**Pop3-5.5 WP TMO 版本制作与发布**

|  |  |  |
| --- | --- | --- |
| File Status：  [√] Draft  [  ] Released  [ ] Modifying | File Identification： | Pop3-5.5 WP TMO 版本制作与发布 |
| Current Version： | V0.1 |
| Author： | 高继泳 |
| Completion Date： | 2015.11.16 |

# WP Env setup prerequisites(PC)

1. sequence install （[\\172.24.220.210\share\jrd-tool](file:///\\172.24.220.210\share\jrd-tool)）
2. Microsoft-win10 include ak/wdk/wpdk/sdk and so on releation tools pls follow readme
3. Arm complie tool RVCT5
4. HEXAGON\_Tools dev by qualcomm and will update according the BSP version
5. Thirdparty tools
6. Qualcomm include download/debug tools
7. Android\_USB\_Driver\_Q\_7.0.0.0\_2014\_10\_16\_All\_in\_One\_noinstall
8. for win10 double check end named env20150811.txt
9. need replace MSBuild.rar to yours C:\Program Files (x86)
10. copy [\\172.24.220.210\share \jrd-tool\microsoft-win10\10160\MobileOS](file:///\\172.24.220.210\share%20\jrd-tool\microsoft-win10\10160\MobileOS)

all the sub folders to your computer C:\Program Files (x86)\Windows Kits\10

1. Install the following cert, registry and run cmdline, refer to \Kits\HLK\StrongNameSigning\

Testroot.cer

testroot-SHA2.cer

StrongNameBypass.reg,

WOW64STrongNAmeBypass.reg

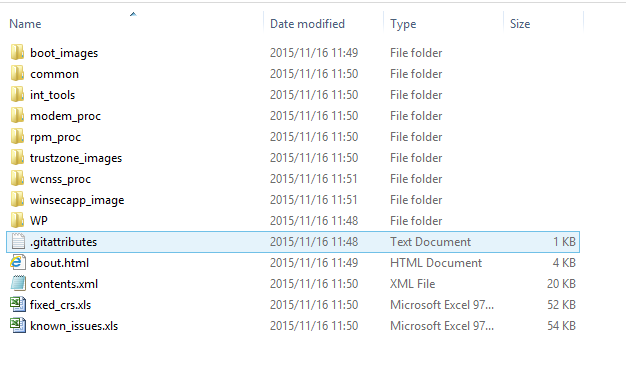
1. Install OEM test certificates by running the script InstallOEMCerts.cmd (this is a one-time step). C:\Program Files (x86)\Windows Kits\10\Tools\bin\i386
2. replace a file use [\\172.24.220.210\share\WindowsDriver.Default.props](file:///\\172.24.220.210\share\WindowsDriver.Default.props) when you use VS to complier driver
3. replace bat file abut VS read register [\\172.24.220.210\share ( VCVarsQueryRegistry.bat](file:///\\172.24.220.210\share%20(%20VCVarsQueryRegistry.bat) vsvars32.bat ) to C:\Program Files (x86)\Microsoft Visual Studio 12.0\Common7\Tools
4. merge register about SDK 10 [\\172.24.220.210\share\SDK.REG](file:///\\172.24.220.210\share\SDK.REG)

for complier driver can not find /warning.h error

# How to get source code from git

You can get code from our server

1. Creat your local folder in your computer just as D:\WP8909
2. Entry the folder cd /d D:\WP8909
3. git clone [git@172.24.61.94:winphone/amss\_8909.git](mailto:git@172.24.61.94:winphone/amss_8909.git)
4. after download finish ,your need to checkout code branch
5. git checkout amss-pop3-5.5-dev
6. make sure you can see the source code as follow



**Note：**

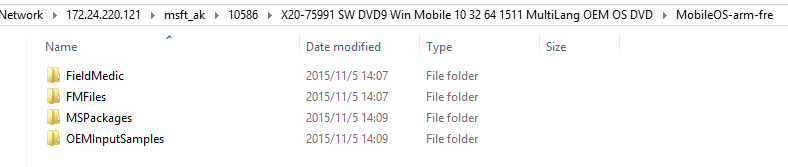
You also can do following bash script to download code



# Update MSFT AK

The latest MSFT AK is located at [\\172.24.220.121\MSFT\_AK](file:///\\172.24.220.121\MSFT_AK)

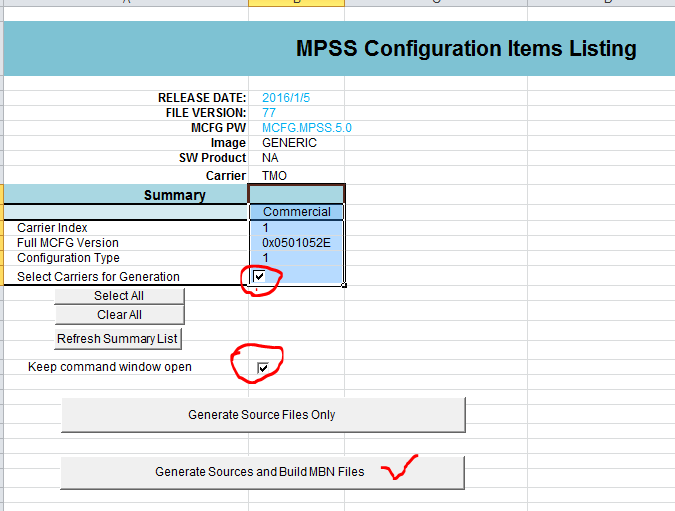
It includes folders as follow



delete corresponding folders under **C:\Program Files (x86)\Windows Kits\10**, Before copy these folders to **C:\Program Files (x86)\Windows Kits\10**.

