



GoDroid

Getting Started With GoDroid

v1.0



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Preface

Overview

This manual provides detailed guidance about how to install and operate GoDroid v1.0 how to make best use of GoDroid, as well as how to use prebuild images to experience Android features. This manual is organized into the following chapters:

- **Chapter 1: Installation and Booting**

This chapter gives general overview and procedure about how to install and boot the system.

- **Chapter 2: First Boot Setup**

This chapter provides guidance on operation steps of first boot setup.

- **Chapter 3: GoDroid Experience**

This chapter gives guidance on how to use GoDroid.

Audience

This manual is applicable for the users who wish to learn how to run GoDroid on TIGER Board first time. Readers are assumed to have certain knowledge and background on Android embedded development.

Applicable Products

This manual is applicable for the GoWarrior TIGER Board.

Reference Documents

- GoWarrior FTool_User Manual
- GoWarrior_GoDroid_Application Notes_Kodi Installation and Use

Conventions

Typographical Conventions

Item	Format
codes, keyboard input commands, file names, equations, and math	<code>Courier New, Size 10.5</code>
Variables, code variables, and code comments	<i>Courier New, Size, Italic</i>
Menu item, buttons, tool names	Ebrima, Size 10.5, Bold e.g. Select USB Debugging
Screens, windows, dialog boxes, and tabs	Ebrima, Size 10.5, Bold Enclosed in double quotation marks e.g. Open the “ Debug Configuration ” dialog box

Table 1. Typographical Conventions

Symbol Conventions




Item	Description
 <i>Caution</i>	Indicates a potential hazard or unsafe practice that, if not avoided, could result in data loss, device performance degradation, or other unpredictable results.
 <i>Note</i>	Indicates additional and supplemental information for the main contents.
 <i>Tip</i>	Indicates a suggestion that may help you solve a problem or save your time.

Table 2. Symbol Conventions

How to Contact Us

Submit all your comments and error reports to the author at:

info@gowarriorosh.com

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Fax: +886-2-8751-1001

For questions regarding GoWarrior, contact our support team at the email listed below:

support@gowarriorosh.com

1 Installation and Booting

This chapter provides step-by-step guide about how to install and start up the GoDroid, and it also provides a few methods of user interface navigation.

1.1 Preparation

Below is the brief description of the hardware and software requirements to install GoDroid

Hardware Requirements:

- **USB power supply:** It is recommended to use 5V/2A USB power adapter to supply power to Tiger Board. However, it is also possible to supply power to Tiger board via PC USB port.
- **Micro USB cable:** It will be normally supplied with the TIGER Board.
- **Ethernet cable:** Use an Ethernet cable to connect the TIGER Board LAN port with the router's LAN port (MAC 10/100Mbps).
- **MicroSD card (Optional):** A MicroSD card at least 1GB is required to boot and install. However, this is optional, since you can access the burning tool directly from pre-built image package to burn the image file on the built-in 4GB NAND Flash.

Software Requirements:

- **Windows Operating System:** A host computer will be required with Windows OS XP/7.
- **GoWarrior FTool:** A default tool used to burn the image file on the NAND Flash of the TIGER Board.

1.2 Installation

This section introduces how to install image files quickly, and get an experience of GoDroid on TIGER Board.

1.2.1 Getting Pre-Built Image Files

The pre-built image files can be downloaded from www.gowarriorosh.com

The structure of the pre-built image files is as below:

```
|-- image
    |-- ALI.ini
    |-- Ali_nand_desc.xml
    |-- Backup.abs
    |-- baseparams.abs
    |-- bootargs.abs
    |-- bootmedia.ubo
    |-- cache.img
    |-- deviceinfo.abs
    |-- FTool.exe
    |-- GoWarrior FTool User Manual_v1.0.docx
    |-- kernel.ubo
    |-- nand_updater_loader.axf.bin
    |-- NandList_v2.ran
    |-- recovery.ubo
    |-- sdram_C3921_BGA462_1GB_1600Mbps.abs
    |-- system.img
    |-- uboot_unify_1GB_training.abs
    |-- userdata.img
```

1.2.2 Installing NAND Image Files

For how to install NAND image files and how to burn NAND Flash of GoDroid platform by using GoWarrior FTool, please refer to "[GoWarrior FTool_User Manual](#)".

1.2.3 Major Components of TIGER Board

The figure below shows the components, LEDs and Switches on the TIGER Board.

1. USB Port 0(Micro USB)
2. USB-1/USB-2 port
3. Expansion connector (GPIO, UART)
4. Ethernet
5. HDMI
6. 3.5mm A/V Jack Socket
7. IR Receiver
8. User Keys
9. Standby/Burn Key
10. Boot Switch (NAND boot or MicroSD card boot)
11. Power Supply Jack
12. LEDs

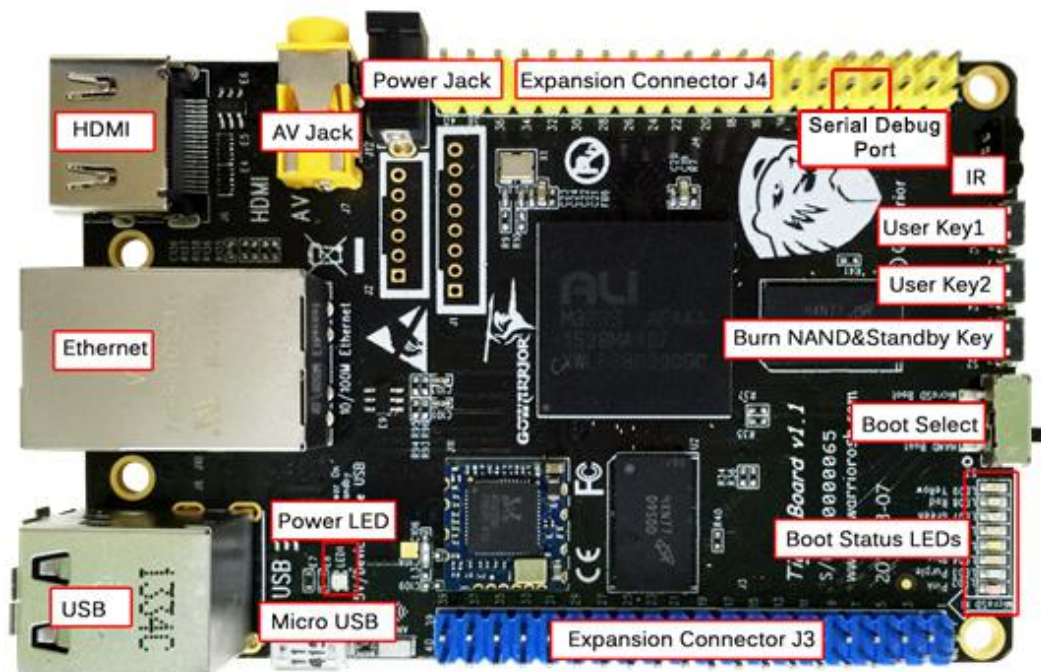


Figure 1. TIGER Board Top Side

Below is a brief description of the USB Port0 and USB Port1/USB Port2 that are annotated in the Figure 2 and Figure 3 respectively.

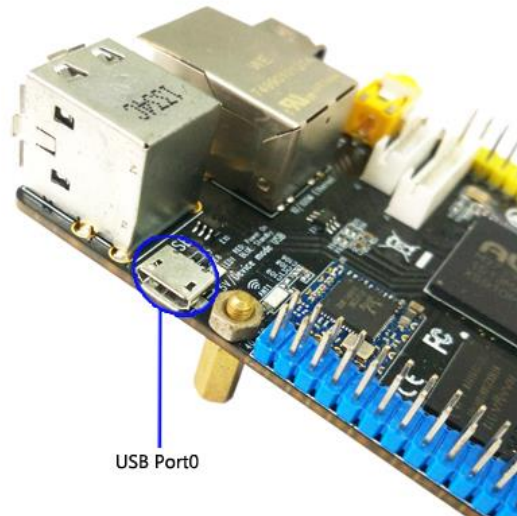


Figure 2. USB Port0



Figure 3. USB Port1/Port2

USB Port description:

- **USB Port0 (Micro USB)** : This port can be used for NAND Flash burning in TIGER Board, to supply 5V power input or for USB ADB debugging. To use it for USB ADB debugging, please ensure USB debugging function is enabled in GoDroid. The option is checked in system by default, **Settings>Developer options>USB debugging**.
- **USB Port1:** The USB 1 is located on the left bottom corner of the TIGER Board, just under the USB Port2, as annotated in the Figure 3. Since the

USB debugging is turned on by default, the USB Port1 can only be used for TIGER Board power supply. However, if you want to use the USB Host mode on USB Port1, then you have to uncheck the option: **Settings>Developer options>USB debugging**. Thus, you can connect USB devices, such as USB flash drive, mouse, keyboards, USB HUB, camera, and other equipment through USB port 1.

