

# AM57x UART Download SOP

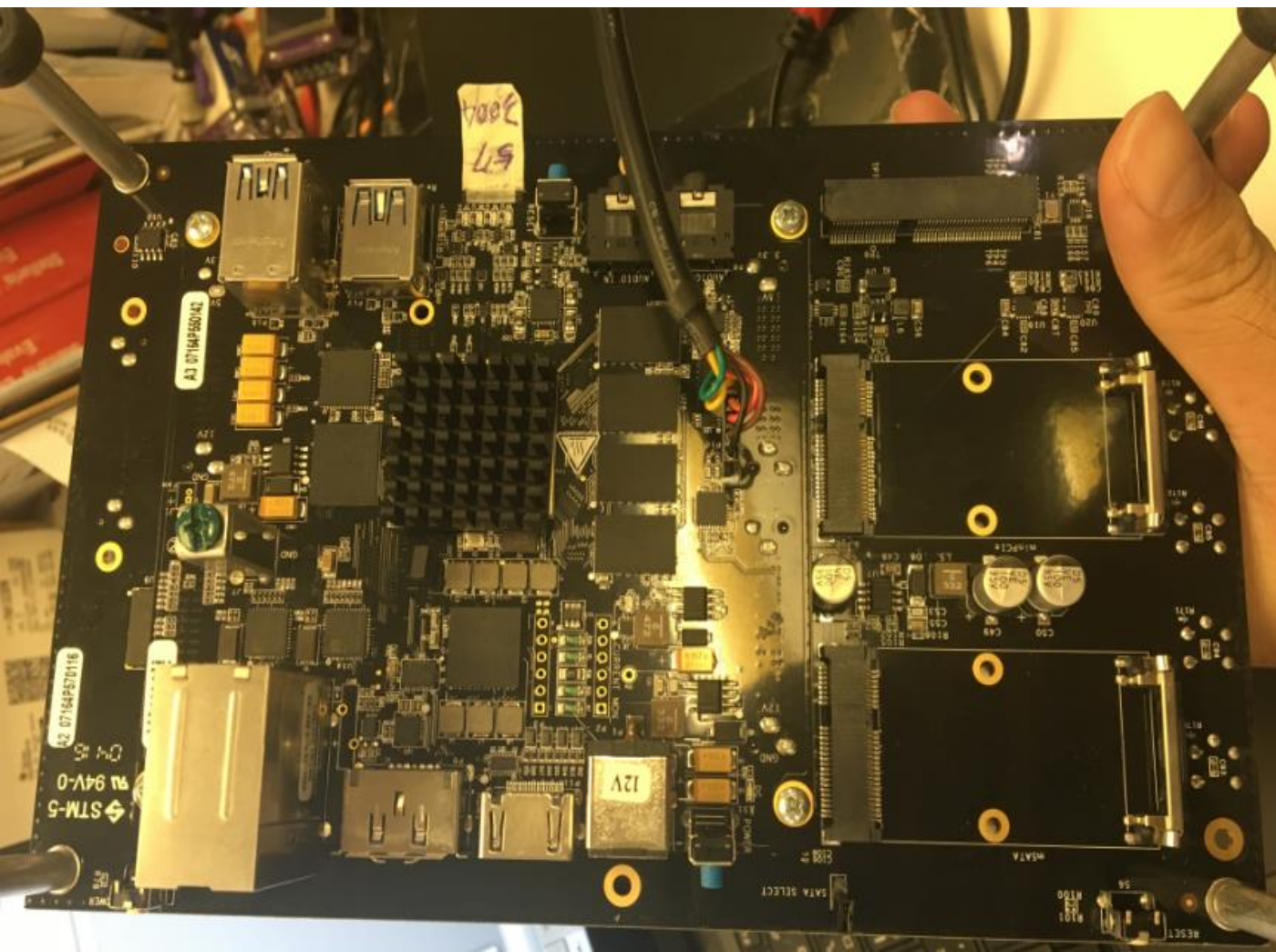


TI Rio 2016/11/1

# Outline.

- 1. HW/SW required stuffs.
- 2. HW setting.
- 3. SW setting.
- 4. Demo SOP

# This is the AM57 GP EVM

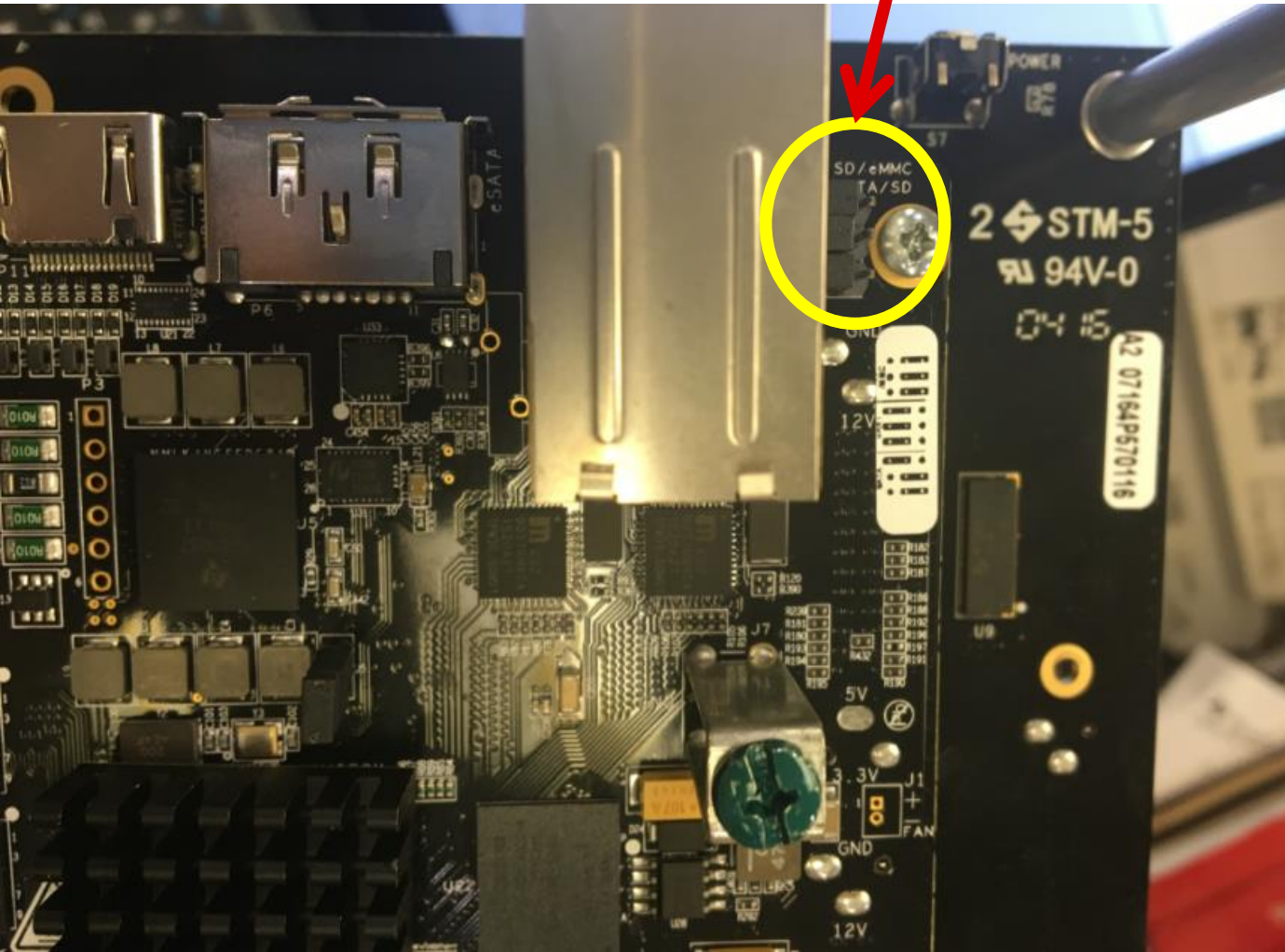


# Check the GP EVM version is beyond A2

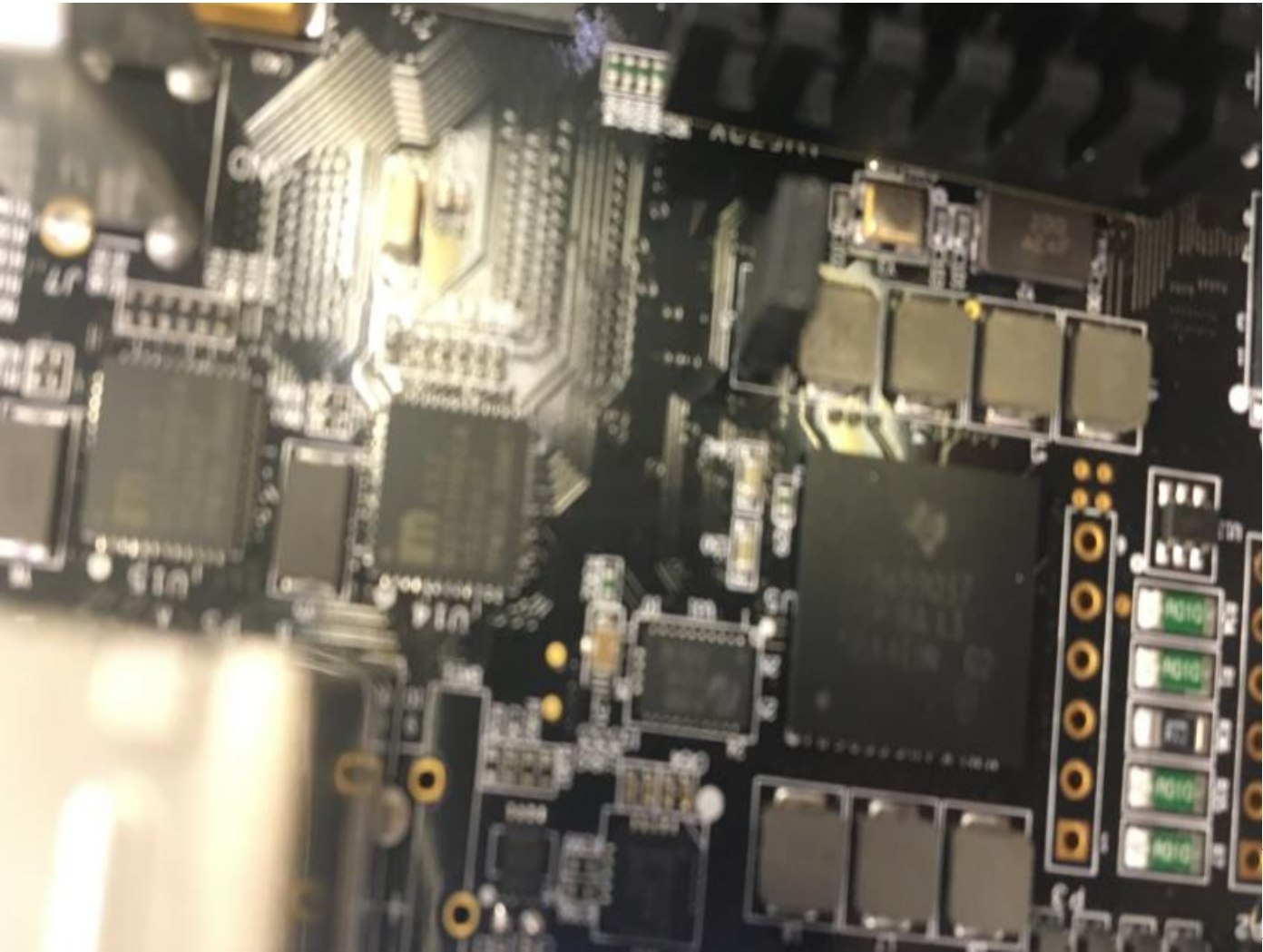




# Connect the J3/J4/J6 to [1:2]



# Connect the J5



# HW Required Stuffs.

- Connect the J3/J4/J6, set them as [1:2:3] (connect the 1:2 for each)
- Connect the J5
- Plug the UART to PC/NB

# SW Required stuffs

- Windows Perl download:
  - Win7.
  - ActivePerl (x86)
  - TeraTerm.
  - serial-boot.pl ← Script for UART download required for AM57.