# How to compile your code

在D:\WP8909\amss\_8909\modem\_proc\mcfg\mcfg\_gen\generic\NA\TMO目录下，打开MCFG\_SW\_Items\_List\_Macro.xlsm文件，勾选如下，并点击有红勾的按钮。



Excute the following script to compile subsystem, boot and ACPI:

build-wp8909-1074.cmd –ALL –RELEASE

you can find the script at **D:\WP8909\amss\_8909\int\_tools**. Of course, you can specify parameter to compile specify module, such as if you want only compile UEFI, use the command: build-wp8909-1074.cmd –UEFI –RELEASE

detail usage, you can use build-wp8909-1074.cmd –HELP

# Create FFU image

After step-5 , Excute the following script to create FFU image:

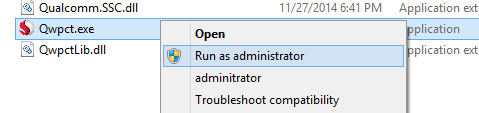
create\_ffu.bat production|test PhoneFirmwareRevision

The PhoneFirmwareRevision is defined at QWPCT’s **Customize Product Details.**

The script file at Folder **D:\WP8909\amss\_8909\WP\prebuilt\8909**

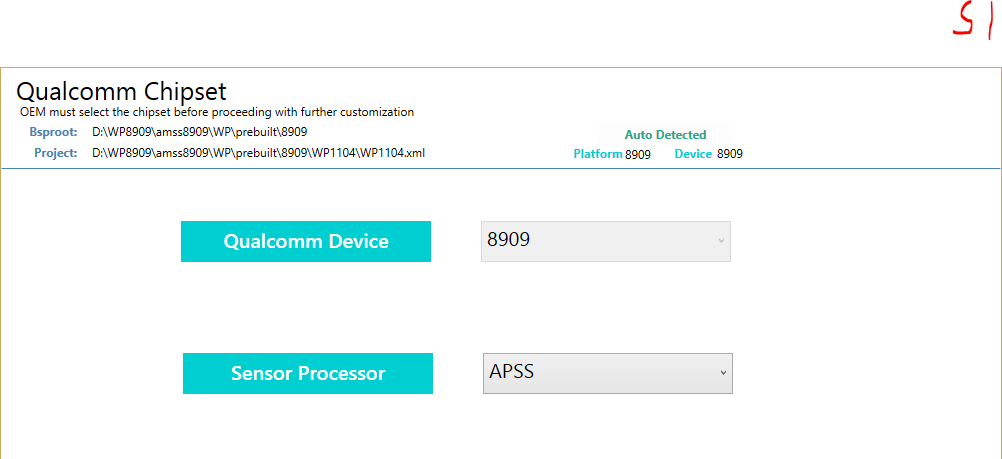
# Using QWpct to Package and subsystem

After compile done, maybe you need package mbn/bin/package files to pkg use QWPCT in your project **amss\_8909\WP\prebuilt\app\Qwpct**, right clip icon



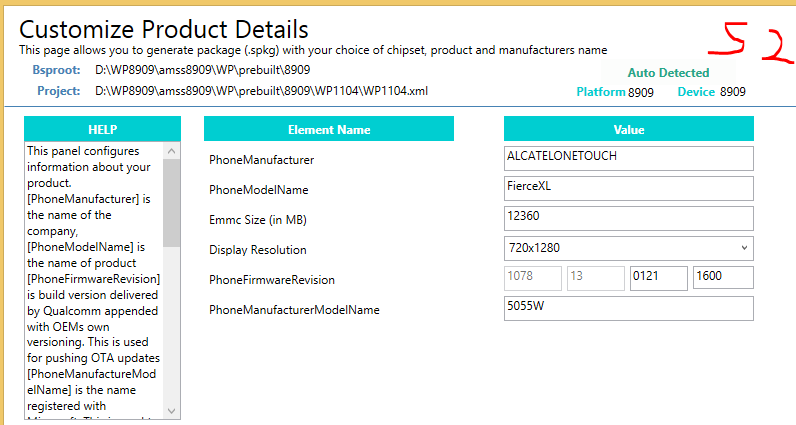
Follow the following tips to Package

**S1: Qualcomm Chipset**

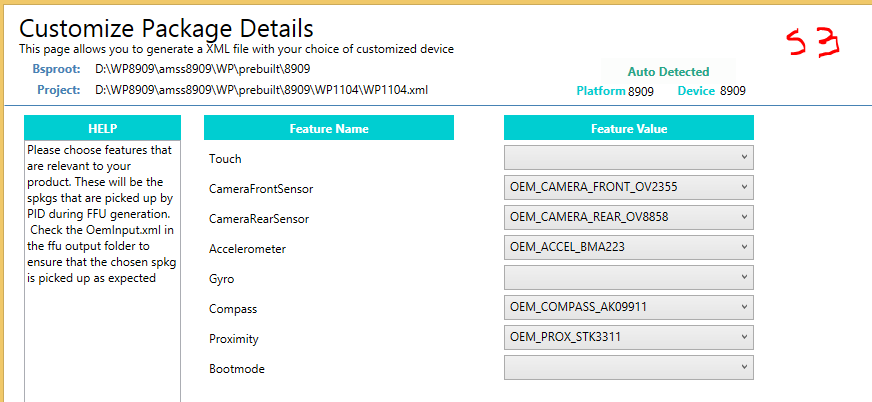


**S2: Customize Product Details**

The PhoneFirmwareRevision option naming rule, please reference **Appendix-A WP Naming Rule**