- **USB Port2:** This port is located the left bottom corner of the TIGER Board, just on the top of USB Port1, as marked in Figure 3. USB Port 2 is use to connect to USB devices, such as USB flash drive, mouse, keyboards, USB HUB, and other equipment.

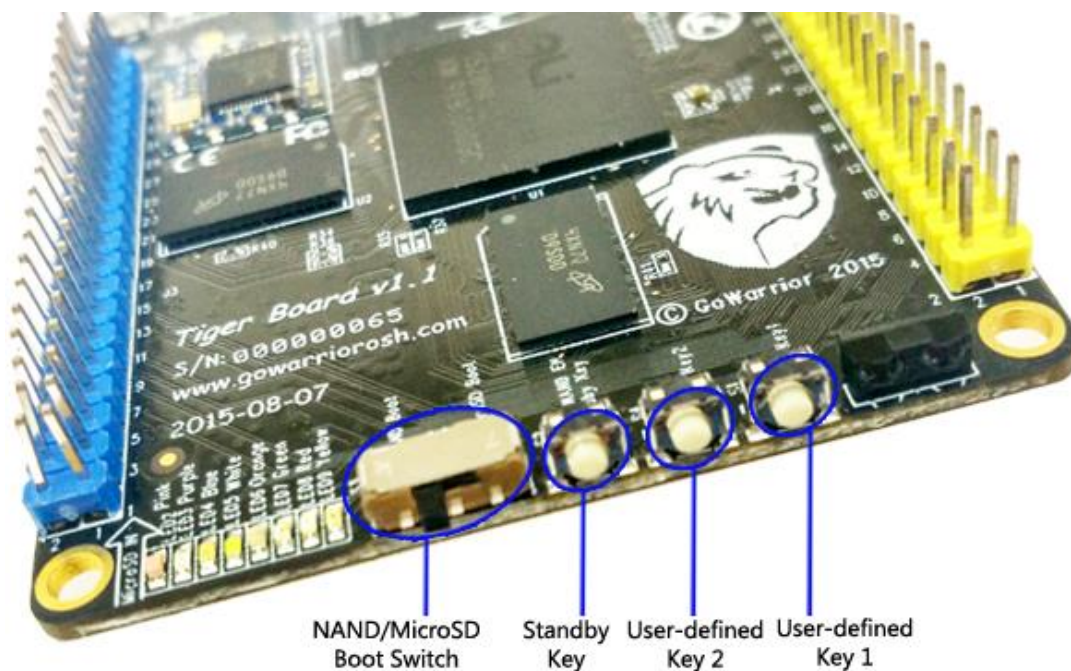


Figure 4. Boot Switch

Below is a brief description of the Boot Switch, which is annotated in the Figure 4.

Boot Switch Description:

The Boot Switch button is to choose boot from NAND Flash or MicroSD card.

- **NAND Boot:** If the button is pushed on this side, then the board will run from NAND Flash.
- **MicroSD Boot:** Similarly, if the button is pushed on this side, then the board will detect MicroSD Card, and run MicroSD Boot process to burn

image from MicroSD Card to NAND Flash.

- **Standby Button:** This button is to make the device go into standby or resume therefrom. It can also be used to burn NAND Flash.
- **User-defined key:** The other two buttons are user defined buttons.



Note:

If a high power-consuming device is connected with USB 1 port, then an additional power supply will be required.

USB debugging is an essential development feature that lets programmers transfer applications from development kit on a computer to a device. Unless you are a developer, you will probably never need to use USB Debugging feature.

1.3 Starting up GoDroid

This section shows how to interact with TIGER Board.

Procedure:

1. Connect an external keyboard and mouse with TIGER Board.
2. Boot Switch to NAND Boot side.
3. Power up the TIGER Board.
4. Wait for about 5 seconds, and then the screen will display GoDroid Logo, which indicates successful system boot.



Note:

It may take 35 seconds to enter the home screen. Please wait patiently. For the first time boot-up, a setup wizard will display.

1.3.1 Home Screen of GoDroid

You should see a similar home screen as shown below in Figure 5.

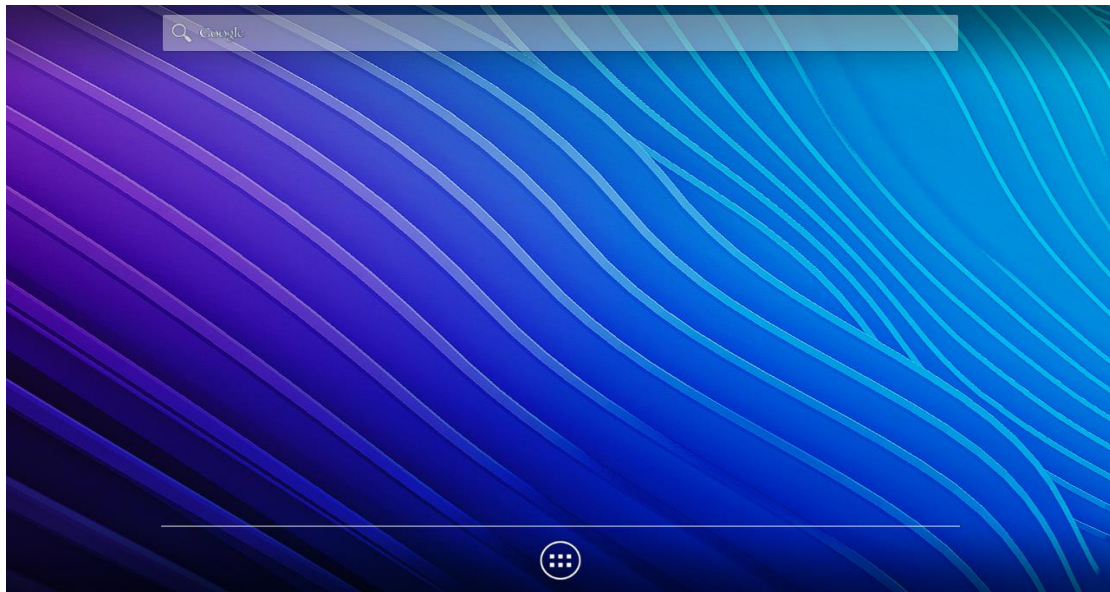


Figure 5. Home Screen of GoDroid

1.3.2 UI Navigation

GoDroid supports the following ways to navigate the UI screen:

- Remote controller
- USB keyboard
- USB mouse

1.3.2.1 Key Mapping

The table below lists the keypad and USB Keyboard mappings for using GoDroid UI. The "Info" key on the remote controller is a switch to let the pressing of Left, Right, Up and Down keys act as mouse movement or as normal keys.

Function	Remote Control	USB Keyboard	USB Mouse	Soft Keyboard
Home screen	Exit key	N/A	N/A	N/A
Volume up	Volume +	N/A	N/A	N/A
Volume down	Volume -	N/A	N/A	

Function	Remote Control	USB Keyboard	USB Mouse	Soft Keyboard
Left	Left Arrow	Left	N/A	Left
Right	Right Arrow	Right	N/A	Right
Up	Up Arrow	Up	N/A	Up
Down	Down Arrow	Down	N/A	Down
Back	Esc	Esc	Right click	Esc
OK	Enter	Enter	Left click	Enter
Number 0-9	Number keys 0-9	Number keys 0-9	N/A	Number keys 0-9

Table 3. Key Mapping Table

2 First Boot Setup

For the first boot after burning process, the First Setting interface pops up before entering GoDroid system. Please perform the following steps to help you carry out the setup interface.

2.1 Welcome

Figure 6 shows the welcome screen on the first boot up, GoDroid system supports "**Basic Setup**" and "**Advanced Setup**". Click "**Basic Setup**" to do some settings for best user experience.

