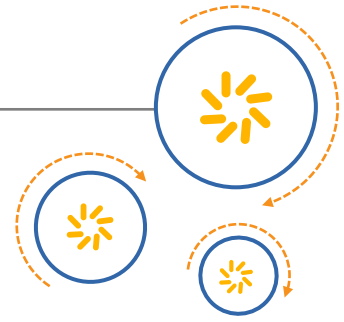




Qualcomm Technologies, Inc.



DragonBoard™ 410c based on Qualcomm® Snapdragon™ 410E processor

Miracast® Wi-Fi Display Application Note

September 2016

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Questions or comments: <https://www.96boards.org/DragonBoard410c/forum>

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Revision history

Revision	Date	Description
B	September 2016	Updated to 'E' part
A	June 16, 2015	Initial release

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1 Introduction

1.1 Purpose

This document provides instructions for setting up and testing Miracast Wi-Fi display using a source device and a NETGEAR® dongle or a second sink device.

1.2 Audience

This document is intended for DragonBoard™ 410c users who need to test and configure Miracast Wi-Fi display.

1.3 Acronyms and abbreviations

Table 1 Acronyms and abbreviations

Acronym	Definition
HDMI	High Definition Multimedia Interface
USB	Universal Serial Bus
P2P	Point-to-point
WFD	Wi-Fi Display
QTI	Qualcomm Technologies Inc.

2 Set Up and Test Miracast Wi-Fi Display

2.1 Required components

- DragonBoard 410c running Android Lollipop with Qualcomm Technologies Incorporated Wi-Fi display stack.
- When connecting two devices:
 - Source device – sends the signal
 - Sink device – receives the signal
- NETGEAR dongle; e.g., PTV3000 NETGEAR USB power supply
- TV with HDMI capabilities
- HDMI cable

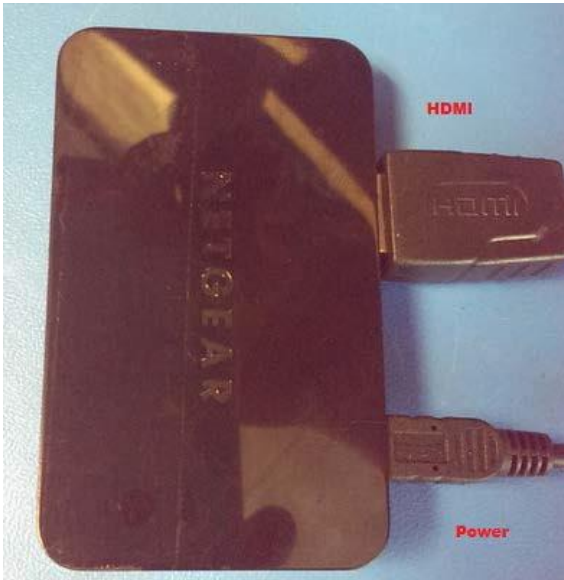
The Miracast Wi-Fi setup consists of a sink device connected to a source device, which is connected to a TV using an HDMI cable. The sink and source communicate over a Wi-Fi link. The source (DragonBoard 410c Android) and sink (NETGEAR dongle) connection are shown.



2.2 Set up NETGEAR dongle and TV

1. Connect the HDMI cable to the TV.
2. Power on the TV.
3. Use the TV remote to select the appropriate HDMI input from the TV menu. Be sure that the TV is not in Standby or Power Save mode.

4. Connect the other end of the HDMI cable to the NETGEAR dongle and power on the dongle by connecting the micro-USB power supply.



In approximately 1 minute, the “Ready for connection” message, including the adapter name and ID, appears.



2.3 Test Miracast Wi-Fi display

2.3.1 Testing with a TV

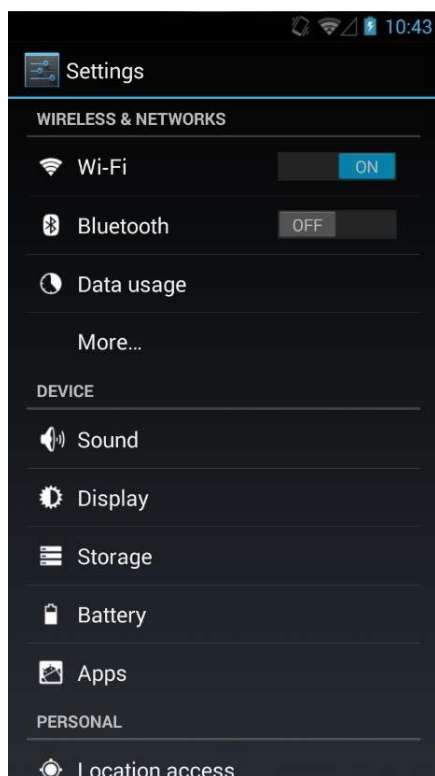
To test the Wi-Fi display on a TV, a connection must be established between the source device and the sink device (NETGEAR dongle). This can be done two ways:

- Wfd Client application – provided by QTI
- Cast Screen application – accessed with Android setting

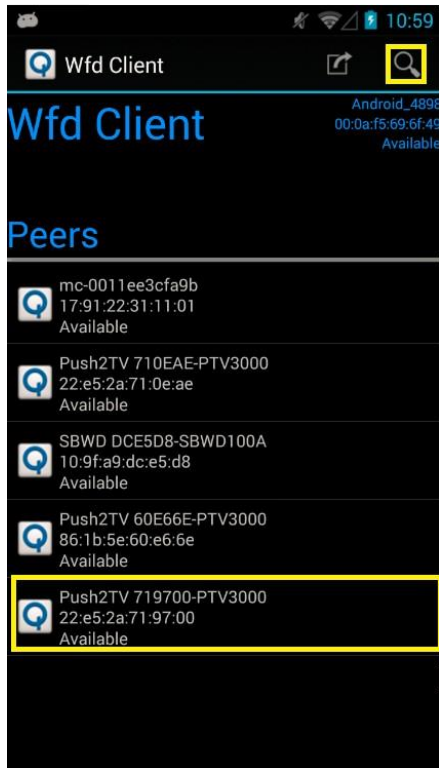
Once connected, the source device signal is mirrored on the TV.

2.3.1.1 Establishing a connection with Wfd Client application

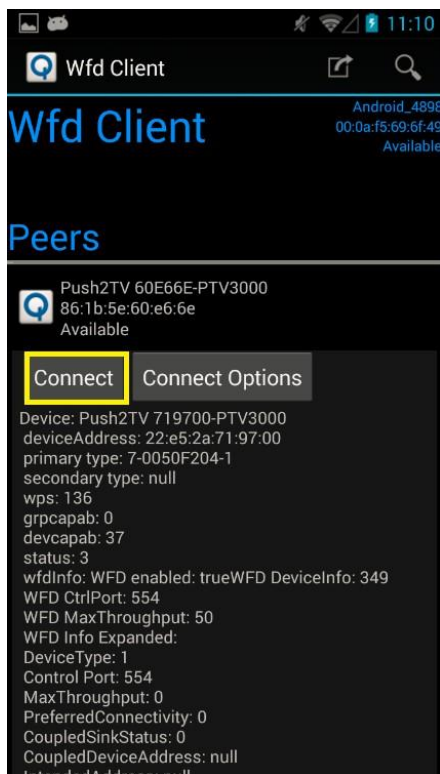
1. Power on the device.
2. Go to Android **Settings** and turn on **Wi-Fi**. This enables P2P.



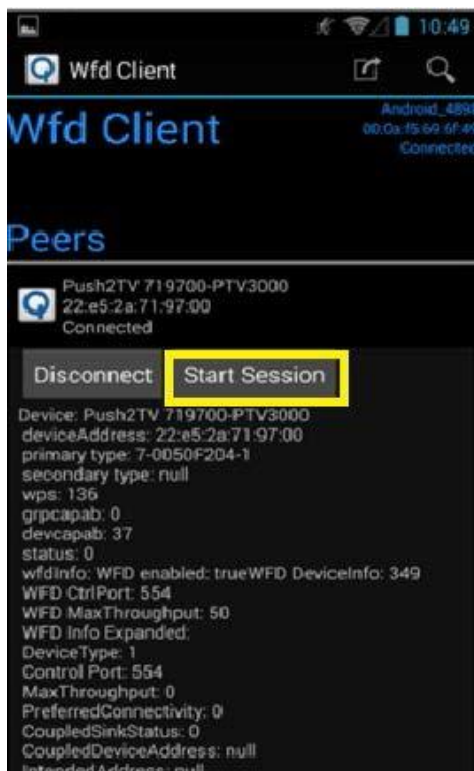
3. Return to the main screen.
4. Press **Wfd Client** to launch the application. The application can also be accessed through the Apps menu. The Wfd Client main screen appears.
5. Press **Search** to access a list of available peer devices.
6. Select the appropriate NETGEAR dongle ID; e.g., “Push2TV 719700-PTV3000”.



