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User Guide for RK2928 wireless HDMI dongle (Lollipop)

(TV Department)

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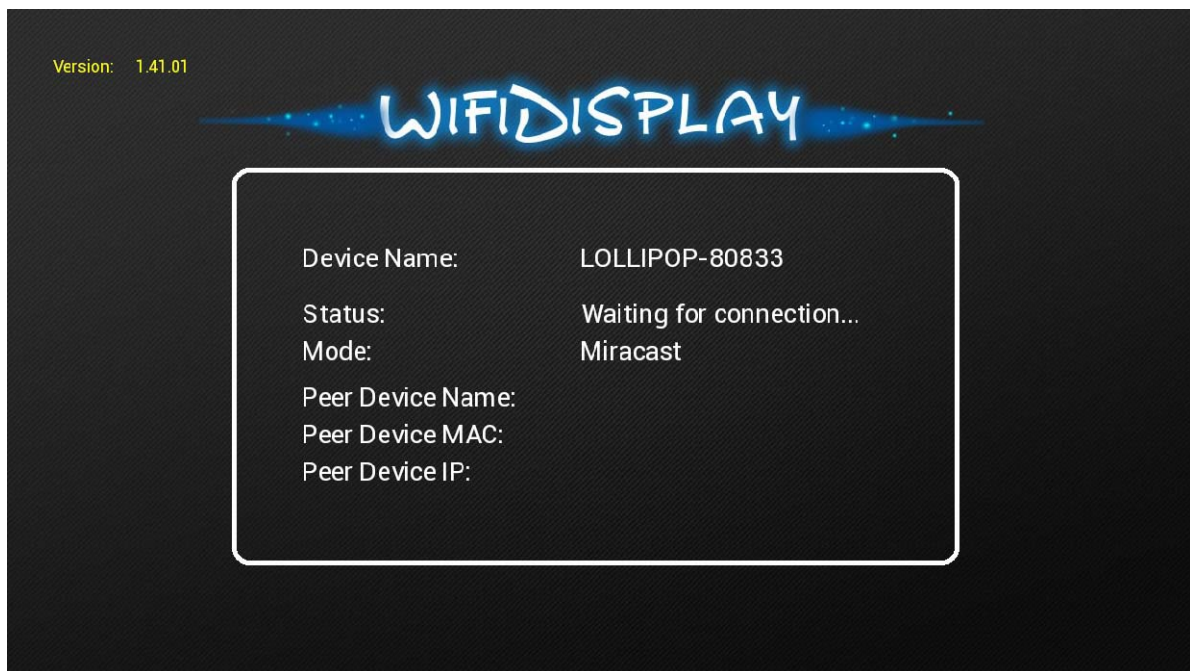
1 Introduction

This document helps user to understand how to use RK2928 wireless HDMI dongle and what kind of devices they need to work with the dongle. Basically, RK2928 wireless HDMI dongle have implemented three features, Miracast(WiFi Display or WFD), DLNA and Airplay which are running on separate function mode, or rather, two different WIFI working model. Chapter 2 describes how to play WFD /DLNA/Airplay on the dongle, and also describes how to switch function modes. Chapter 3 lists the compatible devices that are able to work with the dongle and shows user how to use such devices.

2 How to use dongle

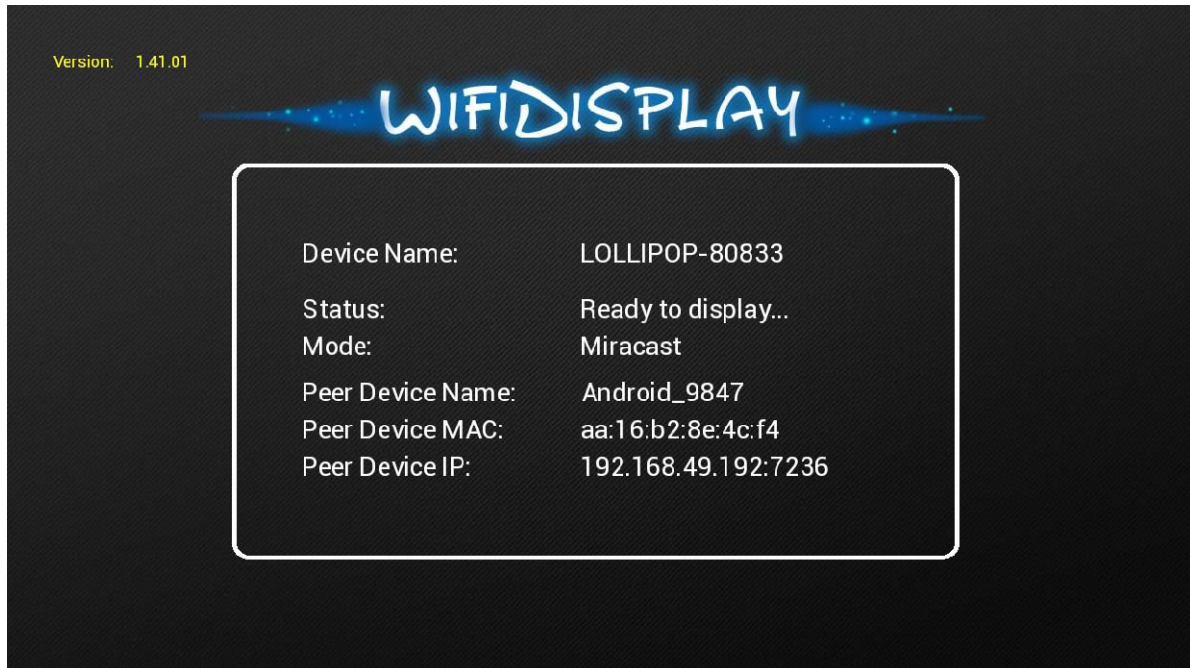
Miracast(WFD) and DLNA/Airplay are running on the different WIFI working models. Miracast's connection is over WiFi direct and DLNA/Airpaly's connection is over WiFi softap(hotspot). These two WiFi working models are not able to be concurrent. In this chapter, each features of the dongle will be described first and then showing how to switch modes between two WiFi working models.

2.1 Miracast(WFD)



Power on the dongle and wait until the status “Waiting for connection...” appears. Meanwhile, make a connection request from WFD source device, i.e. mobile phone. About the operation on WFD source device, please refer to chapter 3 for details. When connection between the mobile phone and the dongle is established, WFD source device’s MAC address, IP address and

device Name will be shown on the screen as the picture below.