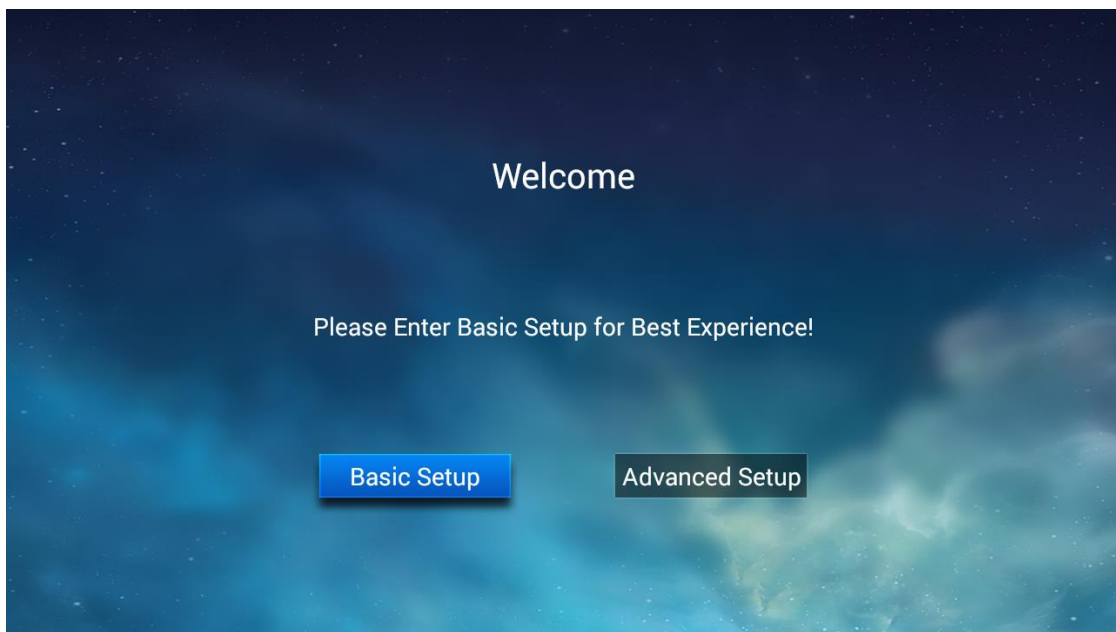


Figure 6. GoDroid First Boot Welcome Interface

2.2 Resolution Setting

GoDroid system supports a variety of resolution settings. It is easy to select the setting that is best for your television. Figure 7 shows the resolution settings interface on the first boot up. You can choose different resolutions for your television.

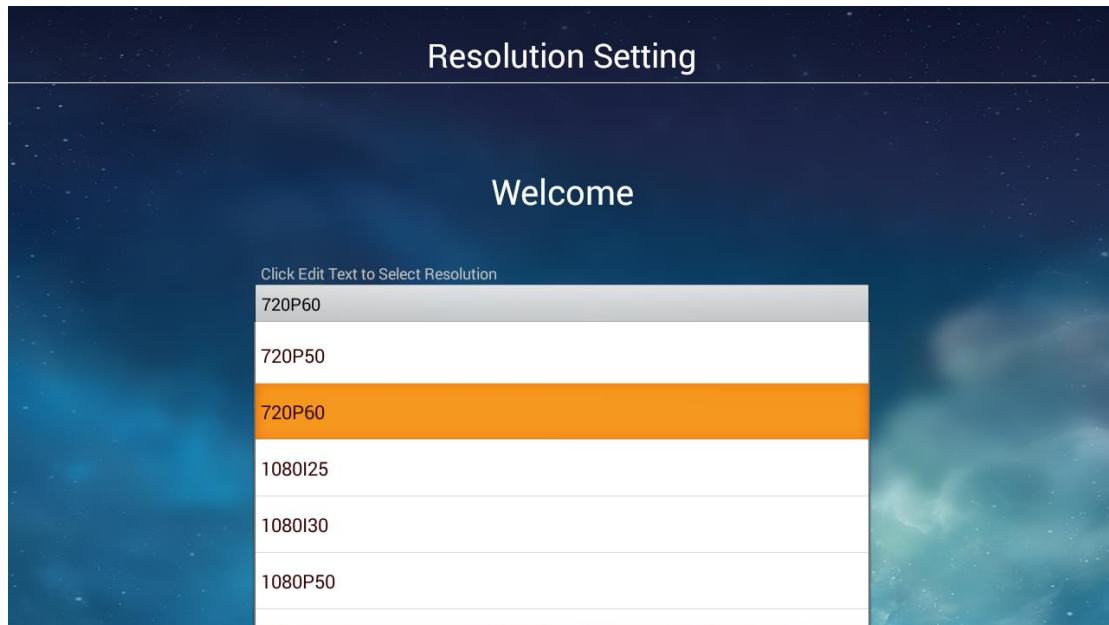


Figure 7. Resolution Setting

2.3 Screen Setting

You can use menu to calibrate your TV to get the best visual result.

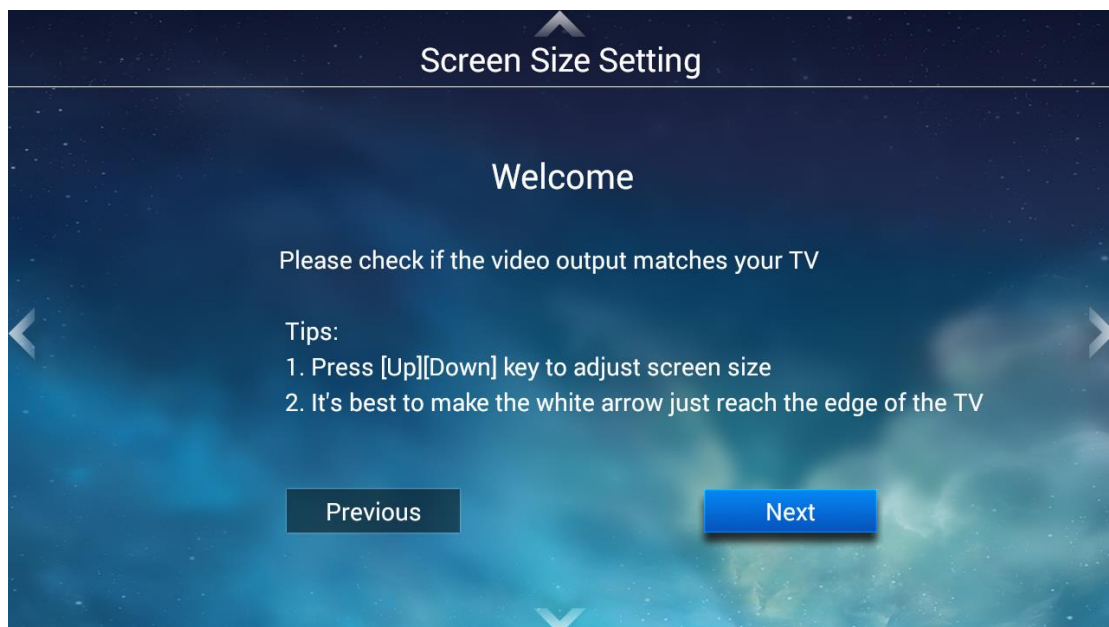


Figure 8. Screen Setting

2.4 Network Setting

GoDroid can be connected to your home network to access the internet using wired or wireless network connection. For information on how to connect with network, refer to Figure 9 shown below.

There are two buttons appeared on screen. Select the desired option to continue: "**Setup WiFi**" and "**Setup Ethernet**".



Figure 9. Network Setting

2.4.1 Wi-Fi Setting

Click "**Setup WiFi**" button. The system will search and list Wi-Fi connections on the screen, as shown in Figure 10. Once the user selects and taps the desired Wi-Fi network. It will be prompted to enter the network password (if you use one), as shown in Figure 11.



Figure 10. Wireless Setting



Figure 11. Wireless Password Input

In this interface, user needs to input Wi-Fi password, then Wi-Fi will be connected.

2.4.2 Ethernet Setting

The GoDroid can be connected to local network using a wired network.

Follow the simple steps shown in Figure 12 to set up a wired network connection.

Plug an Ethernet cable into the Ethernet connector.

Plug the opposite end of the Ethernet cable directly into a LAN port on Router.

Click **"Setup Ethernet"** on the screen.

You have the following options for setting up your wired network:

Auto — IP address will be assigned automatically.

TCDHCP — User needs to input Telecom Account and password.

Manual — User needs to input IP address and other internet information by himself.

Dial-Up — User needs to input PPPoE Account and password.