- uBuntu Perl download.
  - uBuntu 12.04
  - Perl for uBuntu
  - SerialPort package
  - serial-boot.pl ← Script for UART download required for AM57.



# Window Perl to make the UART download procedure

# SW Required Stuffs

- Activeperl
  - With 64bit OS windown7, we choose the AtivePerl (x86).
  - Due to the ActivePerl (x64) is not working on win7.
  - → <http://www.activestate.com/activeperl/downloads>

## DOWNLOAD PERL BINARIES: ACTIVEPERL COMMUNITY EDITION

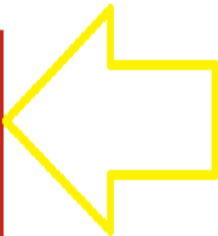
ActivePerl is the leading commercial-grade distribution of the open source Perl scripting language. Download ActivePerl Community Edition free binaries for your development projects and internal deployments.

DO YOU NEED AN OLDER VERSION OF ACTIVEPERL OR WANT TO USE IT ON PRODUCTION OR ON BIG IRON SERVERS?

If you are using ActivePerl for production, redistribution, on terminal servers, for thin client for app deployment (i.e. on MS Terminal Services, Citrix XenApp or File Servers), or for use on HP-



Download ActivePerl  
5.24.0  
for Windows (x86)



Download ActivePerl  
5.24.0  
for Windows (64-bit, x64)

# Start to follow the steps to operate the perl

```
C:\Perl>  
C:\Perl>ppm
```

Trigger  
Perl Package Manager

PPM will bring this screen.  
Install the “serialport”

The screenshot shows the Perl Package Manager interface with a search for 'serialport'. The search results table is as follows:

Package Name	Area	Installed	Available	Abstract
Test-Device-Seri...			0.05	Serial port mock object to be used for testing
Win32-SerialPort	site	0.22	0.22	User interface to Win32 Serial API calls

Don't forget to click  
“install”

The screenshot shows the details for the 'Test-Device-SerialPort' package. The information is as follows:

**Test-Device-SerialPort**  
**Serial port mock object to be used for testing**  
Version: 0.05  
Released: 2010-06-22  
Author: Cosimo Streppone <cosimo@cpan.org>  
CPAN: <http://search.cpan.org/dist/Test-Device-SerialPort-0.05/>

