



## ABSTRACT

This document provides information about utilizing the QuickTrack Control App to certify CC33xx devices according to Wi-Fi® standards. The document provides a high-level overview of the certification process.

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## 1 Download Prerequisites

The QuickTrack Control App is a Wi-Fi automation test tool utilized for Wi-Fi Certification. This user guide is intended to provide an overview of using the QuickTrack Control App with the CC33xx devices to certify end products. The required software and set-up steps vary slightly between Linux® and Windows® operating software.

Note that [Git Bash for Windows](#) must be downloaded when using a Windows operating system.

The source files required to build and use the QuickTrack Control App can be cloned or downloaded and extracted from GitHub. It is imperative that the tags and checkouts are verified to ensure that the correct version is downloaded.

- Option 1: Clone from the [Wi-Fi QuickTrack Repository \(R2.2.1\)](#)
- Option 2: Download and extract the [QuickTrack Control Application \(R2.2.1\)](#) zip/tar file

After using one of the above options to acquire the source file, the installer specific to the operating system being used must be downloaded. Both installers can be found on ti.com at the link below. Make sure to involve the appropriate installer file that corresponds to the operating system being used (Windows or Linux).

- [CC33XX QuickTrack Control Tool Installer](#)

## 2 Build Prerequisites

### Note

The instructions and links included below are specific to use with an AM335x. If using a different supported processor please be sure to download the appropriate SDK and compiler for that processor.

- **Windows**
  - Download and extract the [GCC Linaro package](#)
  - Install [MSYS2](#)
- **Linux**
  - Download the SDK install bin for Linux at [AM335x SDK \(v06.00.00.07\)](#)
  - Using the commands below convert the file to an executable and run it:

```
sudo chmod +x ti-processor-sdk-linux-am335x-evm-06.00.00.07-Linux-x86-Install.bin
./ti-processor-sdk-linux-am335x-evm-06.00.00.07-Linux-x86-Install.bin
```

## 3 Patch Steps

### 3.1 Additional Steps

If, during the download prerequisites, the source code was extracted from a zip/tar file and *NOT from the Git clone* then the following steps need to be added:

1. Open Git Bash [Windows] / Terminal [Linux] in extracted folder.
2. Run the below commands:

```
git init
git add .
git commit -m "init"
```

### 3.2 Overall Steps

The remainder of the steps should be executed whether the source code came from Git or a compressed file:

1. If you have not done so already, download the *TI-Wi-FiQuickTrack-ControlAppC-Patcher* installer linked in the download prerequisites.
  - a. Confirm that the installer is compatible with the OS being used (Windows or Linux)
  - b. Note: if the Linux installer was used it will need to be converted into an executable using the `chmod +x` command

2. When you run the installer make sure to update the Installation Directory to *Wi-FiQuickTrack-ControlAppC* source files directory that was downloaded previously either through Git clone or from the zip/tar file (see previous steps).
  - a. Path of the given directory should contain source files such as .c and .h files and a Makefile

## 4 Check the Applied Patch

1. Open Git Bash (if on Windows) or terminal (if on Linux).
2. Navigate to the *Wi-FiQuickTrack-ControlAppC* source files directory.
3. Type "git status". You should see:

```
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   indigo_api_callback_dut.c
        modified:   vendor_specific.h
        modified:   vendor_specific_dut.c

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        pin_checksum.sh
        wsc_settings_APUT
        wsc_settings_STAUT

no changes added to commit (use "git add" and/or "git commit -a")
```

## 5 Build Steps

### Linux

- Navigate to *Wi-FiQuickTrack-ControlAppC* source files directory in your Linux terminal
- Run the following command to build:

```
make CC=/<AM335_INSTALL_DIR>/linux-devkit/sysroots/x86_64-arago-linux/usr/bin/arm-linux-gnueabi-gcc
```

- Make sure the "app" file has been created in the *Wi-FiQuickTrack-ControlAppC* source files directory.

### Windows

- Install 'make' using the following command in the MSYS2 terminal.

```
pacman -S make
```

- Navigate to the *Wi-FiQuickTrack-ControlAppC* source files directory.
- Run the following command to build:

```
make CC=<Path to extracted gcc-linaro-7.5.0-2019.12-i686-mingw32_arm-linux-gnueabi-gcc>/bin/arm-linux-gnueabi-gcc -k all
```

- Make sure the "app" file has been created in the *Wi-FiQuickTrack-ControlAppC* source files directory.