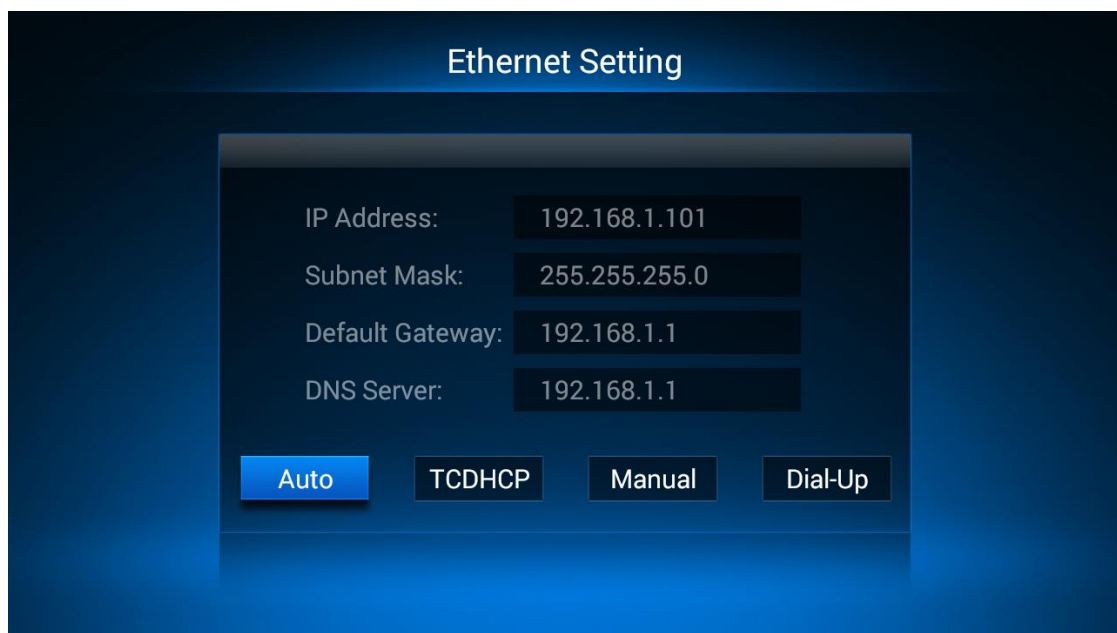


Figure 12. Ethernet Setting

2.5 Time Zone Setting

After Network Setting, the system will show **"Time Zone Setting"** interface, as shown in Figure 13.

Choose the desired time zone and then press **"OK"**, system will return to main page. If pressing **"Advanced Setup"**, **"Settings"** interface will be

shown, as shown in Figure 14.

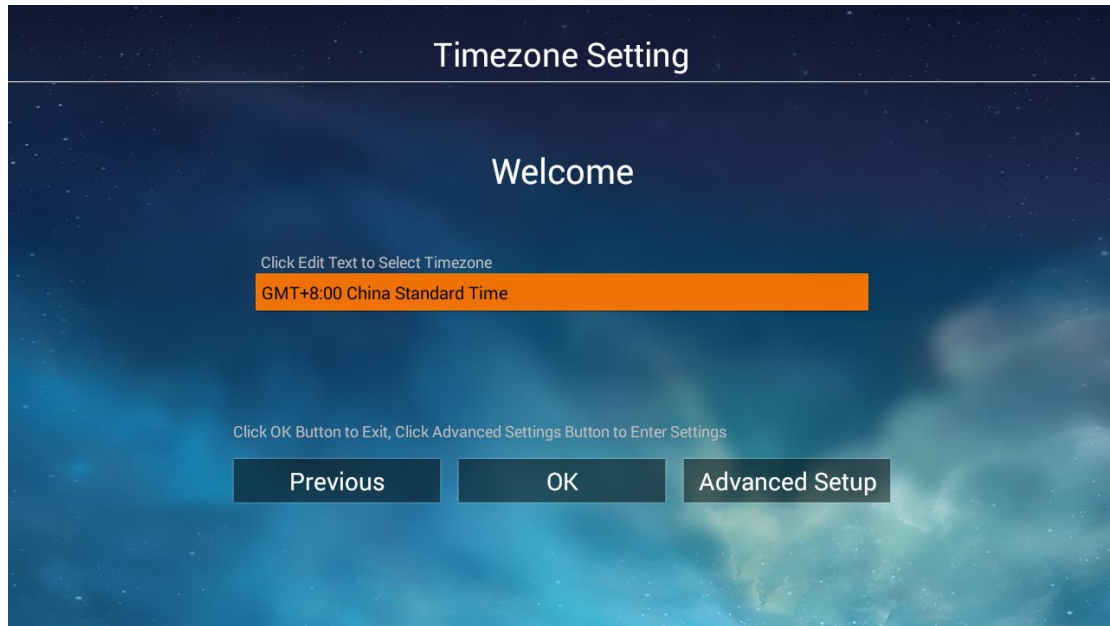


Figure 13. Time Zone Setting

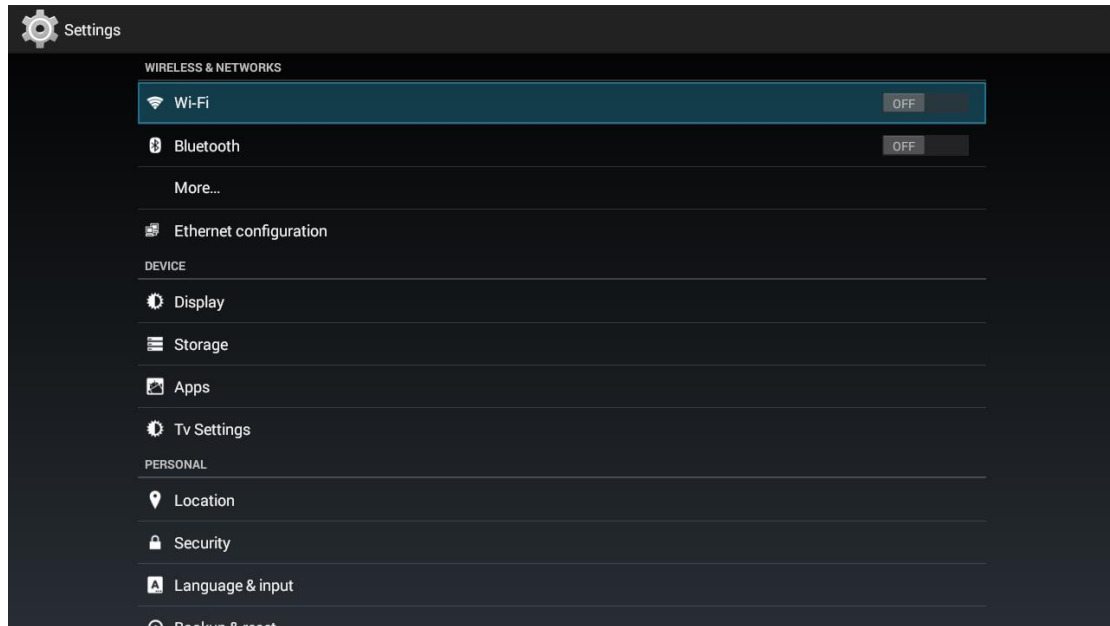


Figure 14. Settings Interface

After the setup is complete, the Home Screen is displayed (see Figure 15).