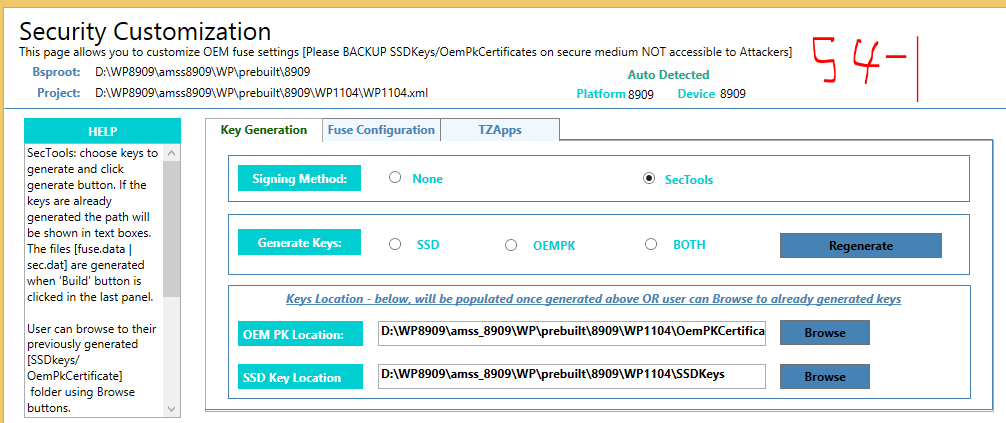


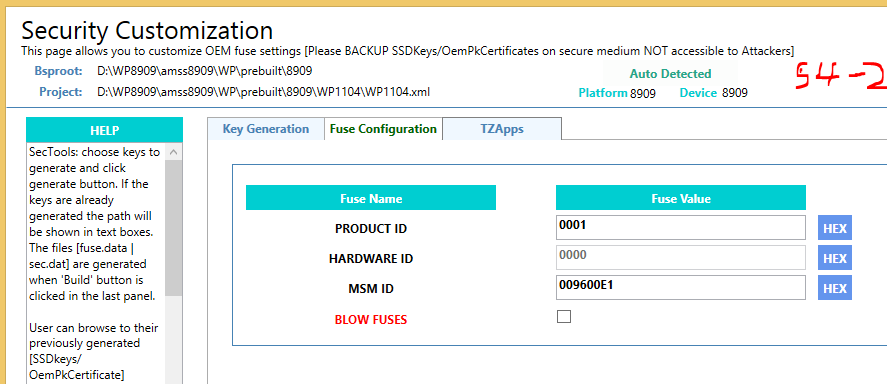
**S3 Customize Package Details**



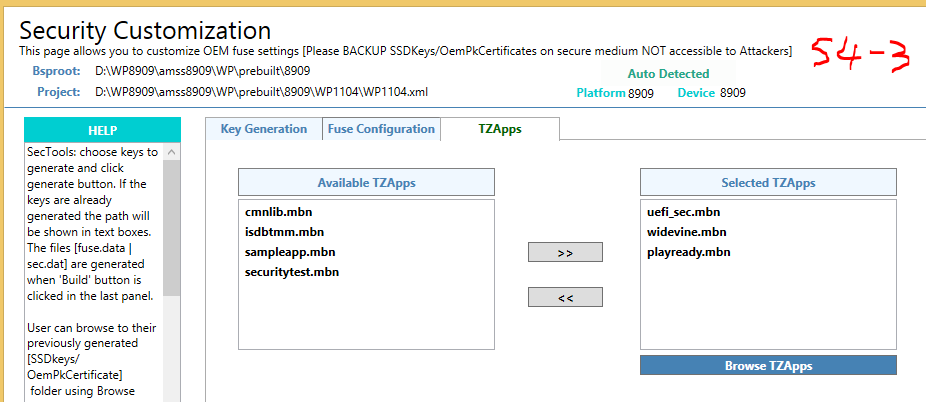
**S4 Security Customization**

**OemPKCertificate and SSDKeys reference to follow the ZIP file**





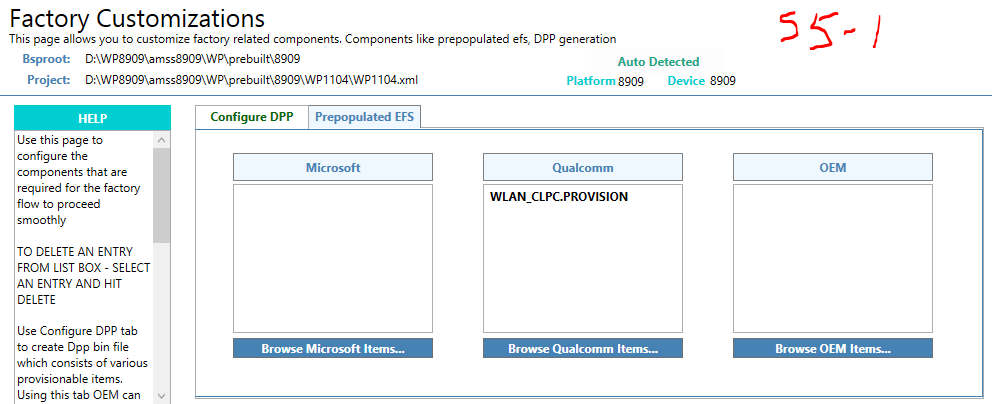
If select BLOW FUSES, the sec.dat file will be merge into FFU image. When DUT download this FFU image, it will be fused.