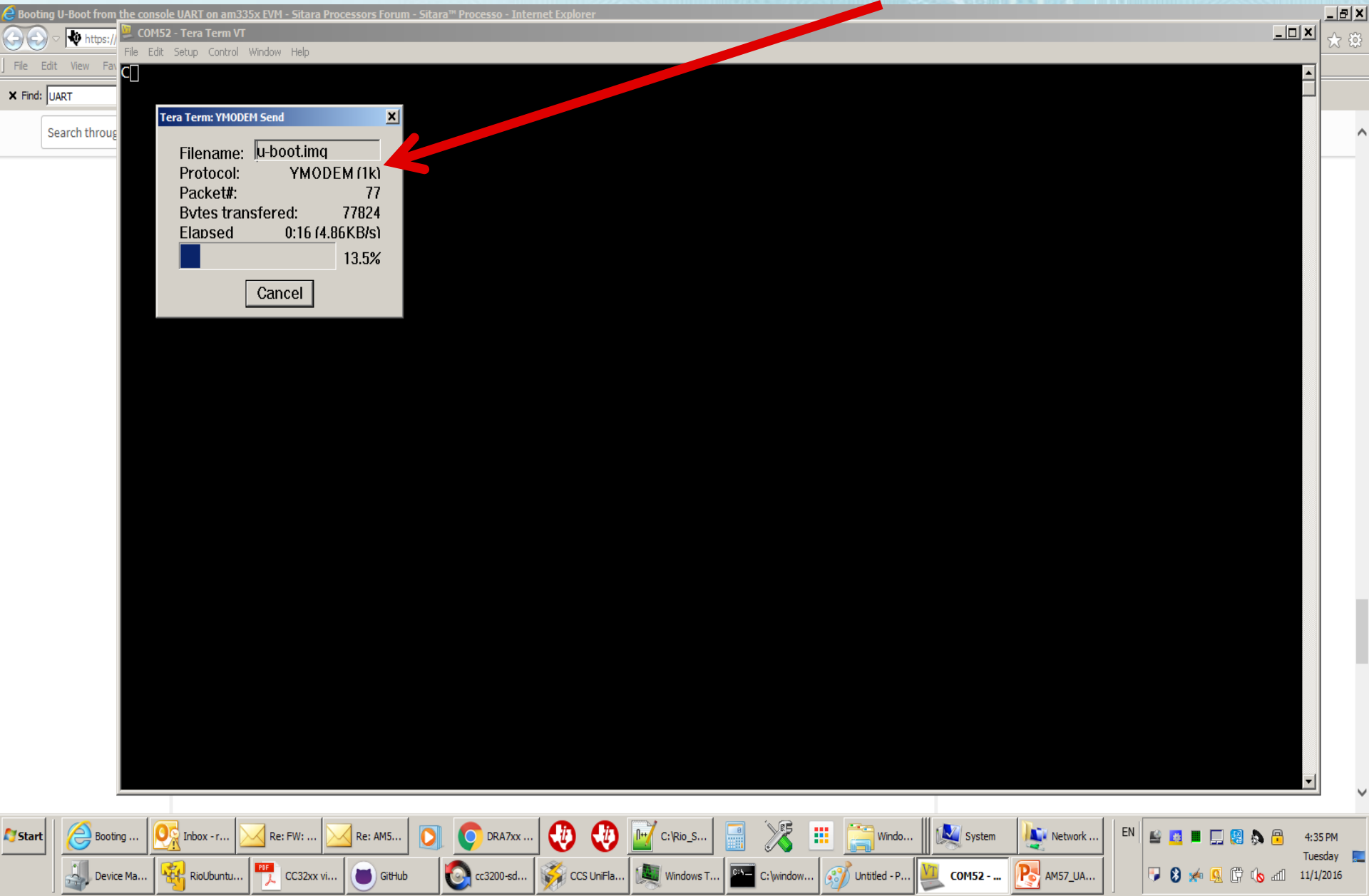
Serial port is ready for used  
by perl.



