

## OBU-201U Environment Setup Procedure

**Note:**

1. This document is a step-wise illustration for OBU-201U environment setup (compatible with 32-bit & 64-bit OS )
2. For compilation under 64-bit OS, an extra package (libc6-i386) need to be installed
3. The commands listed here are for illustration purpose only.
4. On successful execution, an image named "wave-sdk.img" is generated, which can be used to upgrade firmware (Refer Section 7 in Quick Start Guide).
5. Before compilation, it is advised to back up the default image (wave-sdk.img) available in <sdk/arm/img/> folder

Step	Description	Example Command
1.	Login to Ubuntu (tried on ver.16.04.2): On Desktop create a folder named "SDK" & copy the following files in that folder: - sdk-4.11.0-sc-i686-linux-gnu.tar.xz (AT SDK) - sdk-us-914.zip (Unex SDK) - gcc-arm-none-eabi-4_8-2014q3-atk-1.0.0-linux.tar.xz (ARM Toolchain)	N/A
2.	Open a Terminal	- Ctrl+Alt+t
3.	Create a folder named "tools" in root directory	- cd / - sudo mkdir tools
4.	In tools folder, create a folder named "autotalks"	- cd tools - sudo mkdir autotalks
5.	Move to "autotalks" folder, Copy AT SDK into it & uncompress the file	- cd /tools/autotalks - sudo cp ~/Desktop/SDK/sdk-4.11.0-sc-i686-linux-gnu.tar.xz . - sudo tar xf sdk-4.11.0-sc-i686-linux-gnu.tar.xz
6.	Move to "tools" folder and create recursive folders named "gcc" & "arm"	- cd .. - sudo mkdir gcc/arm -p
7.	Move to "arm" folder, Copy ARM Toolchain into it & uncompress the file	- cd gcc/arm - sudo cp ~/Desktop/SDK/gcc-arm-none-eabi-4_8-2014q3-atk-1.0.0-linux.tar.xz . - sudo tar xf gcc-arm-none-eabi-4_8-2014q3-atk-1.0.0-linux.tar.xz
8.	Move to home directory, create a folder named "sdk", copy Unex SDK into it and uncompress the file	- cd ~ - mkdir sdk - cd sdk - cp ~/Desktop/sdk/sdk-us-914.zip . - unzip sdk-us-914.zip
9.	In "sdk" folder, Compile the source code using make <b>Note 1:</b> "make" utility will look for a file named Makefile in sdk folder, and then execute it.	- cd sdk - make

	<b>Note 2:</b> In Makefile, the variable “BOARD” is set to “pcb201v1” indicating compiled image is for OBU-201.	
10.	Move to “img” folder to copy the image file named " <b>wave-sdk.img</b> " & upgrade OBU unit.	<ul style="list-style-type: none"> <li>- cd arm/img/</li> <li>- ls</li> </ul>

✧ **How to build DSRC applications?**

- DSRC applications can be built by modifying `craton_user_init()` function in `main.c` file, located under the `sdk` folder.

✧ **For compilation under 64-bit OS:**

- An extra package “libc6-i386” needs to be installed  
- Example: `sudo apt-get install libc6-i386`