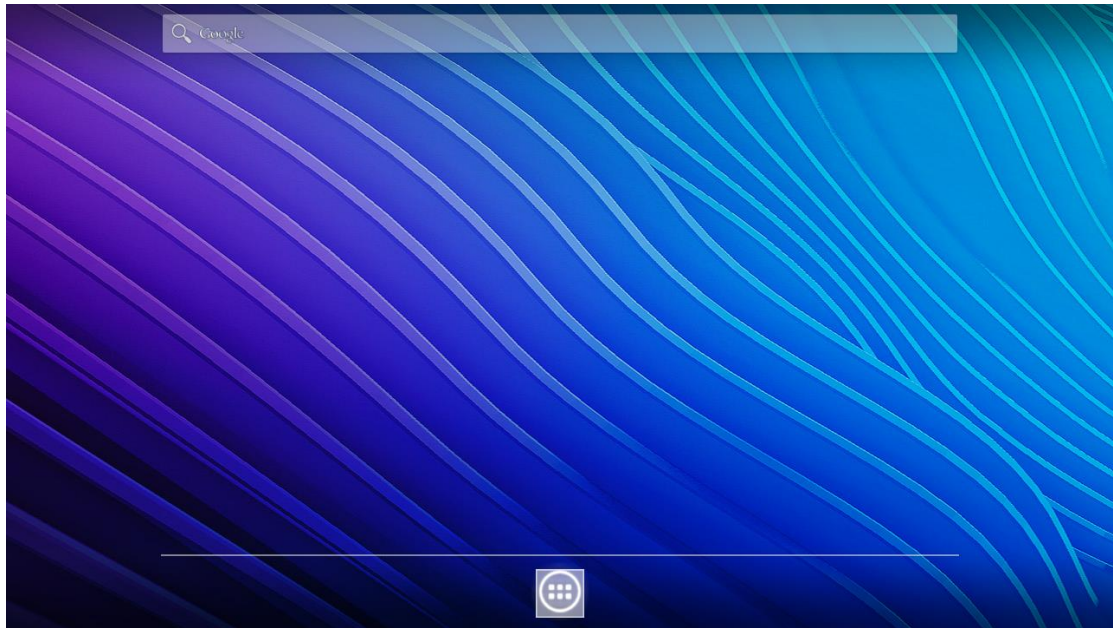


Figure 15. Home Screen

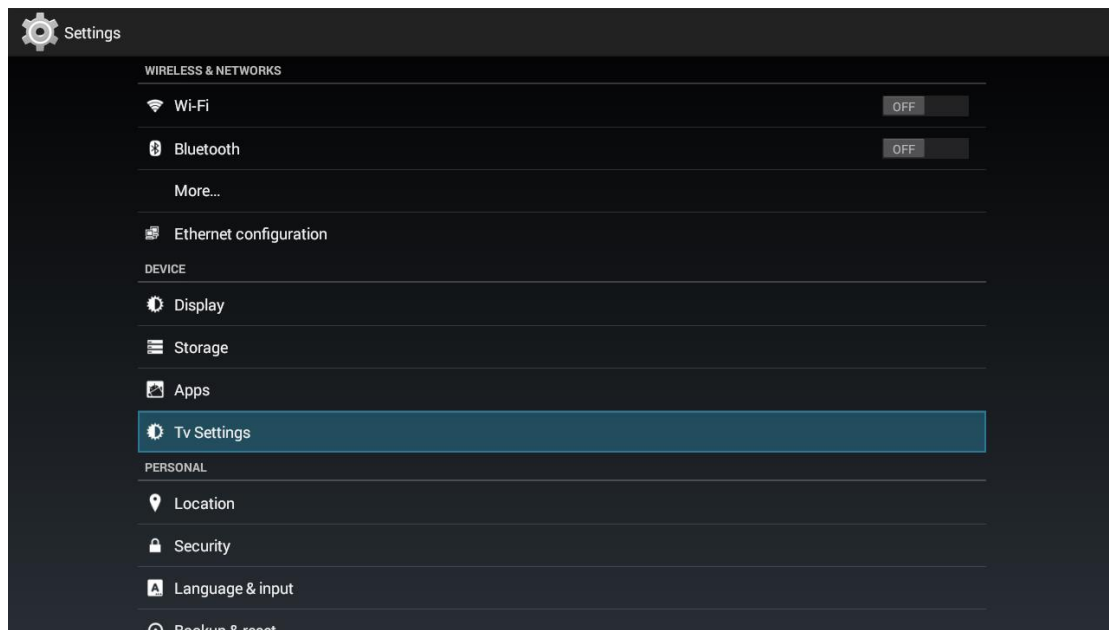
3 GoDroid Experience

This chapter introduces the features implemented by GoDroid, and provides guidance on how to use these features.

3.1 TV Resolution/Scale Ratio

Procedure:

1. Select **Settings>TV Settings>Resolution** to switch a TV system. It supports the following resolutions: 720P50, 720P60, 1080i25, 1080i30, 1080P50, 1080P60.



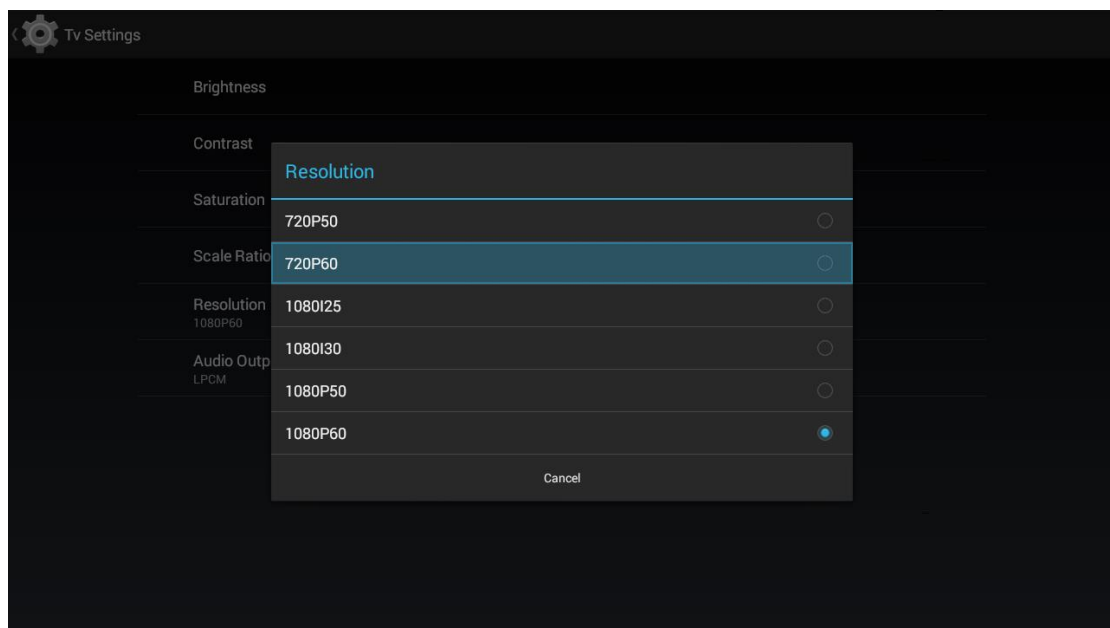
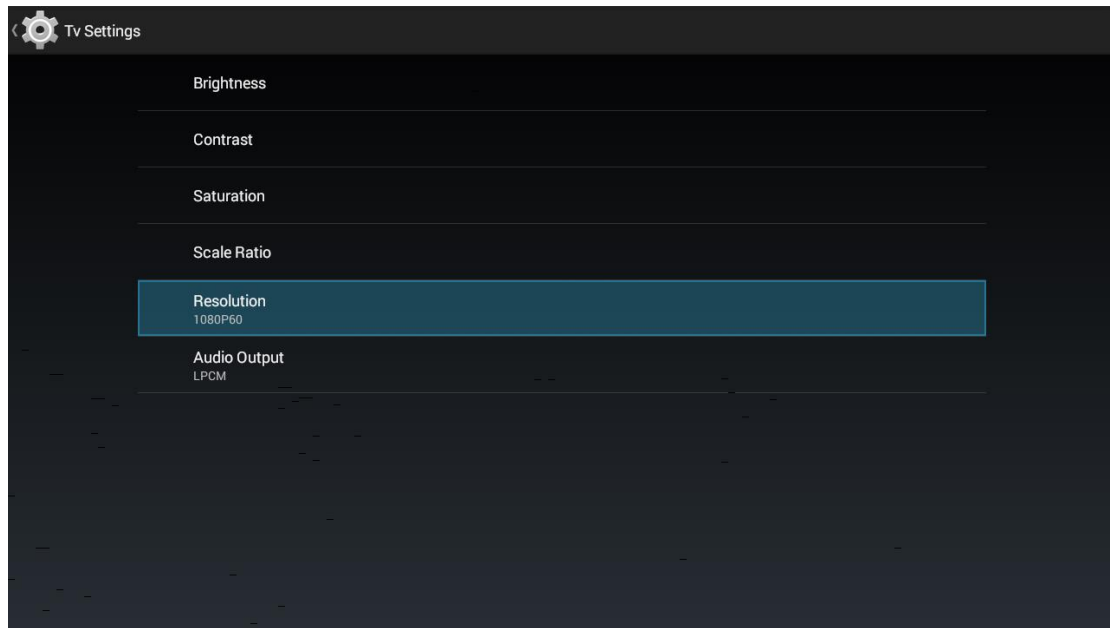


Figure 16. Resolution Setup Interface

2. If the opened application program cannot be displayed in full screen, select **Settings>TV Settings>Scale Ratio** to adjust the window size.