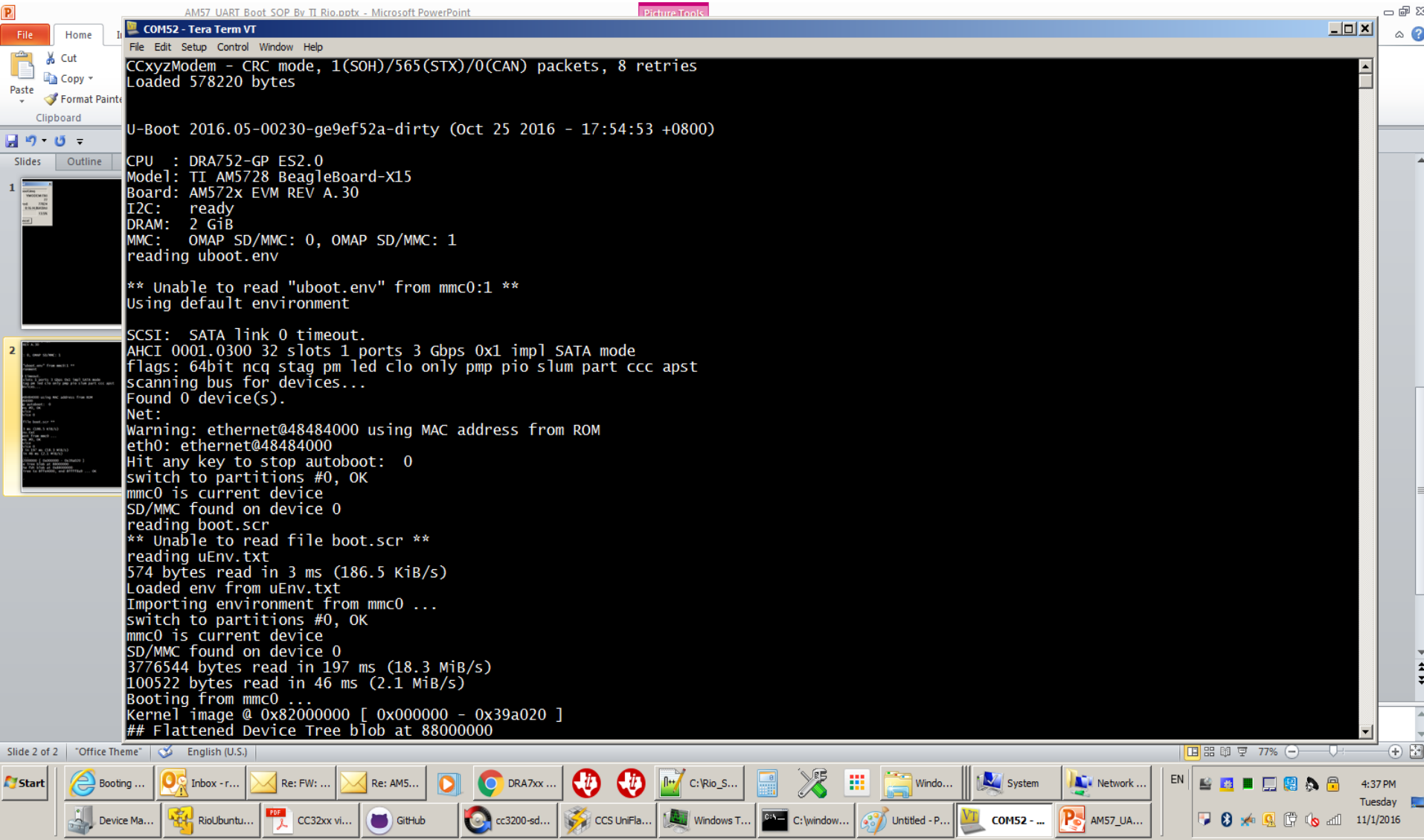




Then, after seeing “CCCC”,  
trigger “ymodem” to send the “u-boot.im



Once “u-boot.img” is download complete, the kernel will bring up naturally.



```
AM57_UART_Boot_SOP_By_Ti_Rio.pptx - Microsoft PowerPoint
COM52 - Tera Term VT
File Edit Setup Control Window Help
CCxyzModem - CRC mode, 1(SOH)/565(STX)/0(CAN) packets, 8 retries
Loaded 578220 bytes

U-Boot 2016.05-00230-ge9ef52a-dirty (Oct 25 2016 - 17:54:53 +0800)

CPU : DRA752-GP ES2.0
Model: TI AM5728 BeagleBoard-X15
Board: AM572x EVM REV A.30
I2C: ready
DRAM: 2 GiB
MMC: OMAP SD/MMC: 0, OMAP SD/MMC: 1
reading uboot.env

** Unable to read "uboot.env" from mmc0:1 **
Using default environment

SCSI: SATA link 0 timeout.
AHCI 0001.0300 32 slots 1 ports 3 Gbps 0x1 impl SATA mode
flags: 64bit ncq stag pm led clo only pmp pio slum part ccc apst
scanning bus for devices...
Found 0 device(s).
Net:
Warning: ethernet@48484000 using MAC address from ROM
eth0: ethernet@48484000
Hit any key to stop autoboot: 0
switch to partitions #0, OK
mmc0 is current device
SD/MMC found on device 0
reading boot.scr
** Unable to read file boot.scr **
reading uEnv.txt
574 bytes read in 3 ms (186.5 KiB/s)
Loaded env from uEnv.txt
Importing environment from mmc0 ...
switch to partitions #0, OK
mmc0 is current device
SD/MMC found on device 0
3776544 bytes read in 197 ms (18.3 MiB/s)
100522 bytes read in 46 ms (2.1 MiB/s)
Booting from mmc0 ...
Kernel image @ 0x82000000 [ 0x000000 - 0x39a020 ]
### Flattened Device Tree blob at 88000000
```

Slide 2 of 2 "Office Theme" English (U.S.) 77% 4:37 PM Tuesday 11/1/2016

# Success !!

AMS57 UART Boot SOP By TI Rio.pptx - Microsoft PowerPoint

COM52 - Tera Term VT

```
