'cycx3_uvc_ov5640' example project provided in FX3 SDK is taken as the base for this UVC+CDC example project.

Modifications done in 'cycx3_uvc_ov5640' to implement CDC:
1. Modify 'cycx3_uvcdscr.c' file to include descriptors for CDC interface.
2. Handle CDC class requests in CyCx3AppUSBSetupCB() API.
3. Create an Auto DMA channel from USB Out EP->UART Consumer and a Manual DMA channel from UART Producer-> USB In EP.
4. Comment out CyU3PUartTxSetBlockXfer() and CyU3PDebugInit() APIs.

Download the example project attached with this Memo onto a Denebola kit. When the kit enumerates, UVC interface automatically binds to UVC driver and will come up as CX3-UVC under 'Imaging devices' section of Device Manager. On a Win10 PC the CDC interface automatically binds to Microsoft CDC driver and comes up as a COM port. Whereas, on a Win7 PC, the CDC interface will come up as CX3-UVC under 'Other devices' section of Device Manager.

On a Win7 PC, the following steps need to be followed only once, to force bind this interface to CDC driver:
1. Download and install CypressDriverInstaller_1.exe from the following link: http://www.cypress.com/documentation/software-and-drivers/usb-serial-software-development-kit
2. After default installation, 'Cypress USB-Serial Driver' folder will be created in the following path: C:\Program Files (x86)\Cypress
3. Right click on CX3-UVC under 'Other devices' section of Device Manager and choose 'Update Driver Software'.
4. In the pop-up window, choose 'Browse my computer for driver software'.
5. Choose 'Let me pick from a list of device drivers on my computer'.
6. Choose 'Show All Devices' and click Next.
7. Click on 'Have Disk...'
8. In the pop-up window, choose 'Browse...' and go to the following location: C:\Program Files (x86)\Cypress\Cypress USB-Serial Driver\DriverBinary\CDC_Driver\bin\win7\x64
9. Choose 'CypressSerial.inf' file and click Open.
10. Choose 'OK'. In the next window, select 'USB to UART Adapter' and click Next.
11. In the 'Update Driver Warning' pop-up window, choose Yes.Now, one of the CDC interface will come up as USB to UART Adapter in Device Manager.
12. Now, you will have another device 'Virtual Serial Port' under Other devices section of Device Manager.
13. Right click on this and choose 'Update Driver Software'.
14. Follow steps 3 to 8.
15. This time select 'USB Serial Port' and click Next. After you choose 'Yes' in the 'Update Driver Warning' pop-up window, you will get a USB Serial

Port(COM x) under Ports (COM&LPT) section of Device Manager. ['x' can be any number]

Now, open any of UVC Host Applications and you can observe the video being streamed. Simultaneously, open a UART Terminal application and you can verify the working of CDC interface.