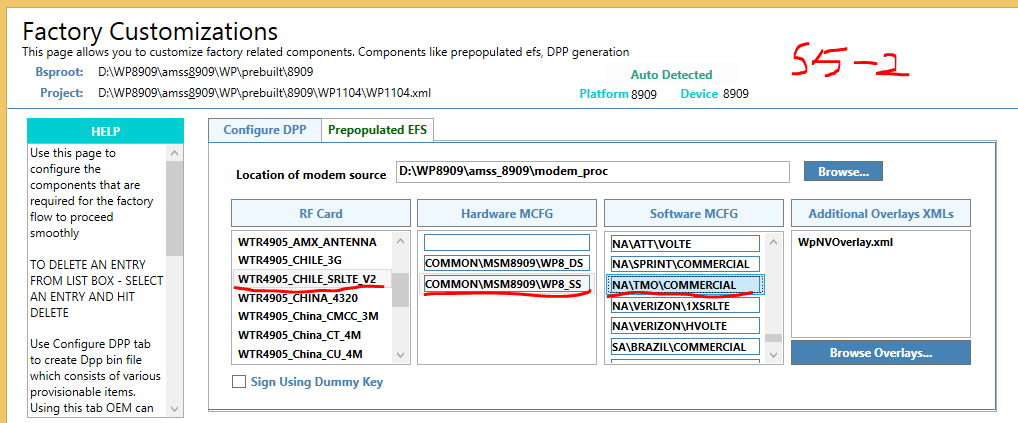


**S5: Factory Customizations**

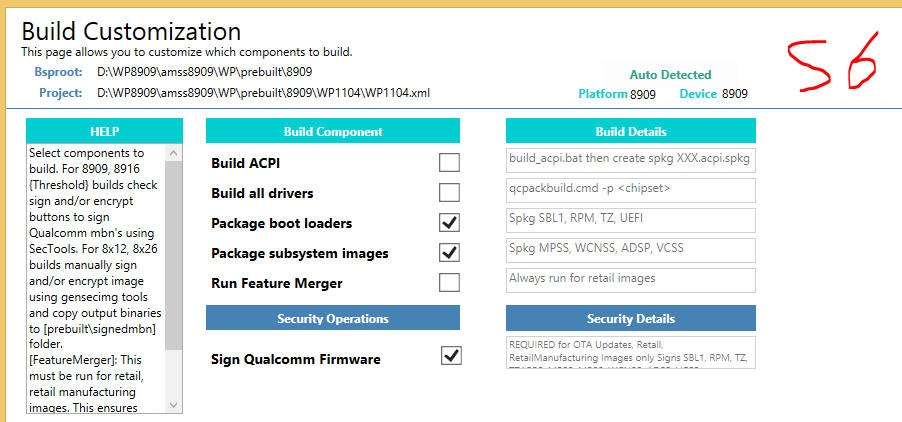
Qualcomm option reference to two files：(the wlan.provision don’t need)



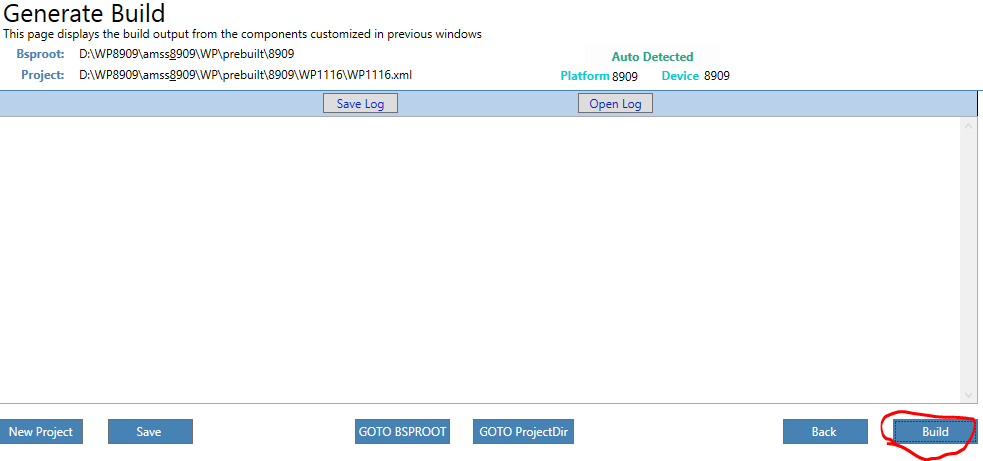




**S6 Build Customization**



**S7: click Build to package and subsystem**



# According to Checklist to test

After create FFU image, need to perform a simple functional test on the basis of Checklist file.