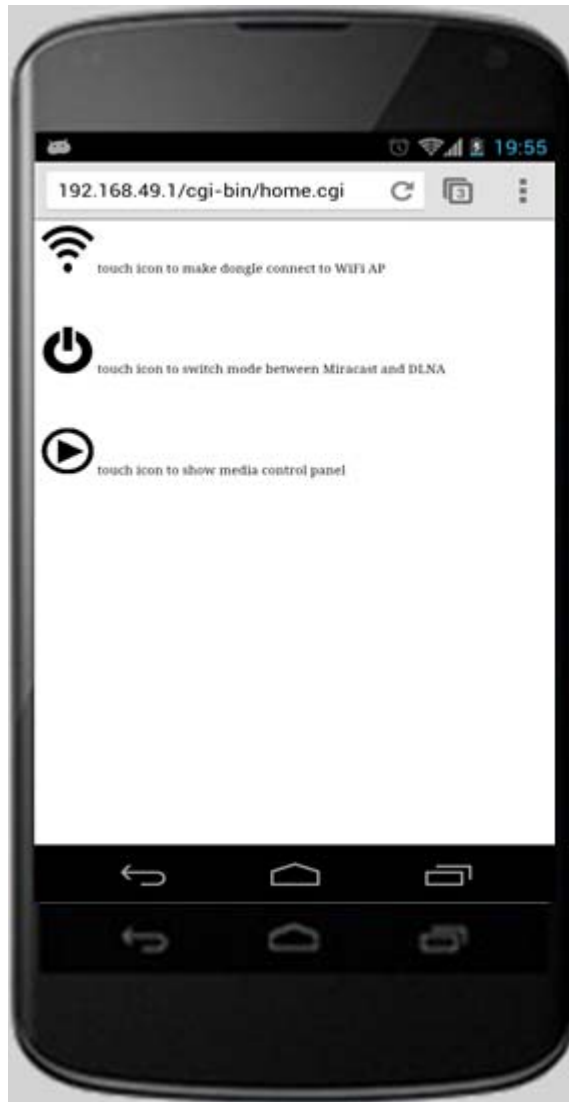
2.2 DLNA


1) Connect to dongle

Enable WiFi on the mobile phone/laptop/tablet, search for the AP with the SSID named by dongle's device name, for example, LOLLIPOP-80833. Dongle is now working as a soft AP. So connect to the soft AP with the default password 12345678.

2) Connect to Internet

Upon the connection between mobile/laptop/tablet and dongle is completed, open web browser on the mobile phone/laptop/tablet and visit <http://192.168.49.1>. What you will see is as below.



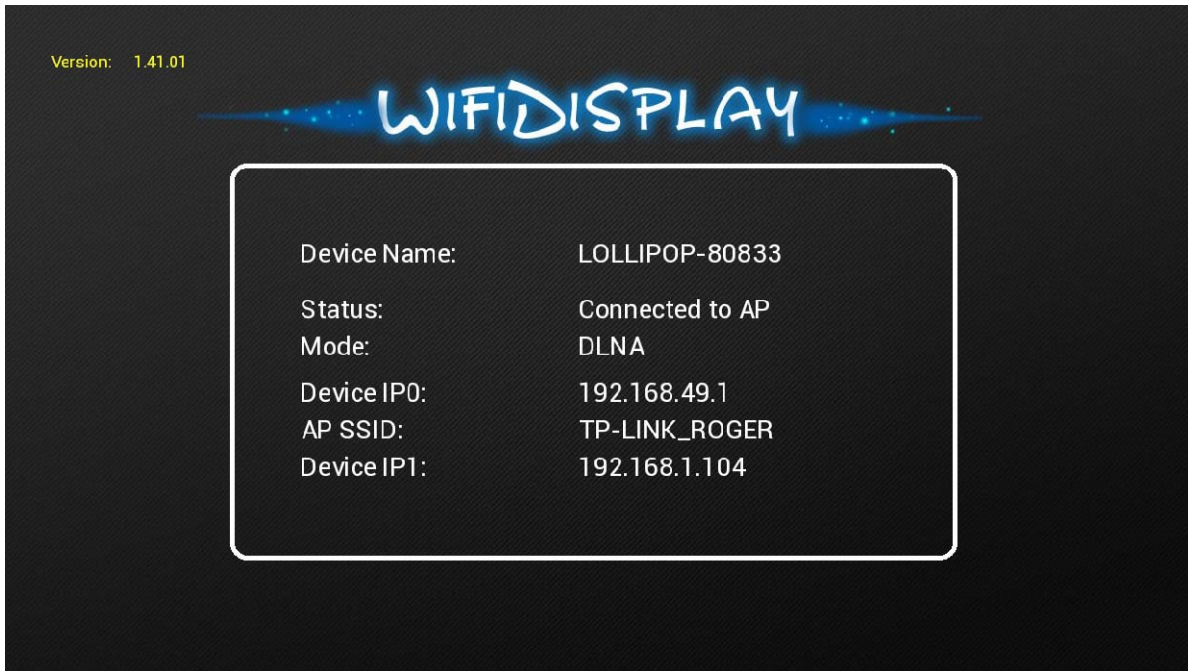
Touching the icon  will make the web browser jump to another page as below.



Touch “Scan” and follow the instructions to connect to a WiFi AP which is able to access Internet through WAN. Please pay an attention that when the connection between dongle and AP is established, the connection between dongle and mobile phone/laptop/tablet may be disconnected. The reason is that the connection channel between dongle and mobile phone is different from the channel between dongle and AP. In this case, mobile phone/laptop/tablet should be connected to dongle by soft AP again.







Till now, dongle is able to access Internet through the AP . AP’s SSID and dongle’s IP address dispatched from AP (“**Device IP1**”) will be shown on the screen. Because of dongle’s AP bridge function, the mobile phone/laptop/tablet connected to dongle is able to access Internet too.

3) Applications for DLNA

As we known, dongle is work as DLNA DMR, so there should be DMC and DMS to work with DMR. There are so many DMC/DMS applications on each kind of OS. Some of them are listed as below.