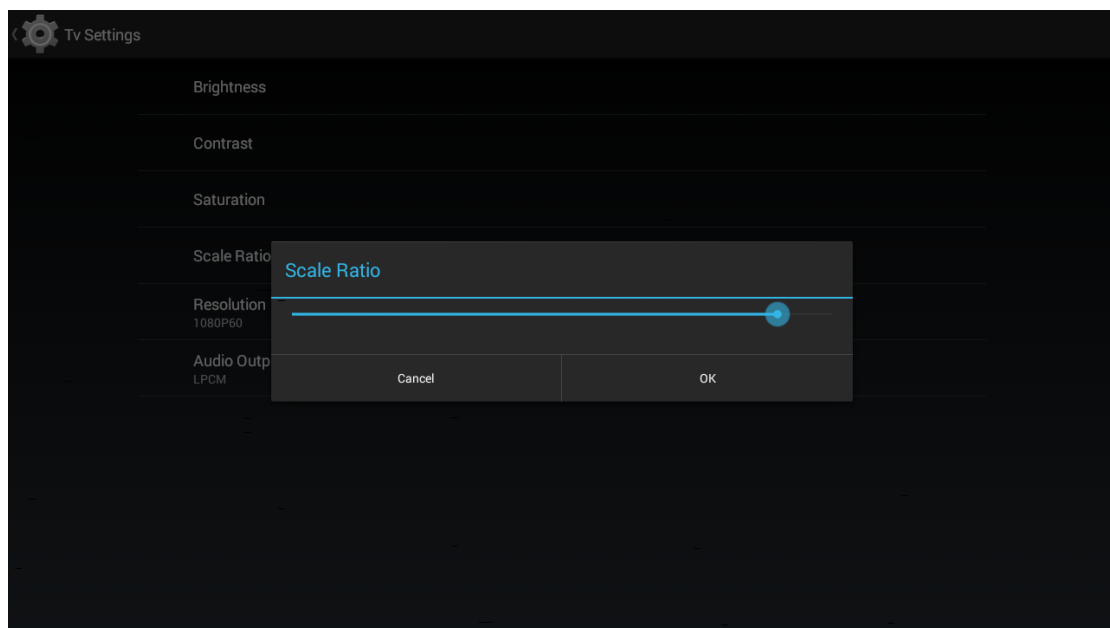
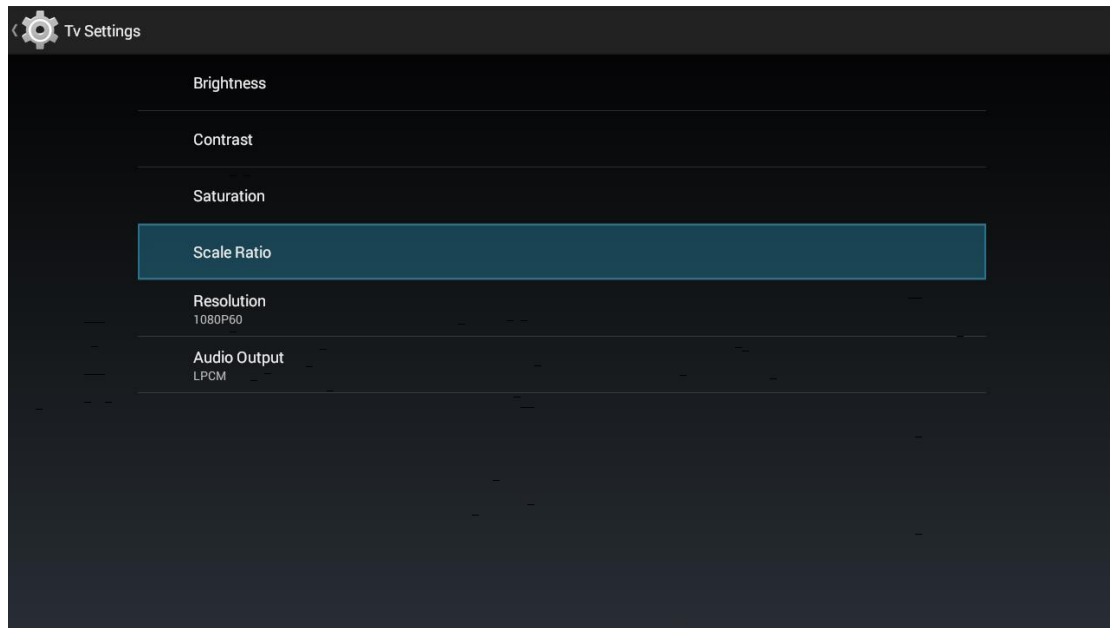


Figure 17. Scale Ratio Adjustment Interface

3.2 Application

3.2.1 Installing Applications

Generally, there are two methods to get an application: one is to download the application from network and install it; the other is to copy the existing

application from a computer to USB flash disk, and install it via the disk. In addition, the current GoDroid system comes with some commonly used default applications. You can open **Tango Browser Application>My Data** folder, select them to install.

Procedure:

1. Select Tango Browser and open, as shown in the following figure, enter **"My Data folder"**.

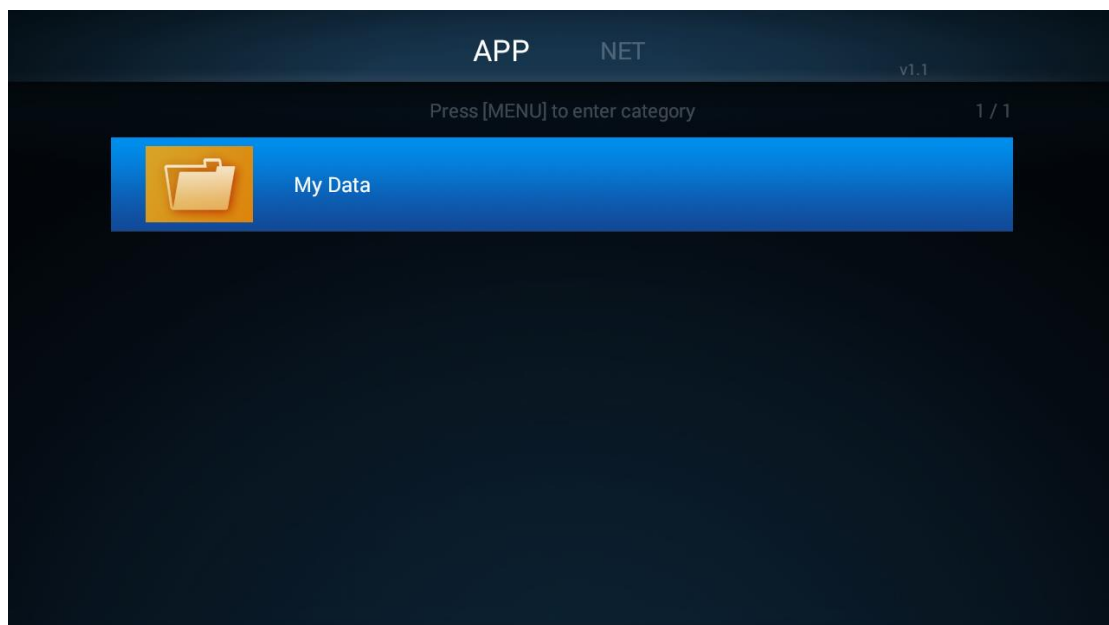
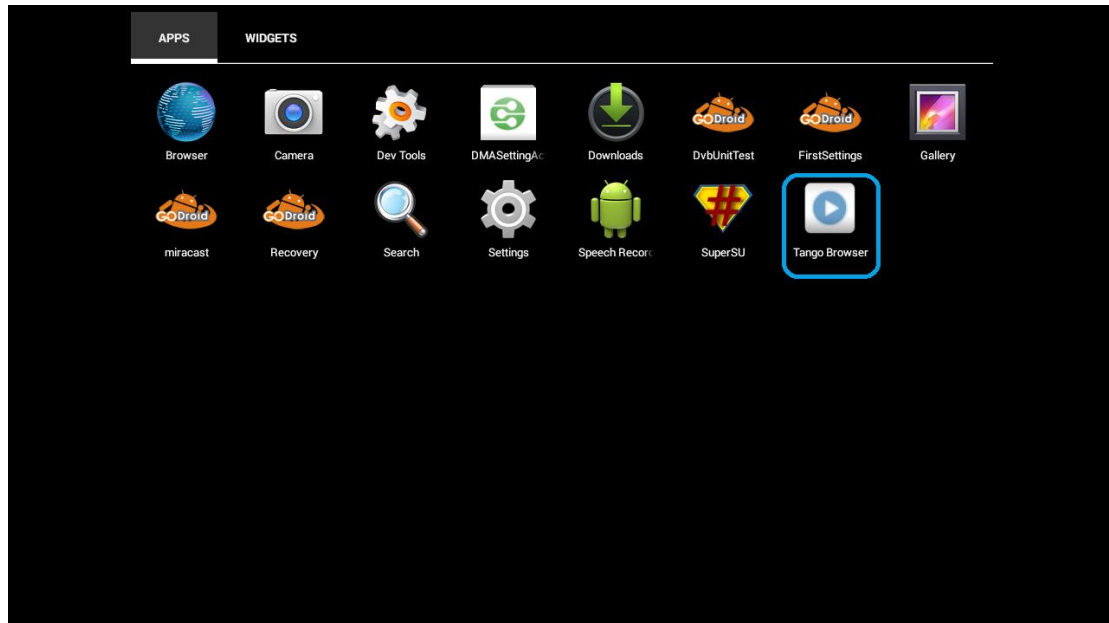


Figure 18. Entering Tango Browser

2. From the pre-installed applications, select the application you want to install, press **"Install"** button to install, below is an example of Kodi application.