File Edit Setup Control Window Help
CPU : DRA752-GP ES2.0
Model: TI AM5728 BeagleBoard-X15
Board: AM572x EVM REV A.30
I2C: ready
DRAM: 2 GiB
MMC: OMAP SD/MMC: 0, OMAP SD/MMC: 1
reading uboot.env

** Unable to read "uboot.env" from mmc0:1 **
Using default environment

SCSI: SATA link 0 timeout.
AHCI 0001.0300 32 slots 1 ports 3 Gbps 0x1 impl SATA mode
flags: 64bit ncq stag pm led clo only pmp pio slum part ccc apst
scanning bus for devices...
Found 0 device(s).
Net:
Warning: ethernet@48484000 using MAC address from ROM
eth0: ethernet@48484000
Hit any key to stop autoboot: 0
switch to partitions #0, OK
mmc0 is current device
SD/MMC found on device 0
reading boot.scr
** Unable to read file boot.scr **
reading uEnv.txt
574 bytes read in 3 ms (186.5 KiB/s)
Loaded env from uEnv.txt
Importing environment from mmc0 ...
switch to partitions #0, OK
mmc0 is current device
SD/MMC found on device 0
3776544 bytes read in 197 ms (18.3 MiB/s)
100522 bytes read in 46 ms (2.1 MiB/s)
Booting from mmc0 ...
Kernel image @ 0x82000000 [ 0x000000 - 0x39a020 ]
## Flattened Device Tree blob at 88000000
Booting using the fdt blob at 0x88000000
Loading Device Tree to 8ffe4000, end 8ffff8a9 ... OK

Starting kernel ...
```

Slide 1 of 1 "Office Theme" English (U.S.) 77%

Start Booting... Inbox - r... Re: FW: ... Re: AMS... DRA7xx... C:\Rio\_S... Windows... System Network... EN 4:36 PM Tuesday 11/1/2016

Device Ma... RioUbuntu... CC32xx vi... GitHub cc3200-sd... CCS UniFla... Windows T... C:\window... Untitled - P... COM52 - ... AMS57\_UA...

# uBuntu Perl to make the UART download procedure







Then, continue to download the u-boot.img by inputting this command:

`sx -kb --ymodem u-boot.img < /dev/ttyUSB0 > /dev/ttyUSB0`