A. Streaming from local storage:

Bubble upnp  , Skifta  for Android

AllShare  for windows

uShare for Linux

8player  for IOS

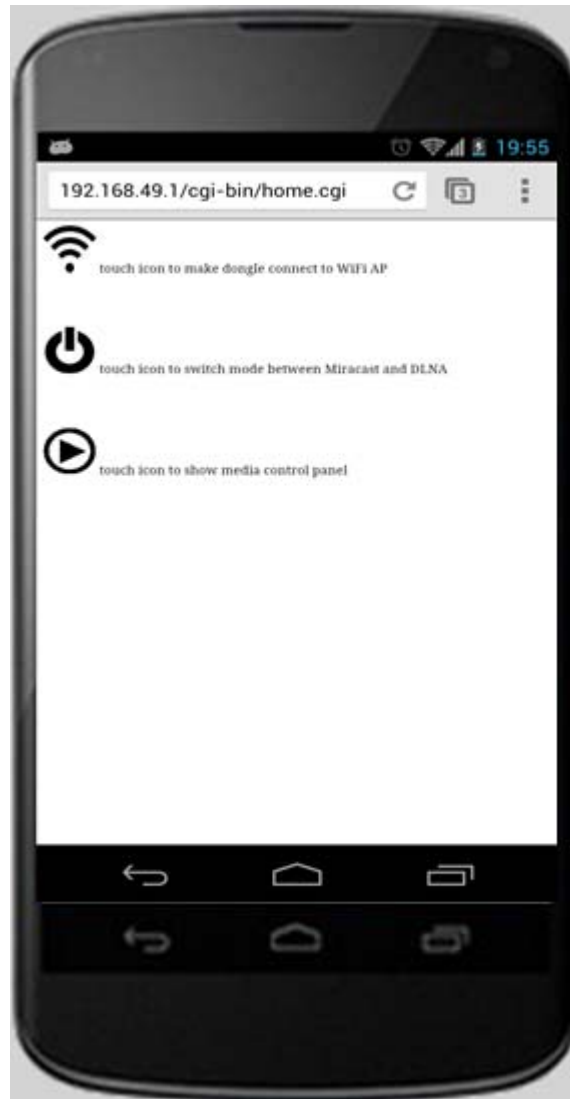
B. Streaming from web streaming client:


腾讯视频(tencent)  , PPTV  , 搜狐视频(sohu)  ,

iMediaShare  for Android

腾讯视频(tencent)  , PPTV  , iMediaShare  for
IOS

4) Media control panel on web



Let's back to <http://192.168.49.1>, touch icon  and the web browser will jump to the page as below.



The media control panel can be used to control dongle to PLAY/PAUSE/STOP/FFW/REWPREV/NEXT /VOL UP/VOL DOWN when streaming video or audio.

2.3 AirPlay (Third party)

As the same as DLNA, Airplay's connection between MAC/ipad/itouch/iphone and dongle is over soft AP. Please refer to 2.2. RK2928 wireless dongle is able to render pictures and videos sharing from IOS devices. Audio has not been supported yet. Some web streaming clients which are able to share contents by

Airplay is listed as below.




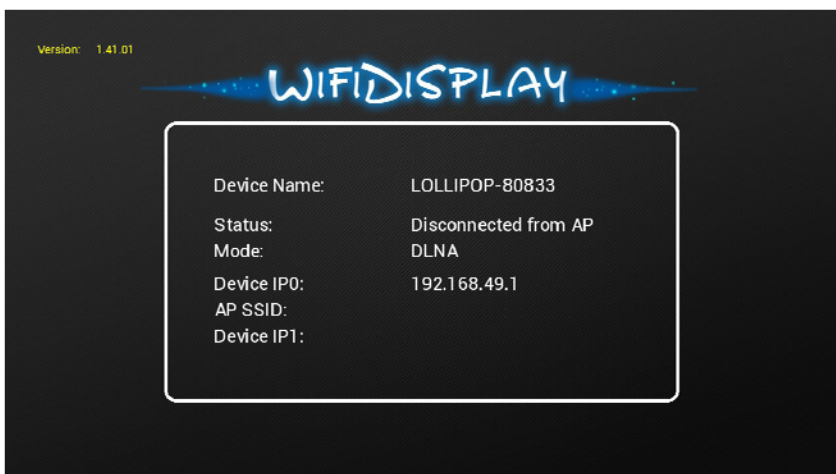
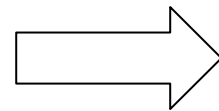
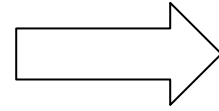
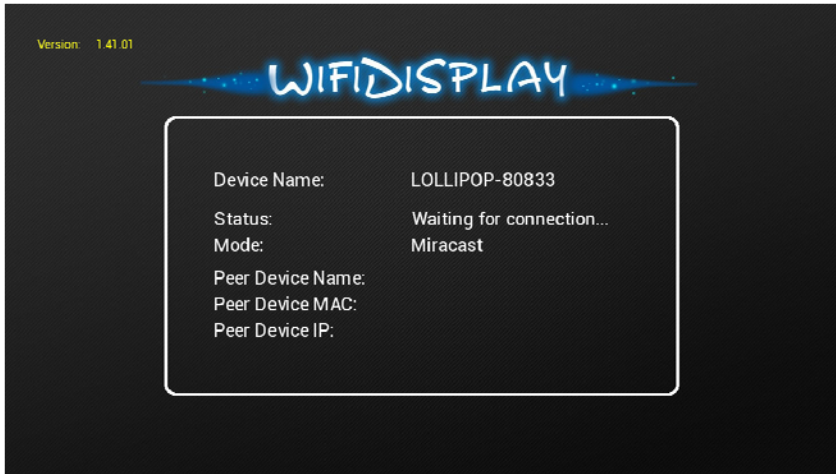
2.4 Switching mode

As described above, Miracast and DLNA/Airplay are working on the different WiFi working models. There are two methods to make switching:

A. By the key on PCB: The mode alternates between Miracast and DLNA/Airplay by pressing the key.

B. By web: Visit <http://192.168.49.1> by web browser when the connection between the dongle and mobile phone/laptop/tablet is established whatever

under the Miracast mode or DLNA/Airplay mode. Touch the icon  and the switching will be undergoing. Please pay attention that the web browser will show something error when switching. The reason is that the wifi driver should be loaded again when switching to a new mode. So the connection between devices and dongle is disconnected.



3 Compatible devices

3.1 Devices list

In order to use the function of Miracast (also called WiFi Display or WFD) with the RK2928 wireless HDMI dongle, a compatible device which supports Miracast and acts as the role of Miracast source is needed.