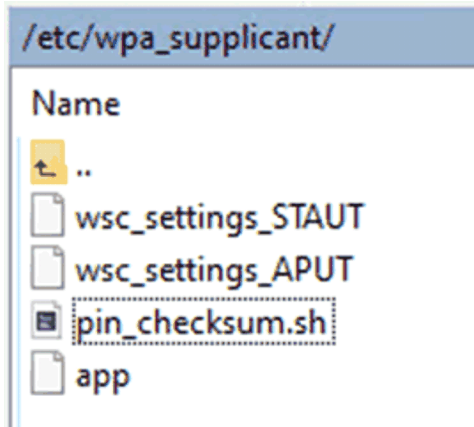
## 6 Using the Built App File

To use the QuickTrack Application provided by the WFA it is necessary to refer to WFA provided documentation. To do so a membership with the WFA is needed which provides access to the *QuickTrack Test Tool User Manual* that outlines how to download and use the QuickTrack application. Once those steps have been completed, continue with the steps below to test the DUT.

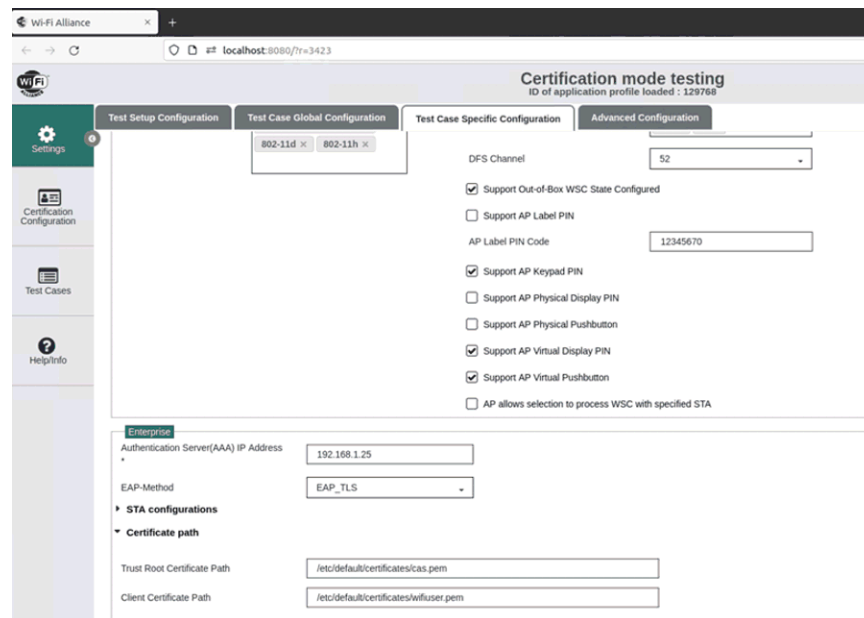
Note as mentioned previously, in the example provided by this document the DUT is an AM335x host with a CC33xx boosterpack.

1. Bring up DUT and connect to it serially using Terraterm, PuTTY, or a similar serial communication program.
2. Connect the DUT via ethernet to the same subnet that the computer running QuickTrack is connected to.
3. Confirm that the DUT has an ethernet IP, if not use ifconfig commands to set the IP address.

4. Copy the following files to /etc/wpa\_supplicant on the DUT (create the directory, if needed).



5. Confirm that the certificates are located at /etc/default/certificates and that the same path is updated in the tool settings to match:



6. Confirm the date on the DUT is recent by running this command in your serial terminal (the date can be the date below or today's date):

```
date -s '2023-11-23 14:34:00'
```

