXXXXXXXX indicates the version.)
4. Launch the app, select the OS image to be written displayed in LOCAL, and a confirmation screen will be displayed. Touch [OK] to start writing the OS. When the writing is completed, it will restart automatically.



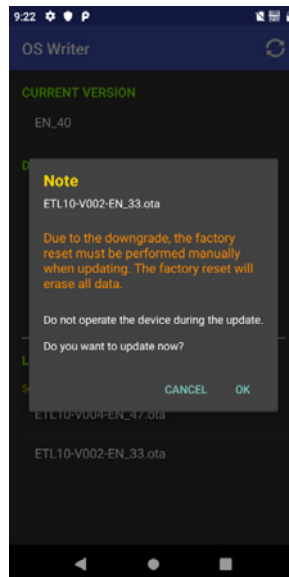
Cautions!

On Android 9, for downgrade that write an older version of the OS image, the factory reset must be performed manually when updating.

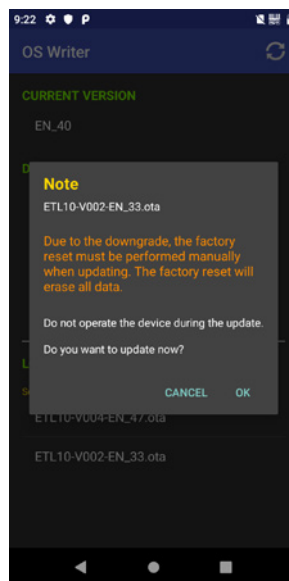
Also, when upgrading from Android 9 to Android 11, the factory reset will be performed automatically.

Note that the factory reset will erase all data.

When selecting the OS image, the following confirmation screen will be displayed indicating that the factory reset must be performed.



On downgrading OS

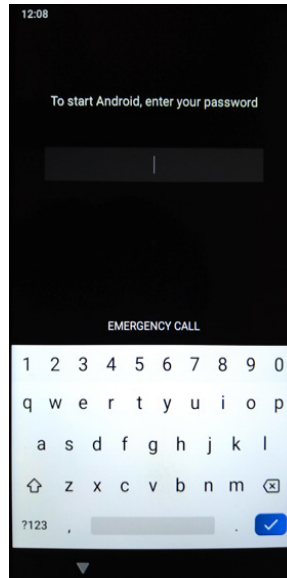


On upgrading to Android 11

5.2.2 Factory reset procedure for downgrade

If it is downgraded, the terminal will start up on the screen below.

In AOSP (Chinese) model, the OS boots, so refer to the "Software Manual" and perform the factory reset.



To boot the OS, it is necessary to perform the factory reset according to the following procedure.

1. Press the power key to turn off the power.
2. Hold down the L trigger key and the light key and press the power key to turn on the power.
3. Android recovery will start.
4. Press the R trigger key four times to move the cursor to [Wipe data/factory reset] and press the power key.
5. Press the R trigger key to move the cursor to [Yes] and press the power key.
6. The data will be erased, and the screen will return to Android Recovery.
7. Move the cursor to [Reboot system now] and press the power key to boot the OS.

5.2.3 Factory reset for upgrading to Android 11

When upgrading from Android 9 to Android 11, the factory reset will be performed automatically and all data will be erased.