The following devices are compatible with RK2928 wireless HDMI dongle and have been fully tested.

vendor	model	type
LG	Nexus4	mobile phone
SAMSUNG	Galaxy S3	mobile phone
	Galaxy S4	mobile phone
	Note2	mobile phone
SONY	Xperia Z	mobile phone
xiaomi	MI 2 (小米2)	mobile phone
	MI 2s (小米 2S)	mobile phone
OPPO	Find 5	mobile phone
Gionee (金立)	GN708W	mobile phone
ZTE (中兴)	Nubia Z5 NX501	mobile phone
AMOI (夏新)	N828	mobile phone

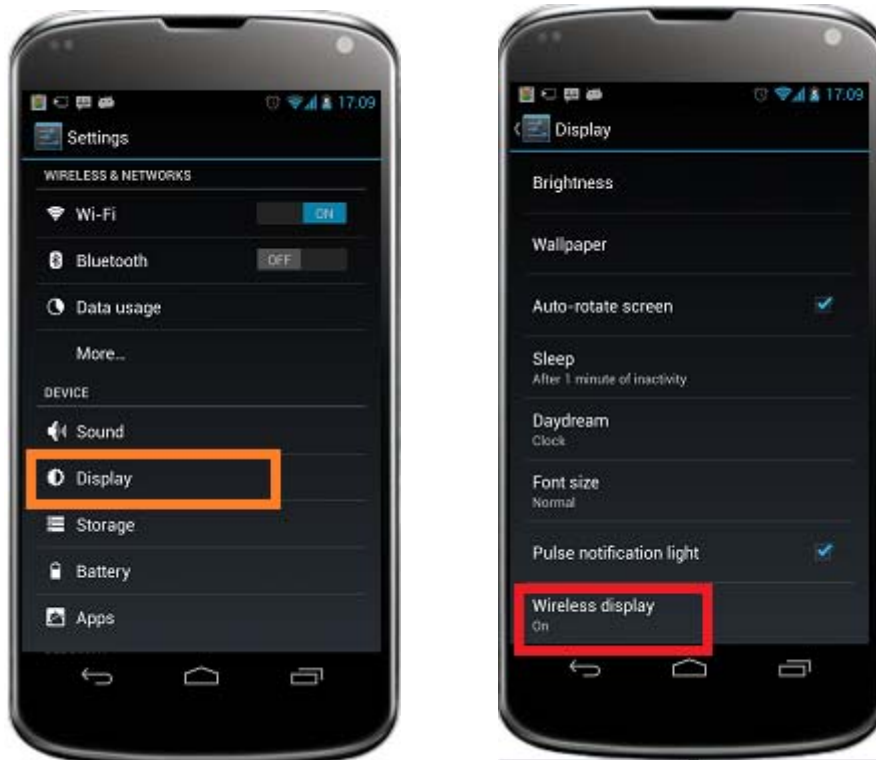
3.2 How to use

3.2.1 LG NEXUS 4

First, open “Settings” and turn on “Wi-Fi”.



Second, click “**Display**” on the menu and then “**Wireless display**”.



Thirdly, enable “**Wireless display**” and pick up an available device to connect to. Please pay attention that the devices which have been connected before will be under the tab of “**PAIRED DISPLAYS**” and the devices which have never been connected before will be under the tab of “**AVAILABLE DEVICES**”. When the devices under the tab of “**PAIRED DISPLAYS**” are ready to be connected, “**Available**” will be showing under the device name.

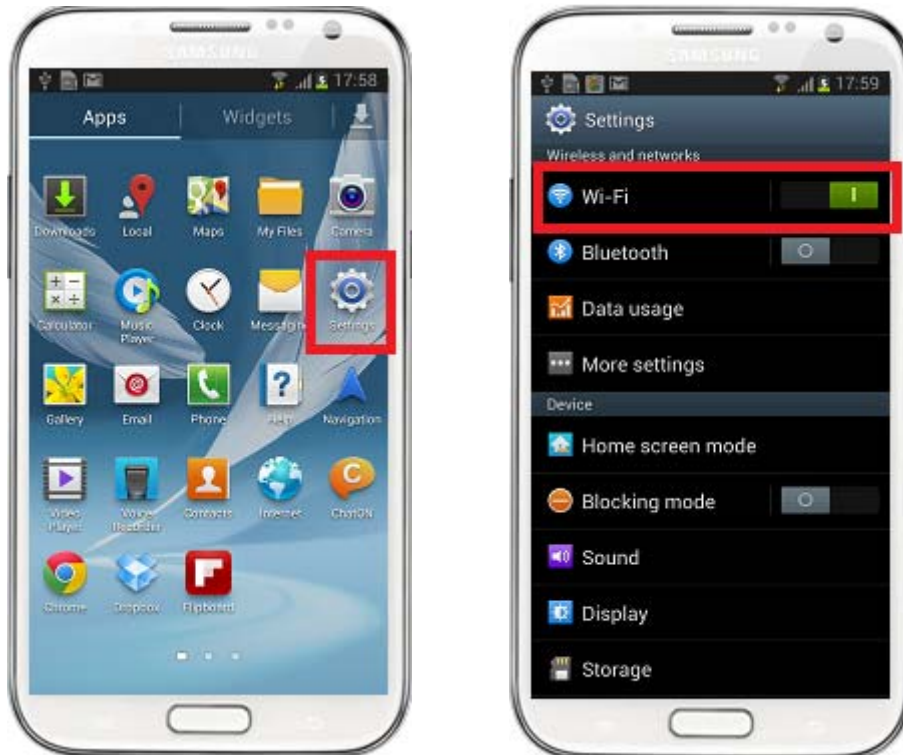


Last, wait until the status indication turns to **“Connected”**.