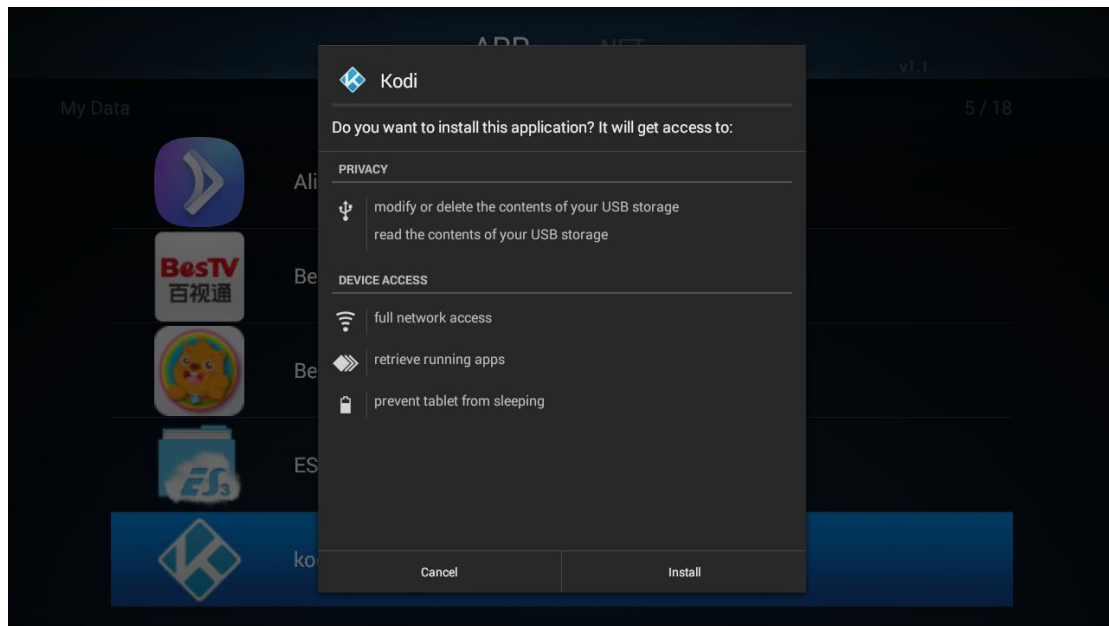


Figure 19. App Installation

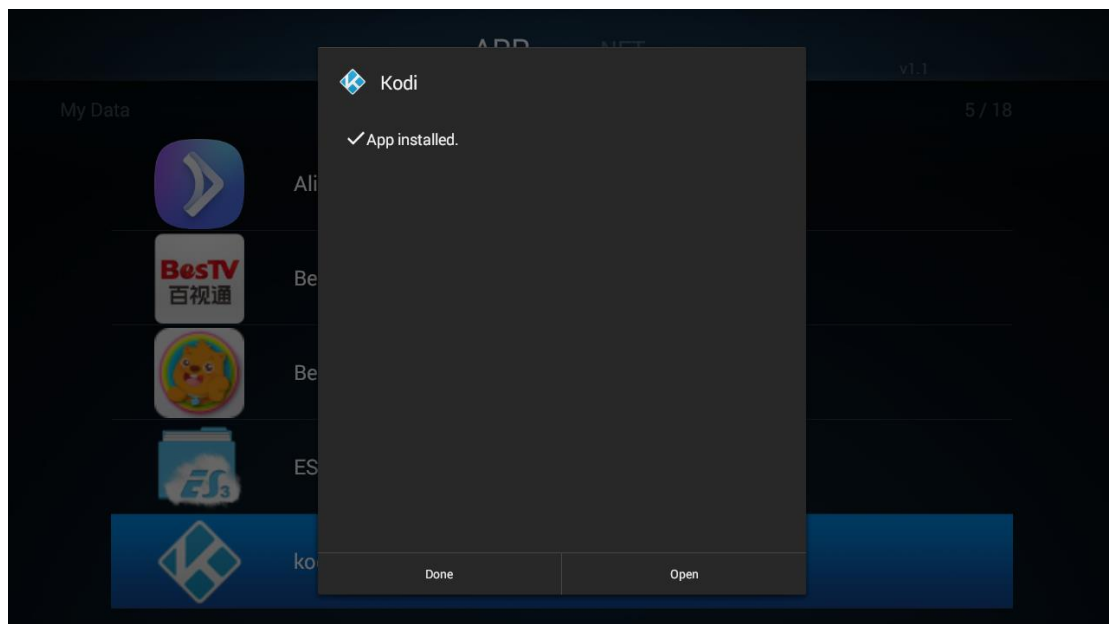


Figure 20. Completion of App Installation

3. After the installation is completed, return to the **"APP"** interface, and then you can see the App program installed.



Figure 21. Interface of Successful App Installation

3.2.2 Uninstalling Applications

If you want to delete some unused applications, do as follows

Procedure:

1. Select the **"Menu"** key, and then select **"Manage apps"** from the pop-up menu in the lower right corner of home screen.

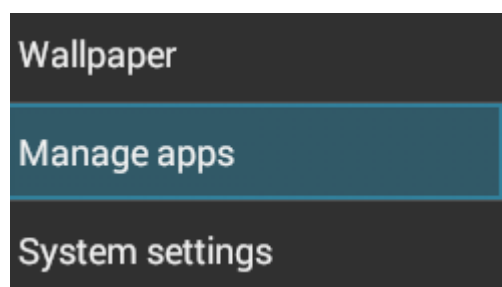


Figure 22. Manage apps

Alternatively, click the **"Settings"** icon  on the **"APP"** interface. After entering the settings interface, click **"Manage apps"**.

2. Select the application icon you wish to delete. In the **"Delete"** Window that pops up, select **"Uninstall"**, and a confirmation window will pop up. Click **"OK"**, and then it will be deleted successfully.