7. Depending on which role is being tested on the DUT run the commands in option a OR option b, respectively:

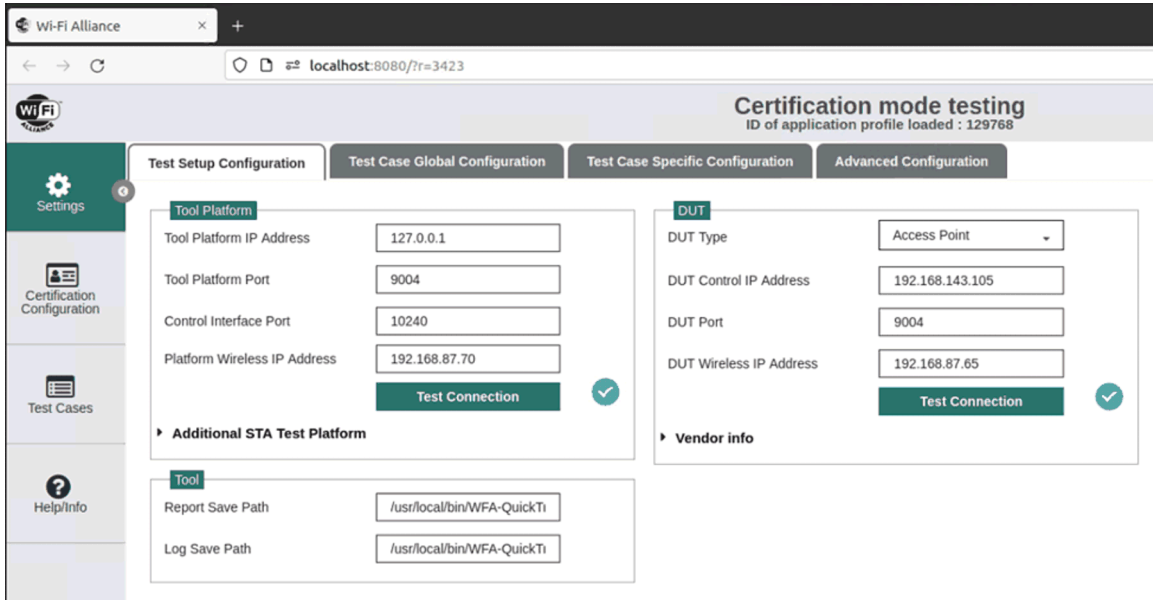
- a. STA Role:

```
cd /etc/wpa_supplicant/  
./app -i wlan0 -p 9004 &  
cd /usr/share/cc33xx  
./sta_start.sh
```

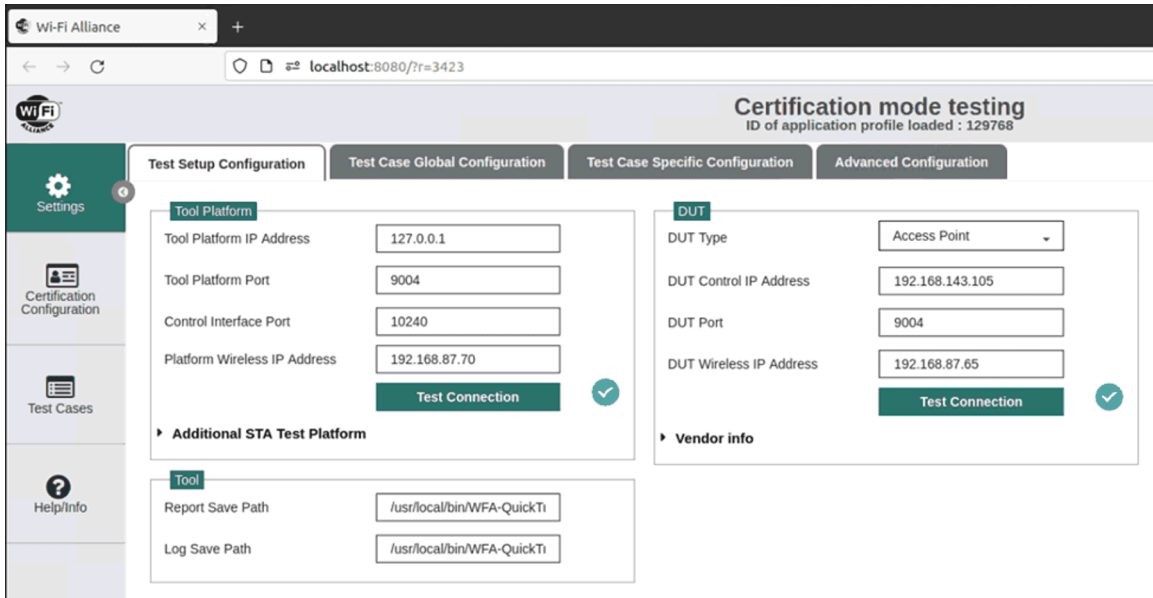
- b. AP Role:

```
cd /etc/wpa_supplicant/  
./app -i wlan1 -p 9004 &  
cd /usr/share/cc33xx  
./ap_start.sh
```