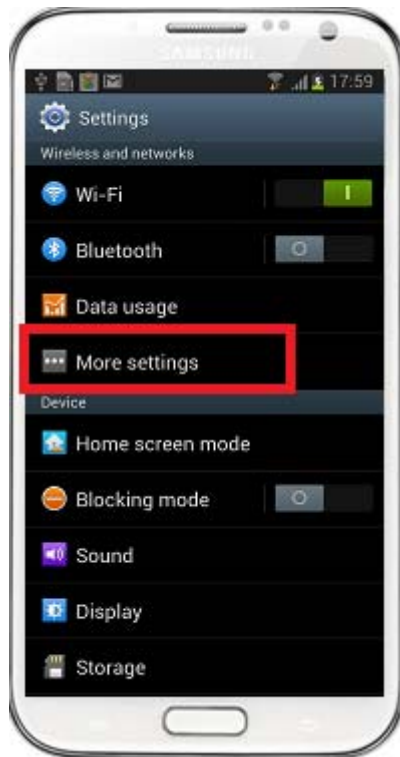


3.2.2 SAMSUNG Note2/Galaxy S3/GalaxyS4

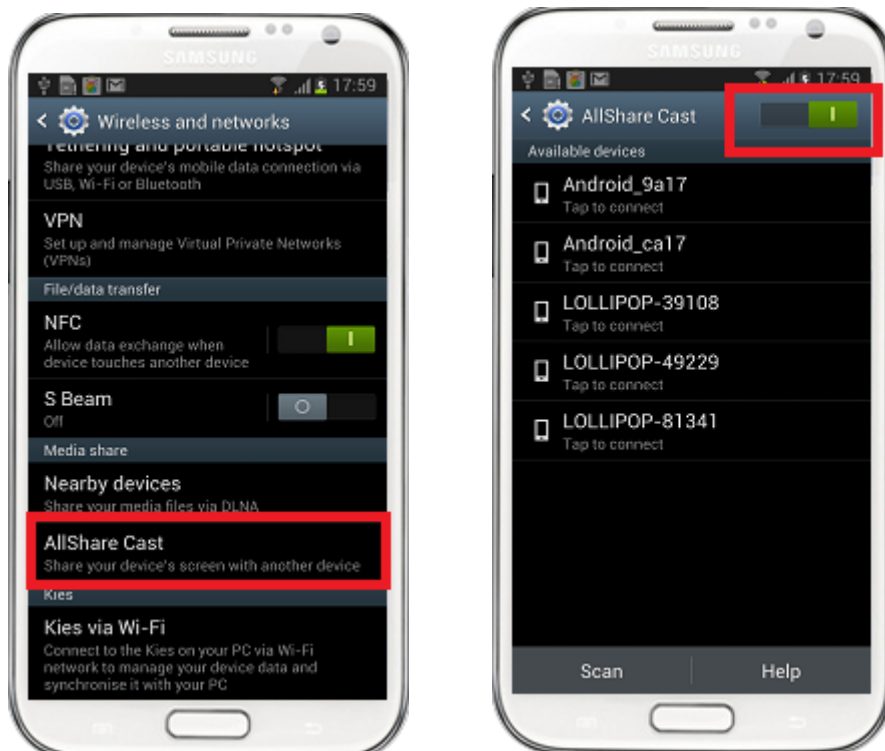
First, open “Settings” and turn on “Wi-Fi”.



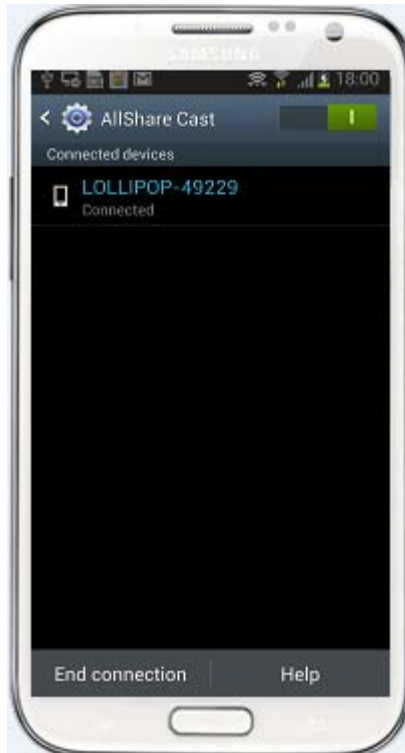
Second, click “More settings”



Third, enable “AllShare Cast” and pick up an available device to connect to.

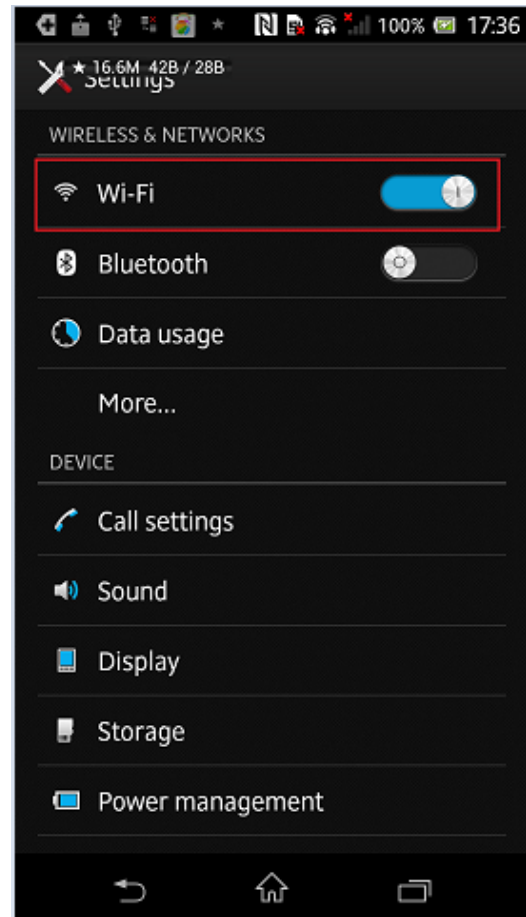
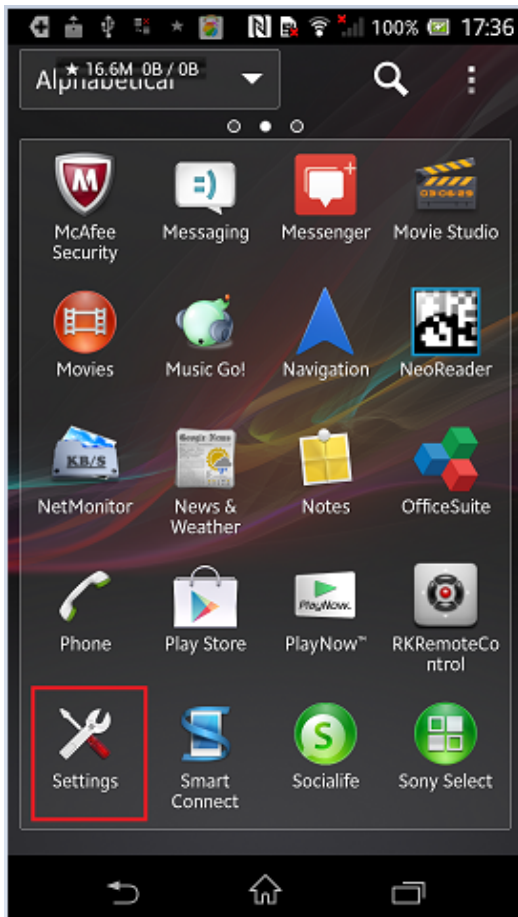


Last, wait until “**Connected**” showing under the device name.

