

Overview

The host CDC project is a simple demonstration program based on the MCUXpresso SDK. It enumerates a COM port and echoes back the data from the UART as follows:

1. The host CDC receives data from the UART, which is plugged in the PC. Type characters in the terminal tool, such as Tera Term, and the characters are sent to the host example.
2. After the host example receives data from the UART, it sends the data to the device virtual COM.
3. After the data has been sent to the device virtual COM successfully, it receives the same data from the device virtual COM.
4. If the host has received the data, it sends data to the UART using the UART driver API. The UART echoes back data to the PC.

System Requirement

Hardware requirements

- Mini/micro USB cable
- USB A to micro AB cable
- Hardware (Tower module/base board, and so on) for a specific device
- Personal Computer(PC)

Software requirements

- The project path is:
<MCUXpresso_SDK_Install>/boards/<board>/usb_examples/usb_host_cdc/<rtos>/<toolchain>.

Note

The <rtos> is Bare Metal or FreeRTOS OS.

Getting Started

Hardware Settings

- The Jumper settings:
JP20 1-2, JP21 1-2 and JP22 1-2 for chip power. JP2 1-2 and JS2 shunt for full speed mode, JP2 2-3 and JS2 open for high speed mode.

Note

Set the hardware jumpers (Tower system/base module) to default settings.

Prepare the example

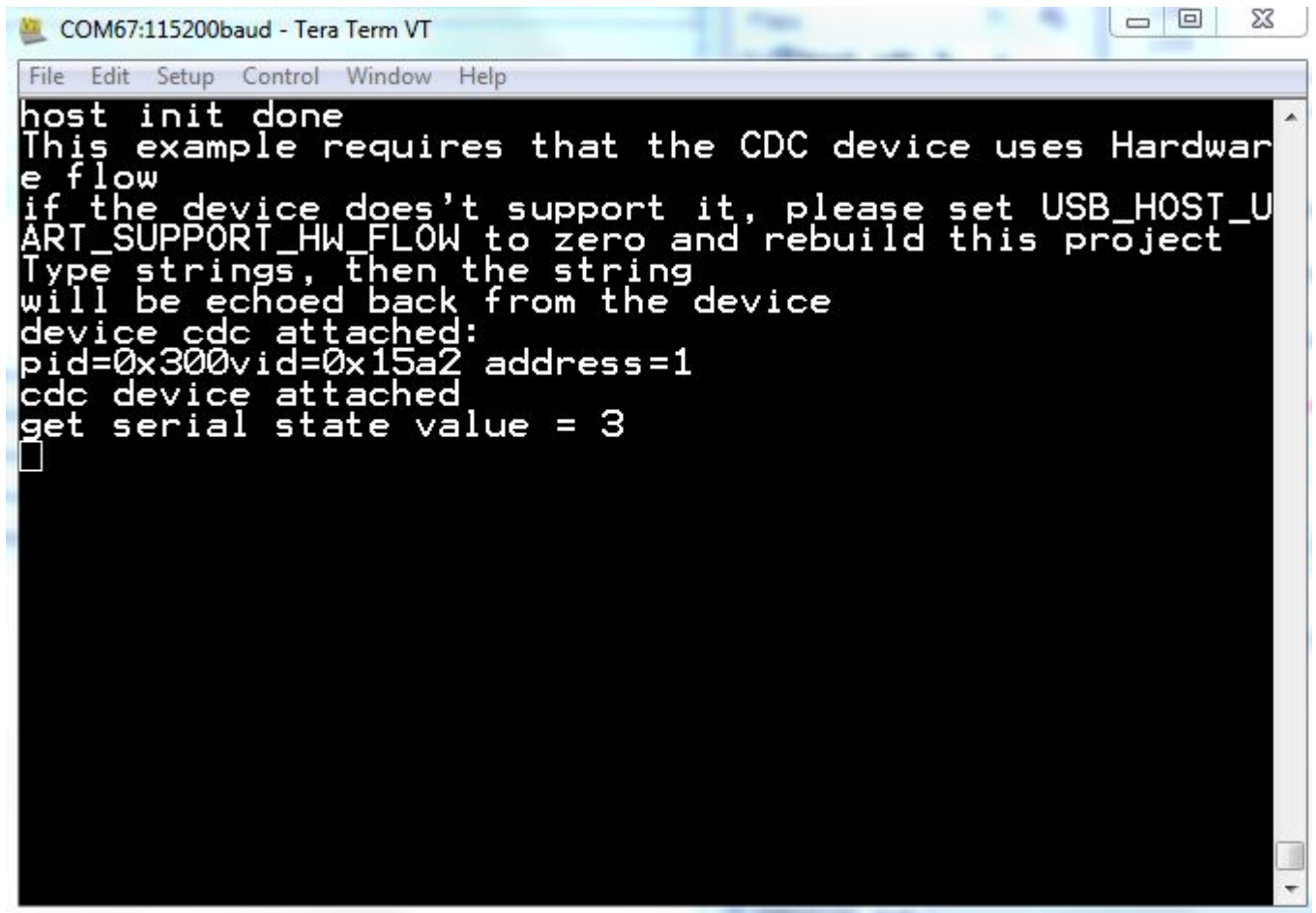
1. Download the program to the target board.
2. Power off the target board and power on again.
3. Connect devices to the board.

Note

For detailed instructions, see the appropriate board User's Guide.

Run the example

1. Run the host_cdc_serial example. The printed guide is displayed. Follow the guide to modify the demo.
2. Plug in the CDC device. The attached information is printed out.
3. Type a string and the string is sent to the CDC device if the string length is greater than USB_HOST_SEND_RECV_PER_TIME. If the length is shorter than the USB_HOST_SEND_RECV_PER_TIME, the string is echoed back later. After that, the CDC host reads back the string and puts it to stdout.

A screenshot of a Tera Term VT window titled 'COM67:115200baud - Tera Term VT'. The window has a menu bar with 'File', 'Edit', 'Setup', 'Control', 'Window', and 'Help'. The main text area is black with white text. The output shows the host initialization, a guide for hardware flow control, CDC device attachment details (pid=0x300, vid=0x15a2, address=1), and the serial state value (3). A cursor is visible at the end of the last line.

```
host init done
This example requires that the CDC device uses Hardware flow
if the device doesn't support it, please set USB_HOST_UART_SUPPORT_HW_FLOW to zero and rebuild this project
Type strings, then the string will be echoed back from the device
device cdc attached:
pid=0x300vid=0x15a2 address=1
cdc device attached
get serial state value = 3
█
```

Figure 1: Host cdc output