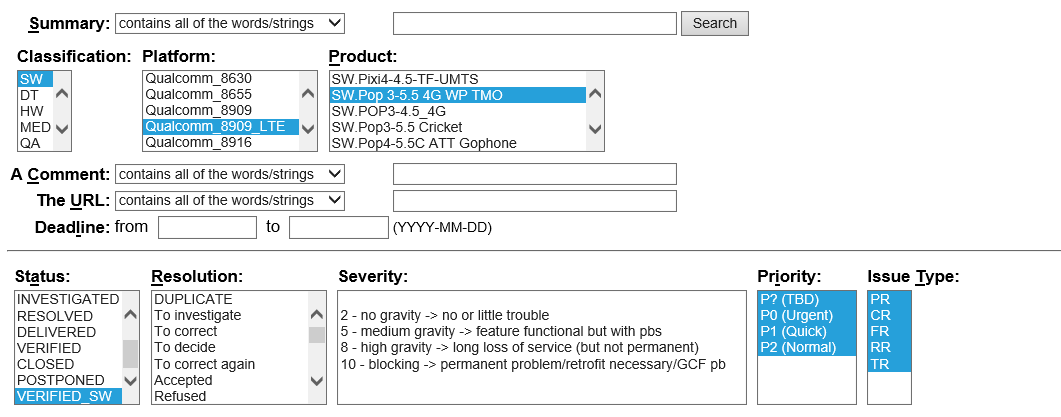
# Create TAG label at GIT

Please excute the following command on git bash:

**git push ssh://jiyong.gao@172.24.61.94:29418/winphone/amss\_8909 HEAD:refs/tags/version**

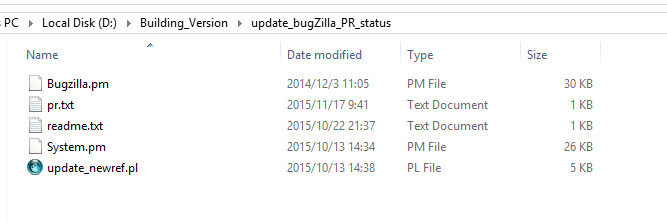
the version is version number, such as WP15 for WP15 version.

# update bugZilla PR status

8.1 Firstly following the picture-8.1 set search condition to find PR status’ **VERIFIED\_SW** on BugZilla website for this version. Saving these PR number to **pr.txt** (the text file will used in perl script). 

**Picture-8.1**

The includes files as follow:

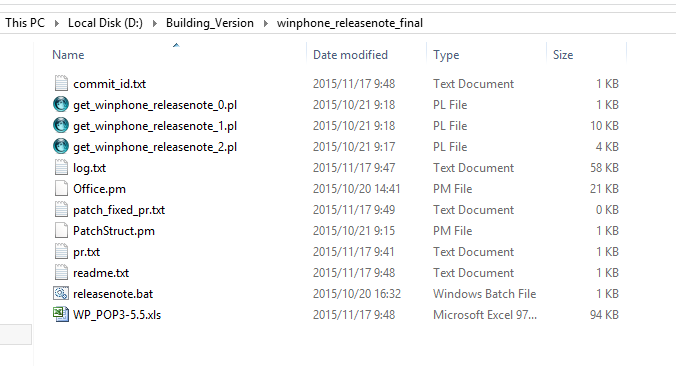


The usage: **perl update\_newref.pl WPxx** ( readme.txt for details).

After excuting the command, the corresponding pr status will become **DELIVERY.**

# Create WP releaseNotes file

The include files to create releaseNotes file, as follow:



For detail usage, please reference to **readme.txt**.

how to use the winphone releasenote:

* + 1. modify WP\_POP3-5.5.xls ‘s release-date and release-version

1. goto your git directory, run the follow command and save log.txt to the winphone release note script directory.

git log>log.txt

2. save the verified sw prs from bugzilla into pr.txt, copy the pr.txt to the winphone release note script directory.

3.run get\_winphone\_releasenote\_0.pl, the parameter is the commid id you take in last release.

perl get\_winphone\_releasenote\_0.pl 04e12267e6f2f266e1032ab27c03cd9695febfb2

4.run get\_winphone\_releasenote\_1.pl, the parameter is the release version.

perl get\_winphone\_releasenote\_1.pl WPxx

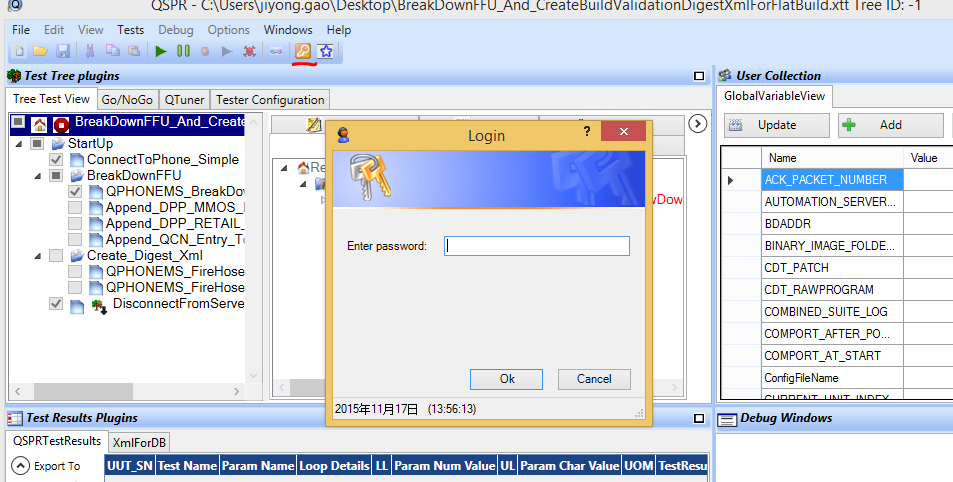
5.run get\_winphone\_releasenote\_2.pl, the parameter is the release version too.

perl get\_winphone\_releasenote\_2.pl WPxx

Now, you can get releaseNotes file for this version.