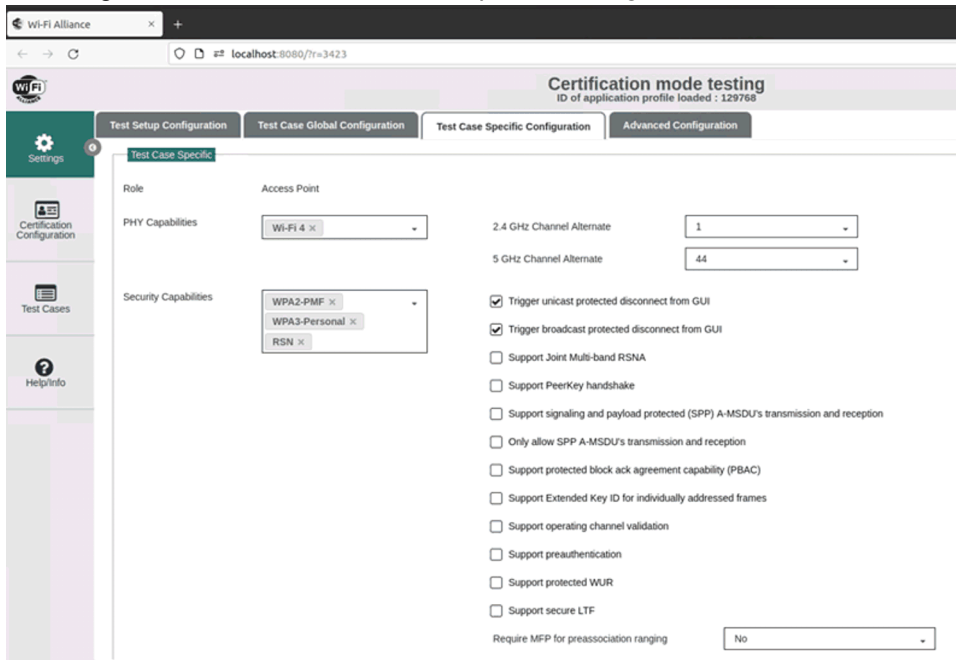
8. Input the Ethernet IP address that was set in step 3 to *DUT Control IP Address*.



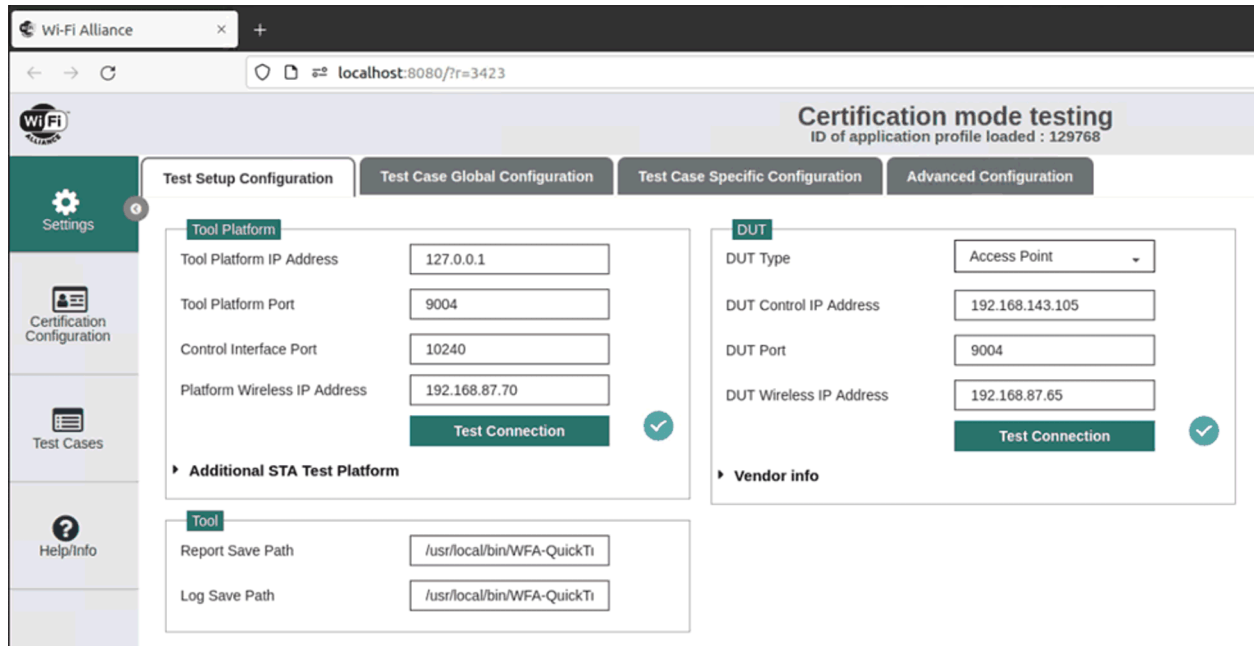
9. Use the *Test Connection* bottom to confirm DUT app is running and identified by the tool:



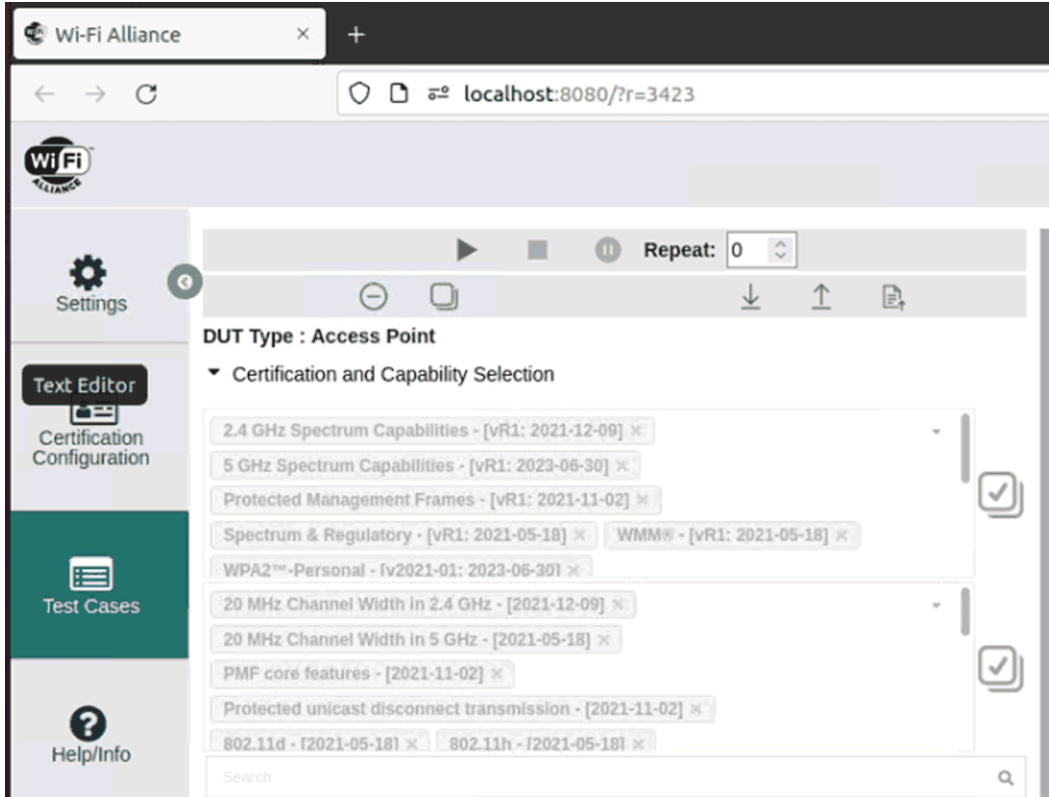
10. Set supported configurations under the *Test Case Specific Configuration* tab:



11. Choose the required role for testing under the DUT Type (this should match the mode set in step 7 on the DUT):



- Manually choose DUT capabilities or, if in certification mode, load the *application profile* that defines the relevant test cases:



- Select and run test cases.

For more information on QuickTrack specifics it is recommended to refer to the support documentation provided by the WFA to WFA members on the website. The *QuickTrack Test Tool Getting Started Guide* provides a high level overview and list of resources and installations, while the *QuickTrack Test Tool User Manual* goes into further detail on many of the steps (these documents are available on the wfa website: <https://www.wi-fi.org/>). Additionally TI is available for additional support on [E2E](#).

## 7 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Revision * (April 2024) to Revision A (July 2024)	Page
• Updated <a href="#">Section 1</a> .....	2
• Updated <a href="#">Section 2</a> .....	2
• Updated <a href="#">Section 3.2</a> .....	2
• Updated <a href="#">Section 5</a> .....	3
• Updated <a href="#">Section 6</a> .....	3

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