7. Press **Connect**.



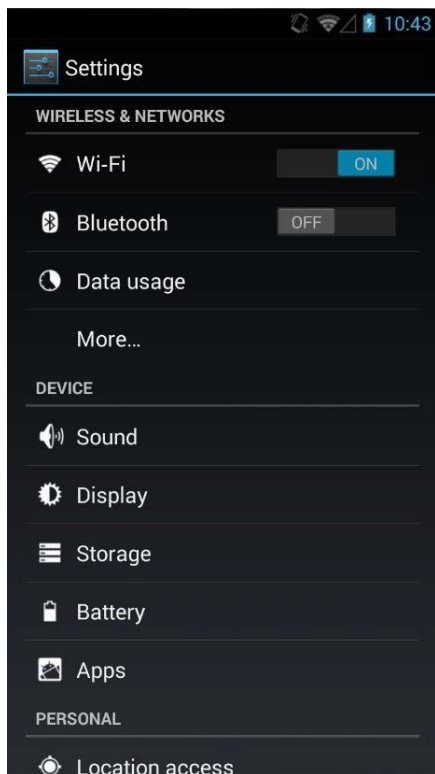
8. Press **Start Session**. The device source screen appears on the TV display.



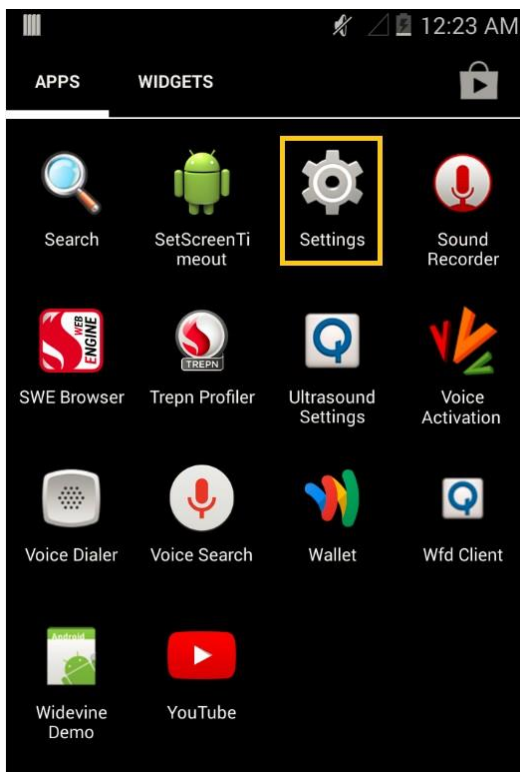
If an issue occurs, reboot the device (source), power-cycle the NETGEAR dongle (sink), and try again.

2.3.1.2 Establishing a connection with Cast Screen application

1. Power on the device.
2. Go to the Android **Settings** and turn on **Wi-Fi**. This enables P2P.



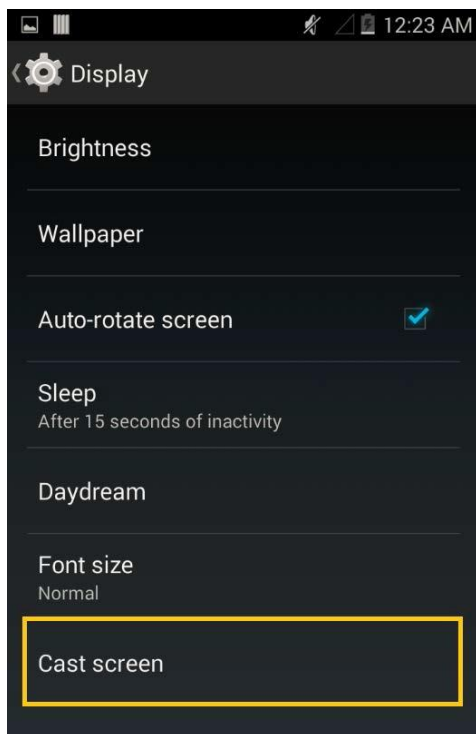
3. Go to the Apps menu and press **Settings**.



4. Select the **Display** option.



5. Select **Cast screen**.



6. Select **Enable Wireless Device Option**. A list of available peer devices appears.

7. Select the appropriate NETGEAR dongle ID; e.g., “Push2TV 719700-PTV3000”. The device source screen appears on the TV display.



EXHIBIT 1

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