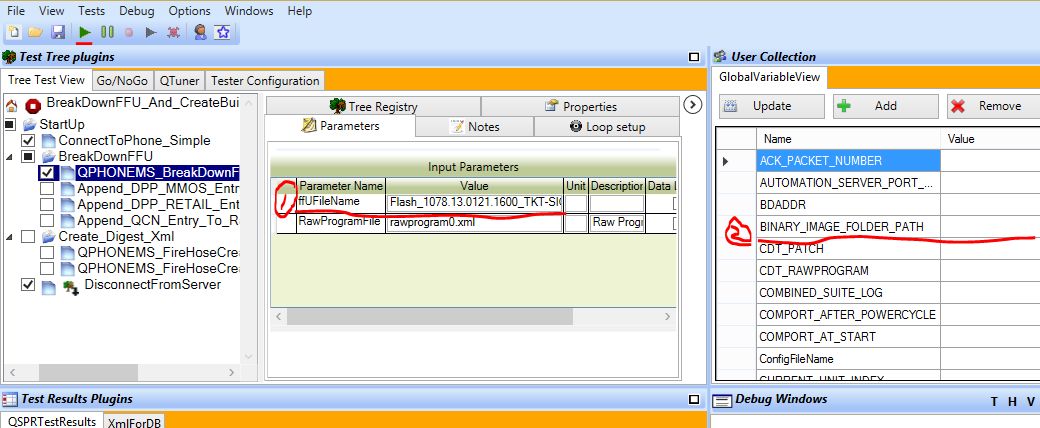
# Breakdown FFU for NPI

Open , click key icon to enter edit status. There is no password, please click ok directly.



Input FFU image name at **①**;

Input FFU image File absolute path at **②;**



Then click to breakdown FFU image.

There need other files:

1. Three BootMode files



1. dpp.bin

find at **amss\_8909\WP\prebuilt\8909\WPCODE**

the WPCODE is defined at QWPCT tool.

1. sec.dat

at **amss\_8909\WP\prebuilt\8909\ WP1116\common\_output\v1**

1. QCN tar package - fs\_image.tar.gz.mbn

How to create fs\_image.tar.gz.mbn, please reference to Appendix-B

1. prog\_emmc\_firehose\_8909\_lite.mbn

at **amss\_8909\WP\prebuilt\8909\signedmbn**

1. keystore.dat

at **SSDKeys\keys**

1. Flash.FFU (retail\_second 下的Flash.FFU)
2. 添加一个空的bin文件，取名为：YWPxxxxx.bin；

例如本项目的WP30版本，则文件取名为YWP01230.bin，WP31版本则命名为YWP01231.bin；以此类推。

# Transfer FFU to teleweb and shared folder

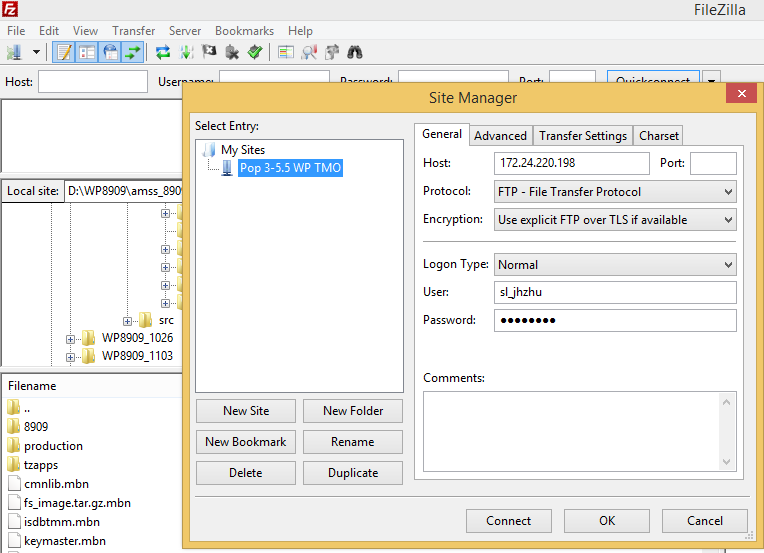
**10.1 transfer FFU to TeleWeb**

Open FileZilla Tool, add site as follow:

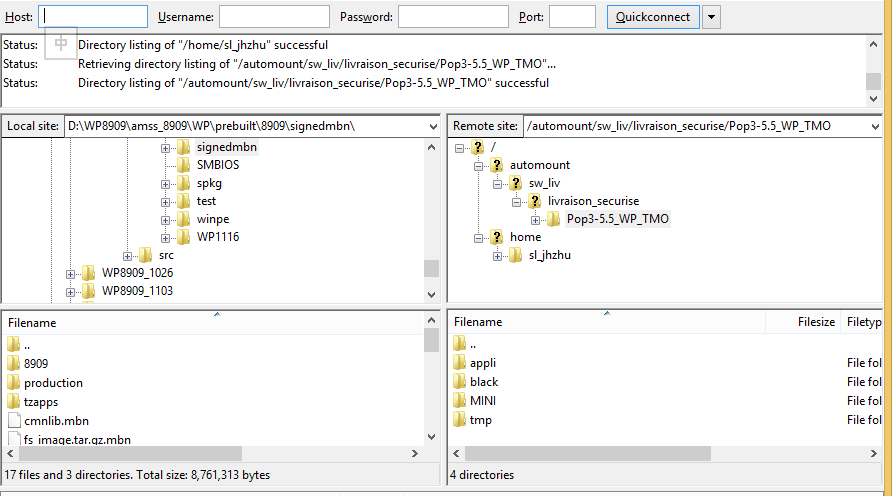
Host: 172.24.220.198

User: sl\_jhzhu

Passwd: Aa123456



Under **/automount/sw\_liv/livraison\_securise/Pop3-5.5\_WP\_TMO**, there are four folders:



The appli folder save official version;

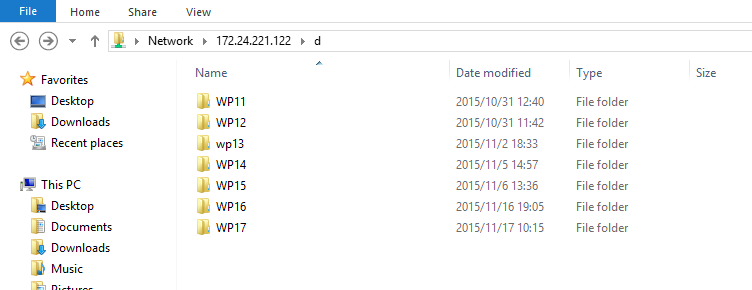
The black folder save black version;

The MINI folder save version for NPI;

The tmp fold save tmp version;

**10.2 transfer FFU and back up related folders to Shared-folder**

The Shared folder is at [\\172.24.221.122\d\](file:///\\172.24.221.122\d\) ,



Also need to back up related folder. They are:

1. amss\_8909\WP\prebuilt\8909\firmware
2. amss\_8909\WP\prebuilt\8909\FMFiles
3. amss\_8909\WP\prebuilt\8909\ICD\_project
4. amss\_8909\WP\prebuilt\8909\OEMCustomization
5. amss\_8909\WP\prebuilt\8909\OEMInputTemplates
6. amss\_8909\WP\prebuilt\8909\signedmbn
7. amss\_8909\WP\prebuilt\8909\spkg
8. amss\_8909\WP\prebuilt\8909\WP1116
   1. The WP1116 is project name, you define it on QWPCT tool.

# Appendix-A: WP Naming Rule

|  |  |  |  |
| --- | --- | --- | --- |
| **WP naming rule** | | | |
| please find phone info at setting->system->about->device information->more info | | | |
| **Model name** | ALCATELONETOUCH FierceXL 5055W | | |
| **OS version** | MSFT AK version | | |
| **fireware version** |  |  |  |
| **1077** | **0** | **ABCD** | **EFGH** |
| QCT baseline changed when the baseline updated |  | AB: project--01  C: 0--test; 1--production;  2--retail  D: QCT signed or not, 0 not signed,1 signed | EF: software version number,09, 10, 11...  GH: black version number,01,02,03…. |
| **hardware version** |  | | |
| **bootloader** | BOOT.BF.3.1.2.c2-00016-M8909AAAAANAZB-1 | | |
| **Radio software version** | MPSS.JO.1.0.c5-00051-M8909EAAAANVZM-1(current value) | | |
| **Chip SOC version** | 8909 |  |  |
| **screen size** | 720x1280 |  |  |
| **MAC address** | WIFI mac address |  |  |
| **IMEI** | IMEI |  |  |

# Appendix-B: Creating fs\_image.tar.gz.mbn

文件所在位置：D:\WP8909\amss\_8909\WP\prebuilt\8909\firmware

* 注释掉D:\WP8909\amss\_8909\modem\_proc\core\storage\efs\inc\custefs.example.h 中的宏定义FEATURE\_EFS\_ENABLE\_FACTORY\_IMAGE\_SECURITY\_HOLE；
* 在D:\WP8909\amss\_8909\modem\_proc\build\ms\cust8909.gen.prodq.h中定义宏FEATURE\_EFS\_ENABLE\_FACTORY\_IMAGE\_SECURITY\_HOLE，格式如下：

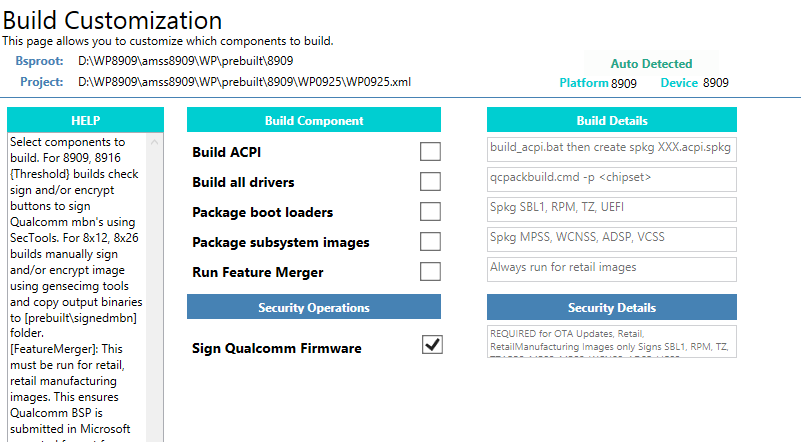
#define FEATURE\_EFS\_ENABLE\_FACTORY\_IMAGE\_SECURITY\_HOLE