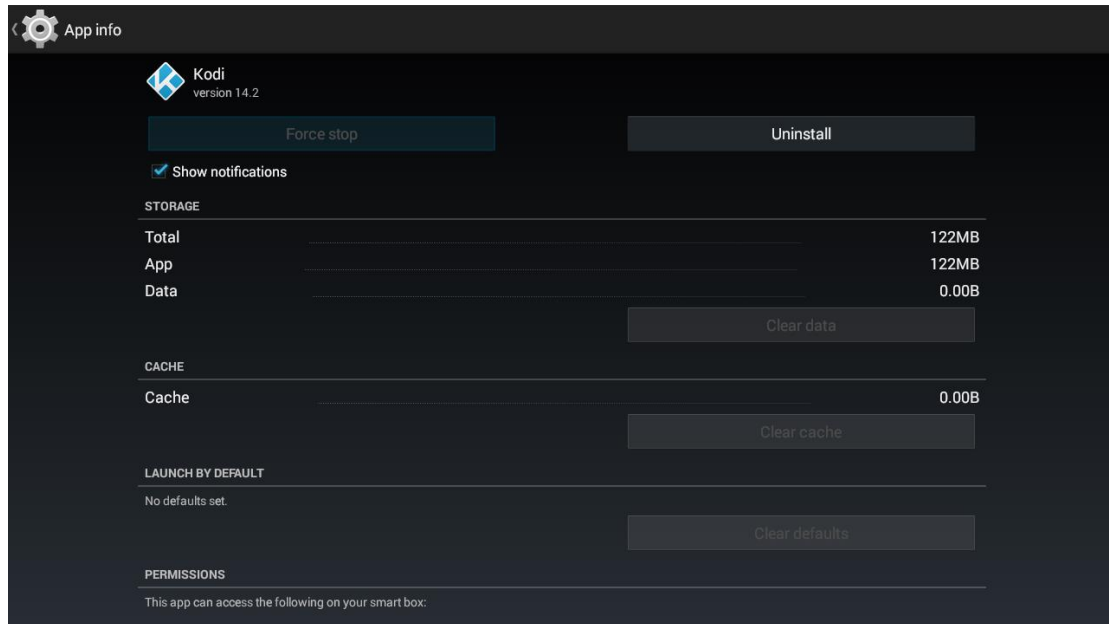
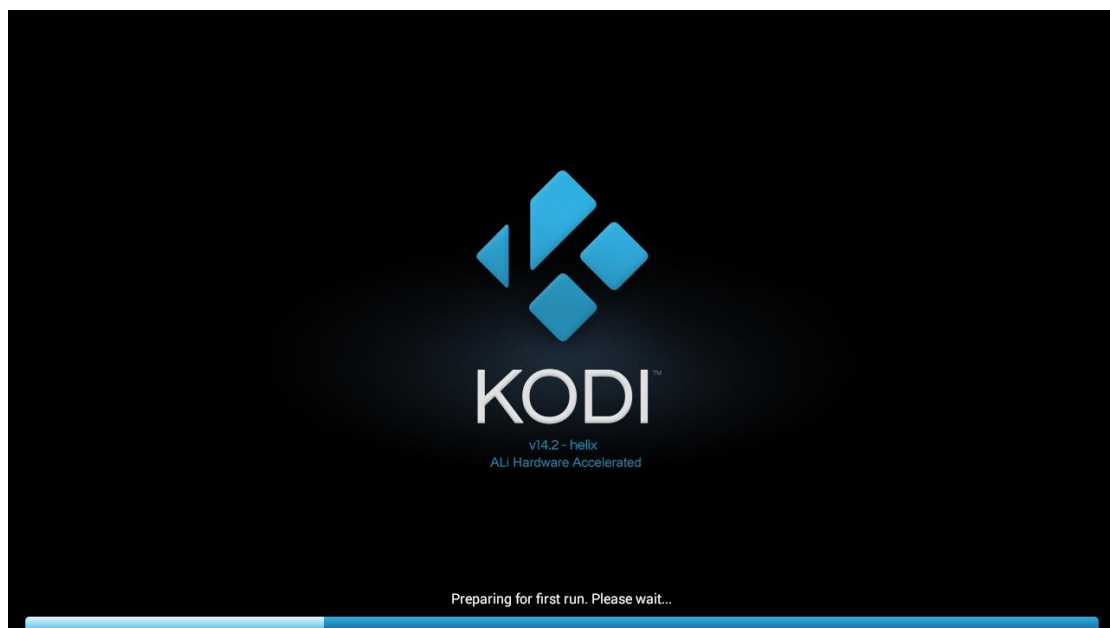
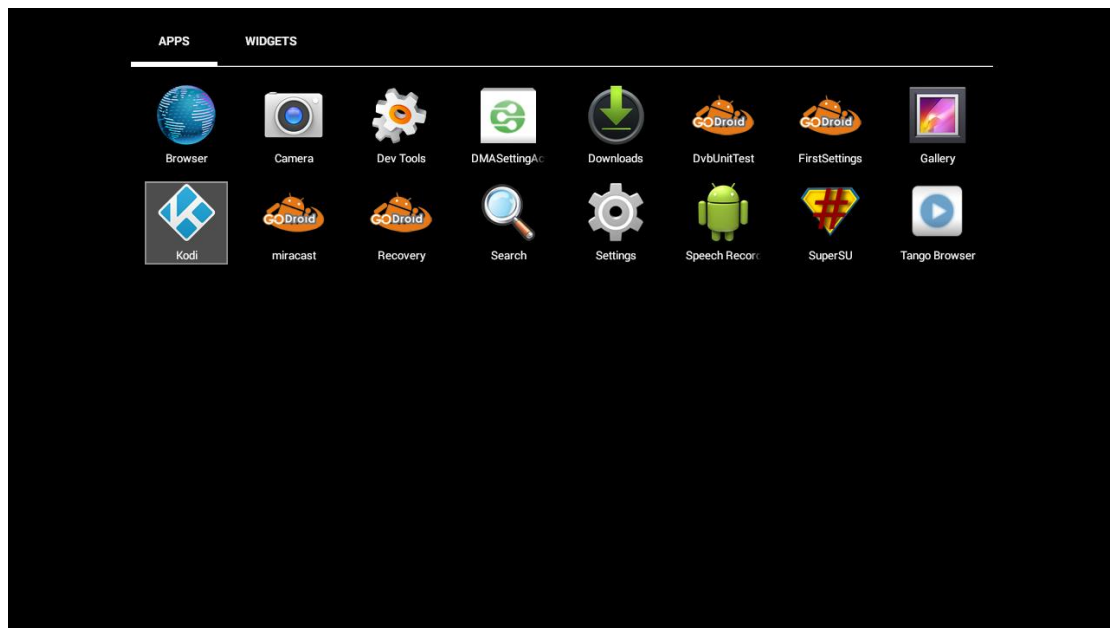


Figure 23. Delete an App

3.3 Local Multimedia Playback

Insert a USB flash disk containing multimedia files, open **"Tango File Browser"**. Then select Kodi application to install, you can use Kodi to playback your local media. For detailed instructions, please refer to ["GoWarrior_GoDroid_Application_Notes_Kodi_Installation_and_Use"](#).



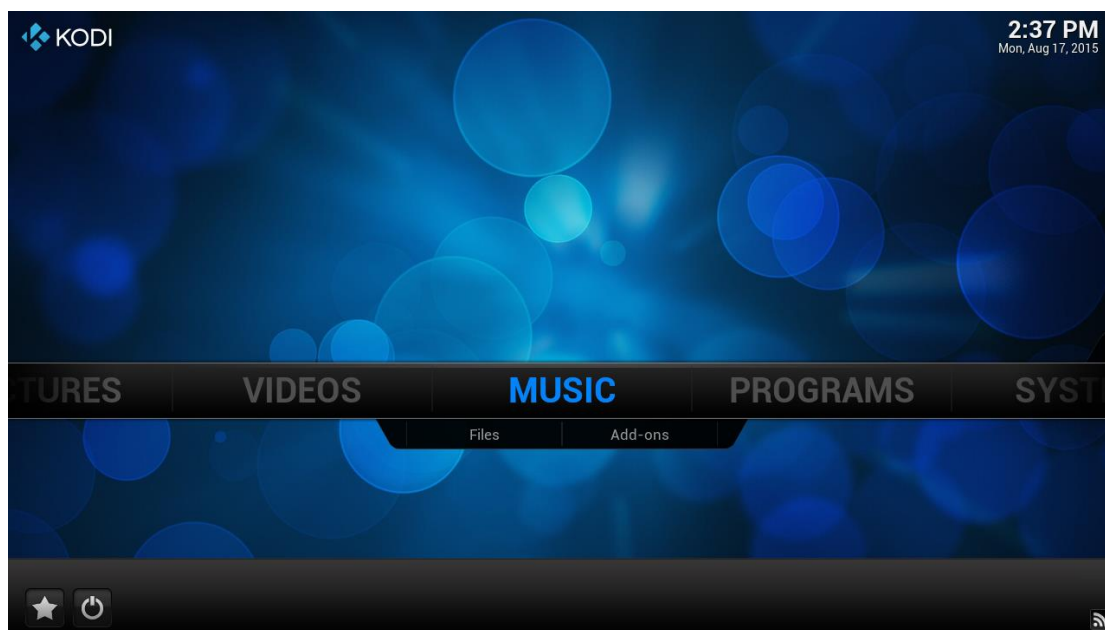


Figure 24. Kodi for Local Media Playback

Appendix: Glossary

Abbr.	Full Name
GoDroid	GoWarrior Android Development Kit
GoWarrior FTool	NAND burning tool used for GoWarrior Platform

Table 4. List of Abbreviations

Revision History

Document Change History

Revision	Changes	Date
v1.0	Initial Release	September 07, 2015

Table 5. Document Change History

Software Changes

Revision	Changes	Date
v1.0	Initial Release	September 07, 2015

Table 6. Software Change History



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