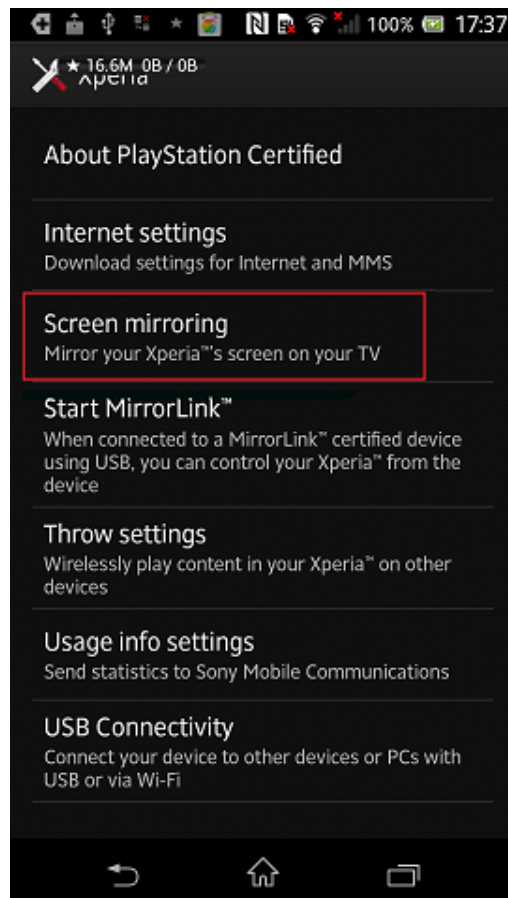
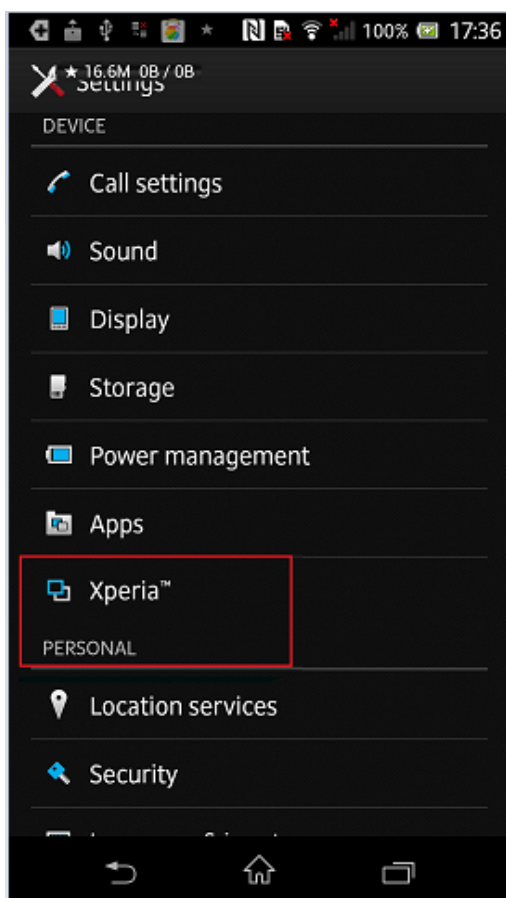


3.2.3 SONY Xperia Z

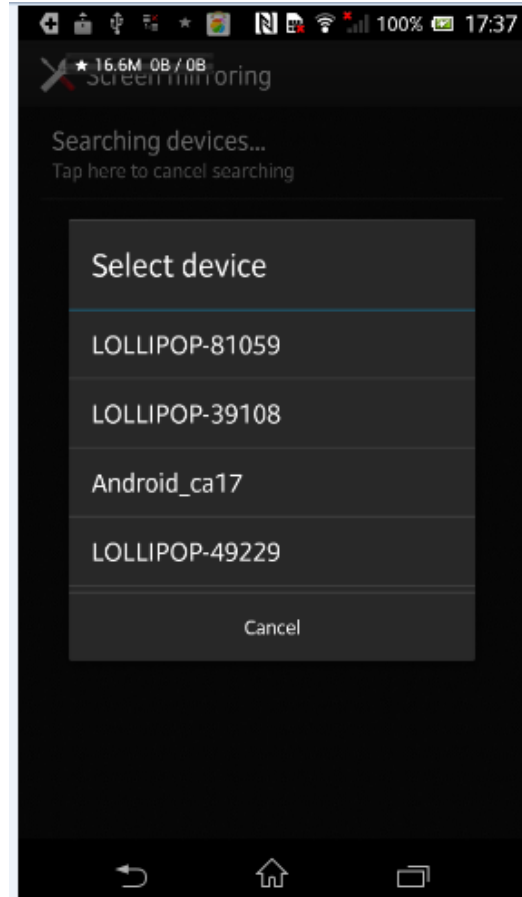
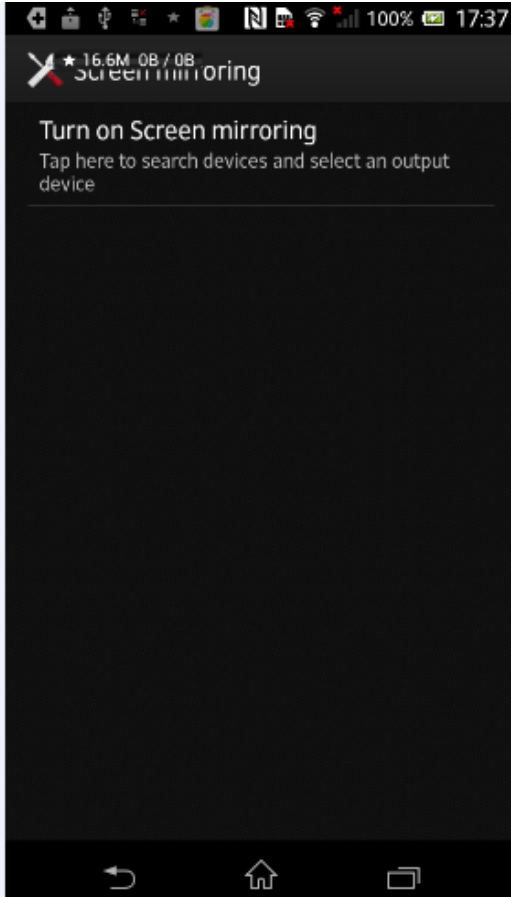
First, open “Settings” and turn on “Wi-Fi”



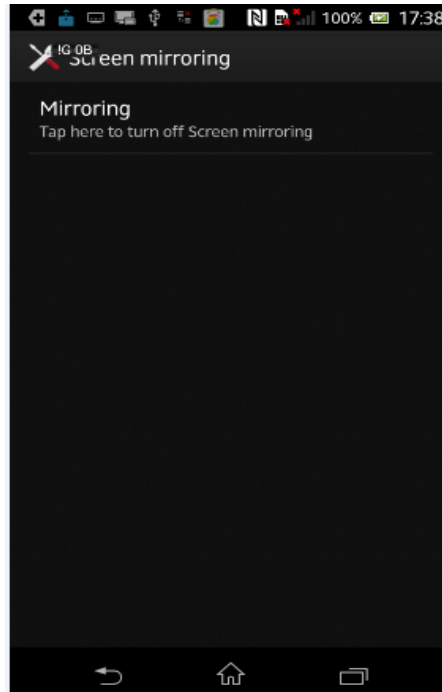
Second, click the “**Xperia**” and then “**Screen mirroring**”.



Third, turn on “**Screen mirroring**” and pick up an available device to connect to.



