

## Testing Processor SDK RTOS USB bulk example on AM335x GP EVM

1. Download and install the latest Processor SDK RTOS: [http://software-dl.ti.com/processor-sdk-rtos/esd/AM335X/latest/index\\_FDS.html](http://software-dl.ti.com/processor-sdk-rtos/esd/AM335X/latest/index_FDS.html)
2. Download the new USB patch package for bulk support: [https://bitbucket.itg.ti.com/projects/PROCESSOR-SDK/repos/usb/commits?until=refs/heads/PRSDK-3478\\_usb\\_bulk\\_support](https://bitbucket.itg.ti.com/projects/PROCESSOR-SDK/repos/usb/commits?until=refs/heads/PRSDK-3478_usb_bulk_support)
3. Either rename the original USB folder under `pdk_am335x_1_0_9/packages\ti\drv` or merge the patch package from step 2 into the existing USB folder (the below based on renaming the original USB folder, then creating a new folder called “usb” with the contents from the step 2)
4. The new package doesn't come with prebuilt USB library, please modify the top level `ti\pdk_am335x_1_0_9/packages\makefile`:

```
all: cs1 profiling board emac fatfs gpio gpmc i2c icss-emac mcasp mmcsd nimu nimu-icss osal pm spi starterware uart usb
pruss
```

```
usb:
```

```
$(MAKE) -C ./ti/drv/usb all
```

```
usb_clean:
```

```
$(MAKE) -C ./ti/drv/usb clean
```

Follow [http://processors.wiki.ti.com/index.php/Rebuilding\\_The\\_PDK](http://processors.wiki.ti.com/index.php/Rebuilding_The_PDK) to build the USB library, e.g:

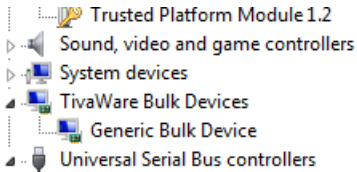
- `pdksetupenv`
- `gmake usb`

5. Follow: [http://processors.wiki.ti.com/index.php/Rebuilding\\_The\\_PDK#PDK\\_Example\\_and\\_Test\\_Project\\_Creation](http://processors.wiki.ti.com/index.php/Rebuilding_The_PDK#PDK_Example_and_Test_Project_Creation) to create USB test example, e.g.

```
pdkProjectCreate AM335x all little usb all arm
```

A CCS project called `USB_DevBulk_evmAM335x_armExampleProject` should be created

6. Go to `\ti\drv\usb` folder, type “`gmake xdc_meta`” to build XDC related package info
7. If the host PC side has been setup for testing with USB bulk device using `AM335X_StarterWare_02_00_01_01`, this step can be skipped. If not, go to:
  - a. <http://www.ti.com/tool/SW-TM4C>
  - b. The Windows driver for the AM335x bulk device is in the: “SW-TM4C: TivaWare for C Series Software (Complete)” package.
  - c. The prebuilt binary of the Windows host program that send data to the AM335 EVM via bulk interface is in the package: “SW-TM4C-USB-WIN”
8. Load the out from step 6 into AM335x A8 core and run
9. The Windows PC device manager should detect this USB as TivaWare bulk device



10. Run the host application to test this:

```
C:\Program Files (x86)\Texas Instruments\Tiva\usb_examples>usb_bulk_example
Bulk USB Device Example
-----
Version 2.1.4.178

This is a partner application to the usb_dev_bulk example
shipped with Tivaware software releases for USB-enabled
boards. Strings entered here are sent to the board which
inverts the case of the characters in the string and returns
them to the host.

Enter a string (EXIT to exit): ASDPtyui1234

Wrote 12 bytes to the device. Expected 12
Read 12 bytes from device. Expected 12

Returned string: "asdfTYUI1234"

Enter a string (EXIT to exit):
```

## AM335x UART:

[illegible]