* 在D:\WP8909\amss\_8909\WP\prebuilt\8909\app\Qwpct\scripts\Factory\Factory.psm1中，将函数GenerateEFSTar注释，这样Qwpct工具就不会自动生成tar包。
* 执行以下命令：

cd D:\WP8909\amss\_8909\modem\_proc\build\ms

build.cmd 8909.gen.prod –k

* 执行Qwpct,最后一项只选最后一项



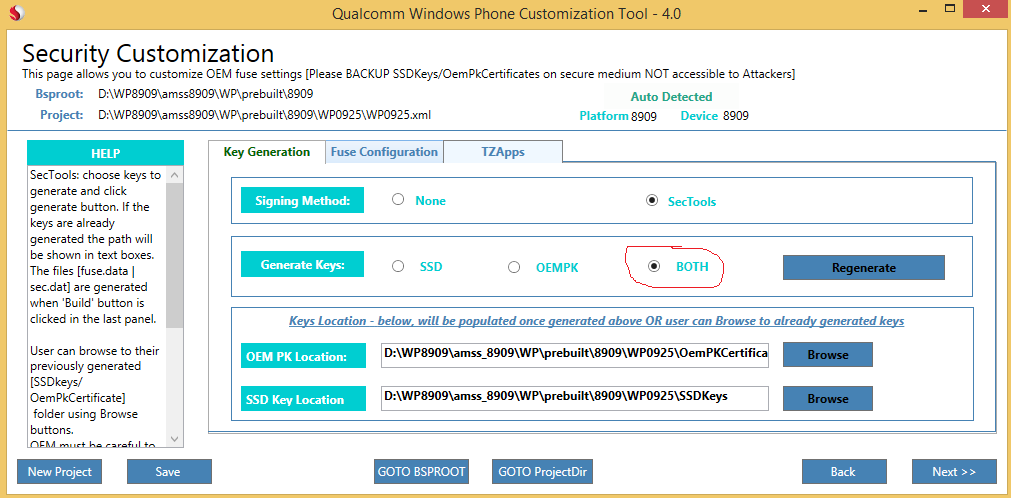
* 将D:\WP8909\amss\_8909\WP\prebuilt\8909\signedmbn\8909的qcdsp1v28909.mbn和qcdsp28909.mbn拷贝到手机的system32目录中。
* 打开手机diag口，并打开QPST，查看手机是否连接上，
* 使用如下命令，生成fs\_image.tar.gz:

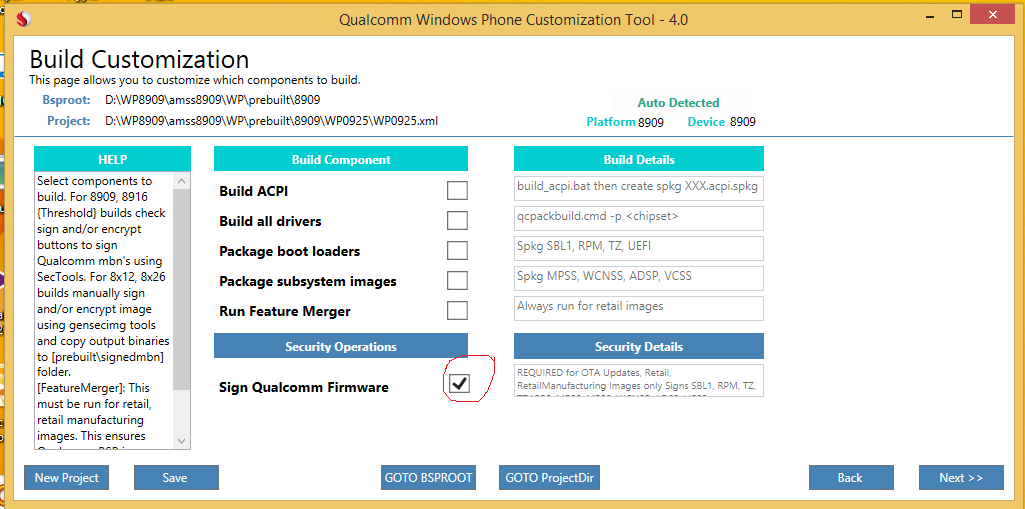
perl efsreadimage.pl –z

* 将上步创建的压缩文件copy到D:\WP8909\amss\_8909\WP\prebuilt\8909\firmware

先备份D:\WP8909\amss\_8909\WP\prebuilt\8909\signedmbn

打开Qwcpt，设置如下：





执行完后，可以在D:\WP8909\amss\_8909\WP\prebuilt\8909\signedmbn中获取signed过的fs\_image.tar.gz.mbn

# Appendix-C: How to downlaod FFU image

**方法1：进入闪电模式后刷机**

先短按power键开机，然后立即长按VOL+键，直到出现如下图所示，即表明进入闪电模式。然后使用如下命令：

ffutool –flash ffu.FFU

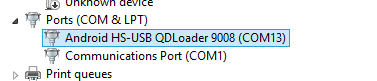


**方法2：开启9008端口后刷机**

手机关机后，直接用强制下载线连接手机。即可在设备管理器中查看到，如下图：

然后使用如下命令：

emmcdl –p COM13 –f prog\_emmc\_firehose\_8909\_lite.mbn –ffu ffu.FFU



# Appendix-D: how to backup FFU image

在D:\Building\_Version下有个backup\_black.cmd脚本，用法如下：

backup\_black.cmd WP30 WP3000 production|test|retail

Note:

对于正式版本的版本，使用D:\Building\_Version下的backup\_to\_Server.cmd脚本，用法如下：

backup\_to\_Server.cmd WP30 WP3000 production|test|retail WPCODE