Last, wait until “**Mirroring**” showing on the menu.

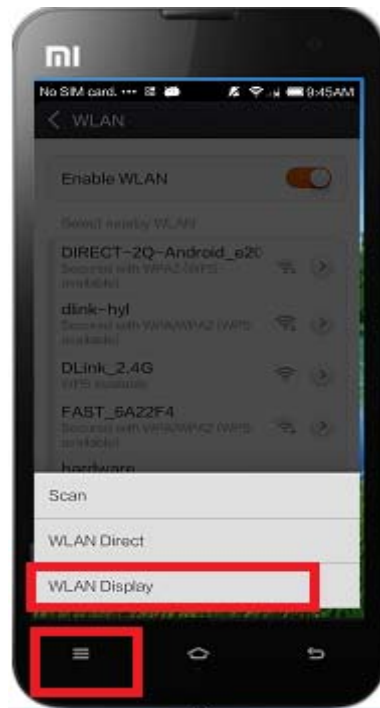


3.2.4 MI 2/ MI 2s

First, open “Settings” and enable “WLAN”



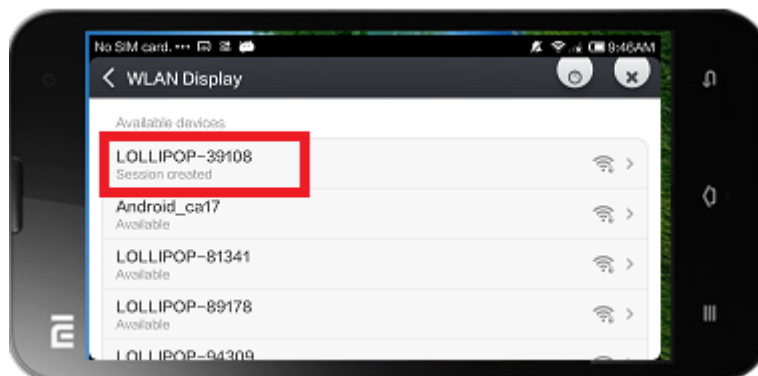
Second, click the menu button and then select **“WLAN Display”**.



Third, pick up an available device to connect to.

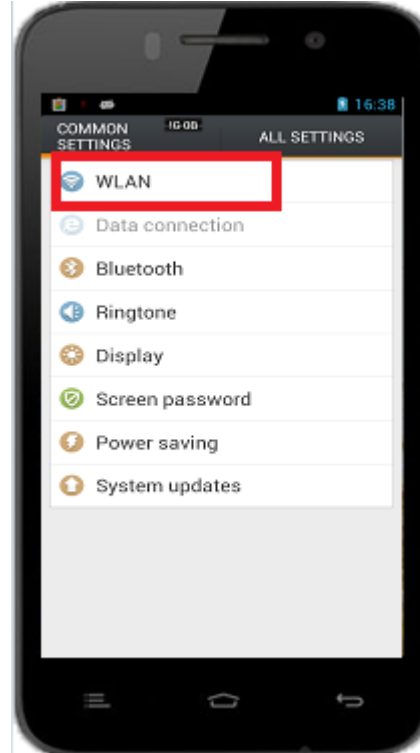


Last, wait until “**Session connected**” showing under the device name.

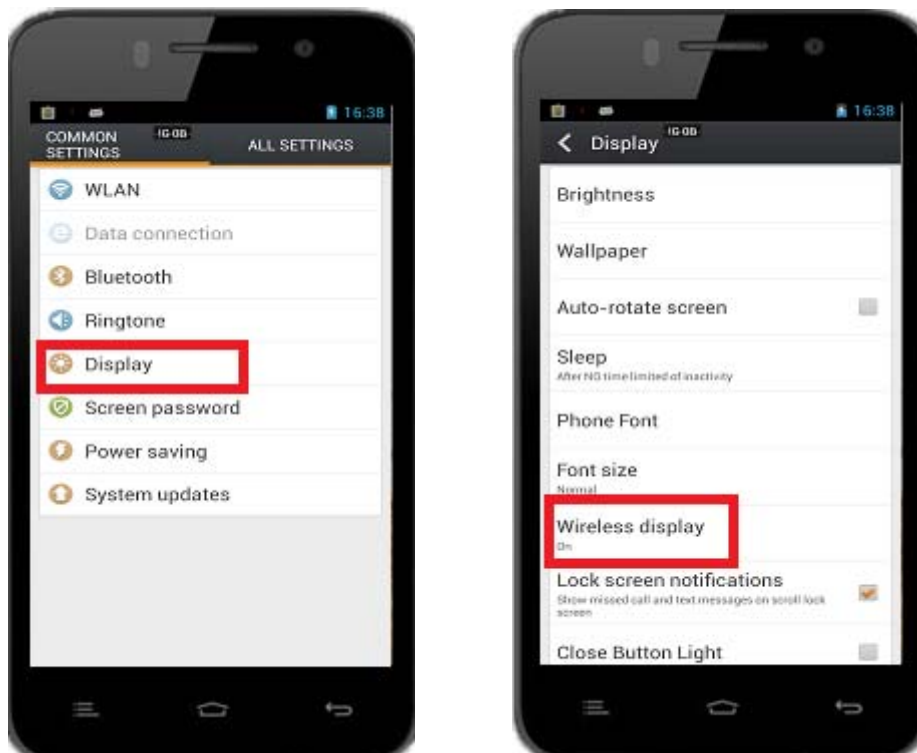


3.2.5 GIONEE

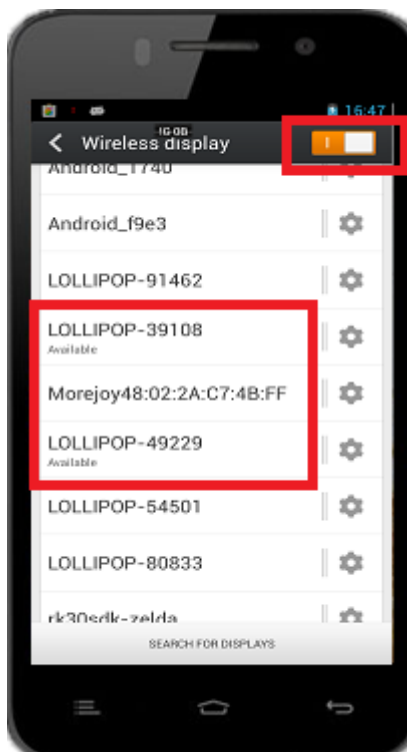
First, open “Settings” and enable “WLAN”



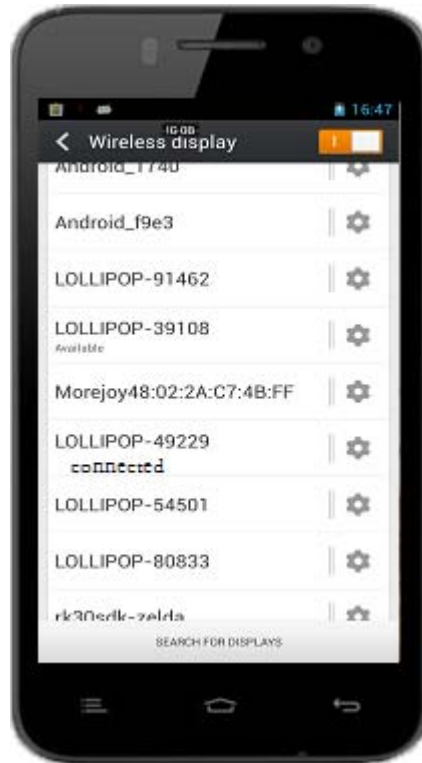
Second, click the “**Display**” and then “**Wireless display**”.



Thirdly, turn on “**Wireless display**” and pick up an available device to connect to.



Last, wait until “**Connected**” showing under the device name.



3.2.6 OPPO find5

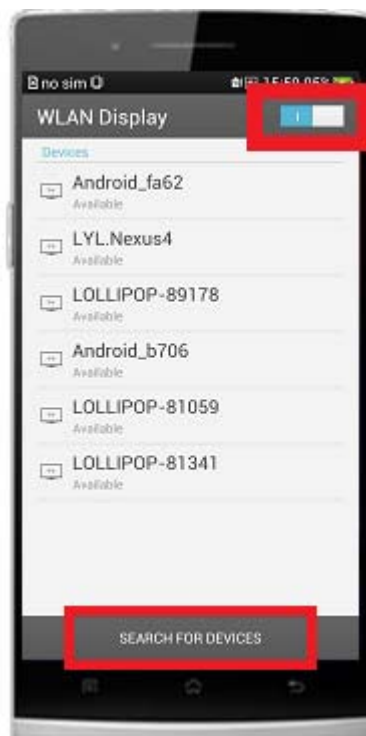
First, open “Settings” and enable “WLAN”



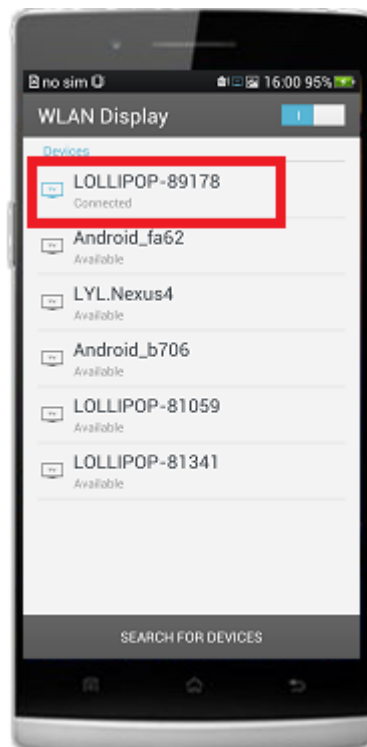
Second, back to “**Settings**” menu and then click “**WLAN Display**”.



Third, turn on “**WLAN Display**” and then click “**SEARCH FOR DEVICES**”, pick up available device to connect to.



Last, wait until “**Connected**” showing under the device name.

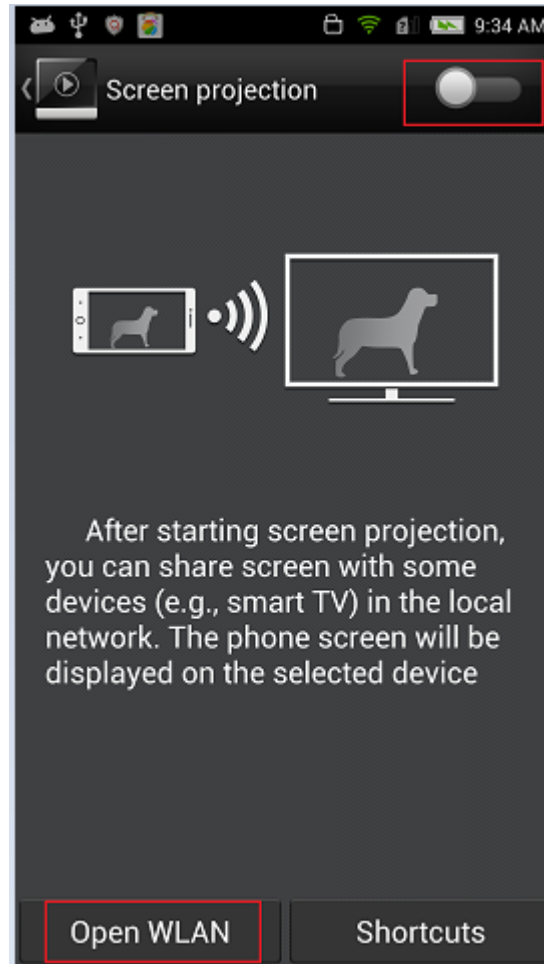


3.2.7 ZTE nubia

First, launch the application called “**Screen proje**” which comes with the system.



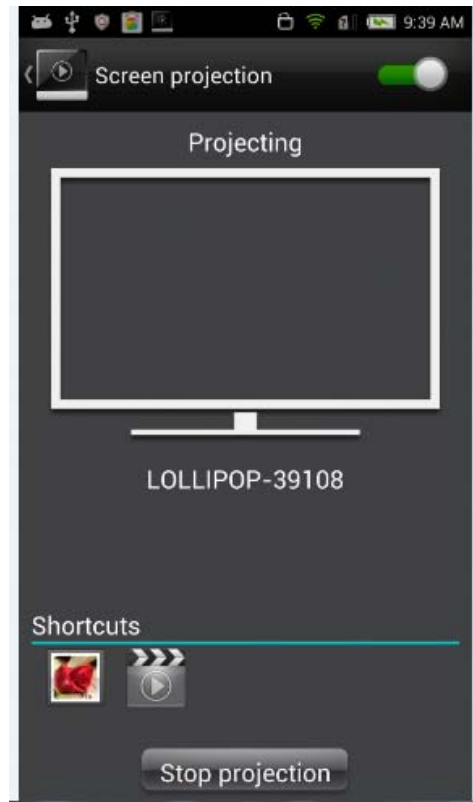
Second, turn on “screen projection” and click “**Open WLAN**” if WLAN has not been enabled yet.



Third, pick up an available device to connect to.



Last, wait until “Projecting” showing.



3.2.8 AMOI N828

(Refer to LG Nexus4)