Overview

The USB video FlexIO camera application is a simple demonstration program based on the KSDK. It is enumerated as a camera and users can see the video of the device by using a PC test tool.

System Requirement

Hardware requirements

- Mini/micro USB cable

- USB A to micro AB cable

- Hardware (Tower module/base board, OV7670 camera module, and so on) for a specific device

- Personal Computer (PC)

Software requirements

- The project files for lite version example are in:
  <SDK_Install>/boards/<board>/usb_examples/usb_device_video_flexio_ov7670_lite/<rtos>/<toolchain>.
  For non-lite version example, the path is:
  <SDK_Install>/boards/<board>/usb_examples/usb_device_video_flexio_ov7670/<rtos>/<toolchain>.

  Note

  > The <rtos> is Bare Metal or FreeRTOS OS.

- Download the install the PC Test tool "QQ International" from www.imqq.com/#download.
  For more information, see `QQ International Beginner's Guide`

  Note

  > The video FlexIO camera example is tested in Microsoft Windows 7 OS Enterprise X64.

Getting Started

Hardware Settings

Note

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

Prepare the example

1. Download the program to the target board.

2. Connect the target board to the external power source (the example is self-powered).

3. Power off the target board. And then power on again.

4. Connect a USB cable between the PC and the USB device port of the board.

Note

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

Run the example

1. Plug in the device, which is running video FlexIO camera application, into the PC. An imaging device "FlexIO Camera Demo" is enumerated in the Device Manager.
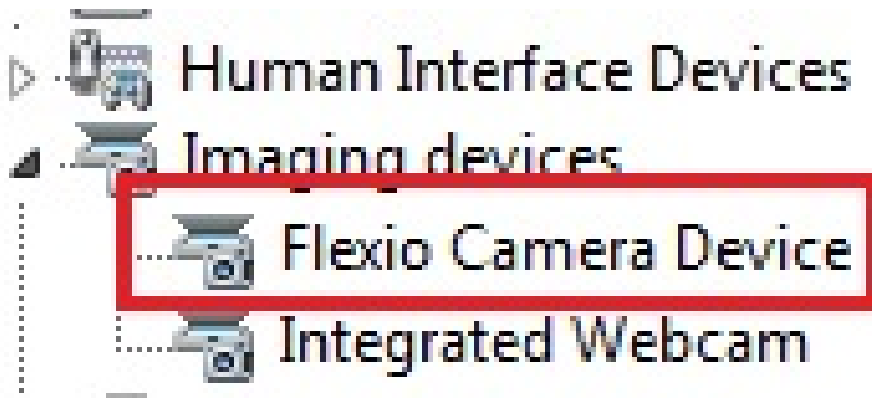

Figure 1: The video device is attached

2. Open the tool "Tencent QQ" and log in.

Figure 2: Login the test tool

3. Open the video test form Main Menu->Settings->General->Audio and Video->Video Settings.
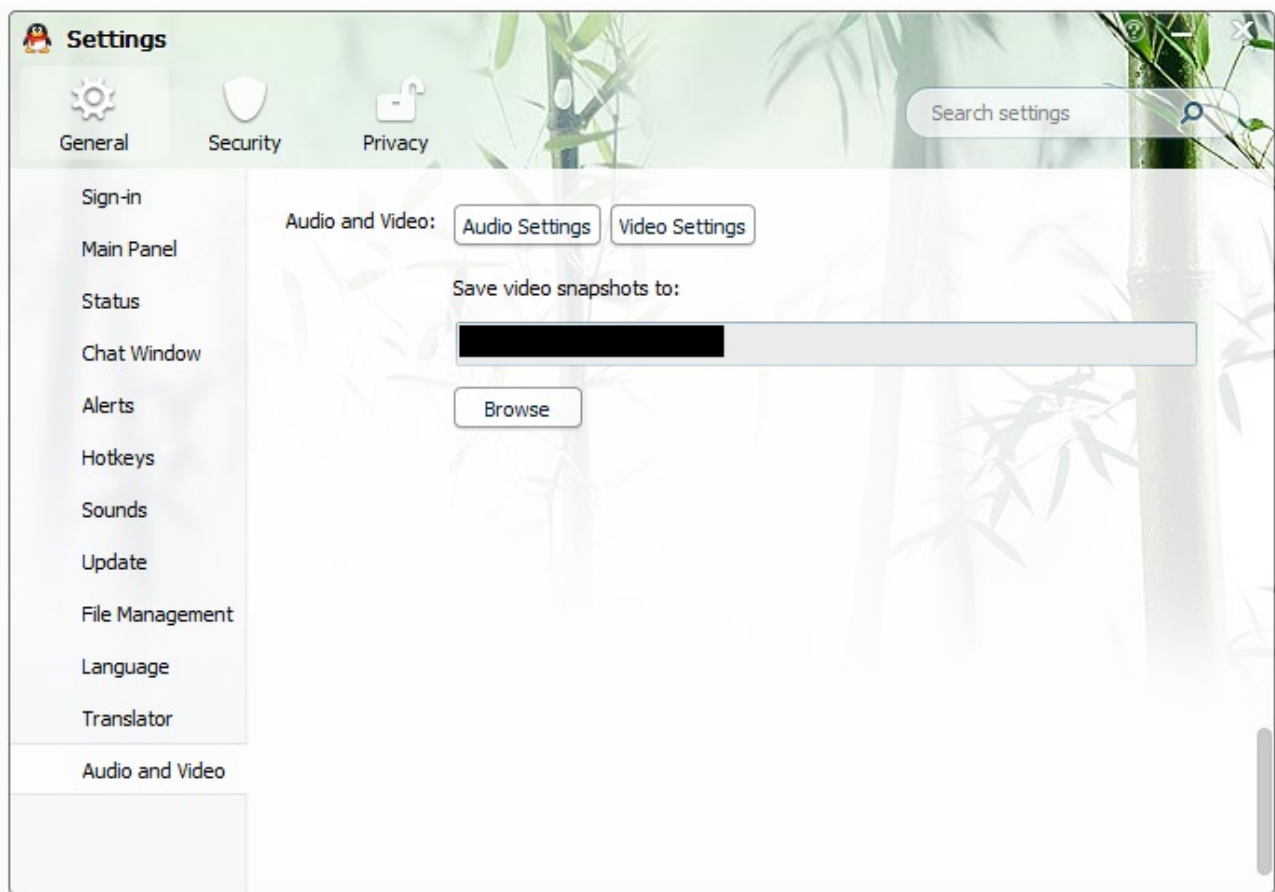
Figure 3: Video Settings form

4. Select the "FlexIO Camera Demo" in DropBox. The video can be seen in the form.
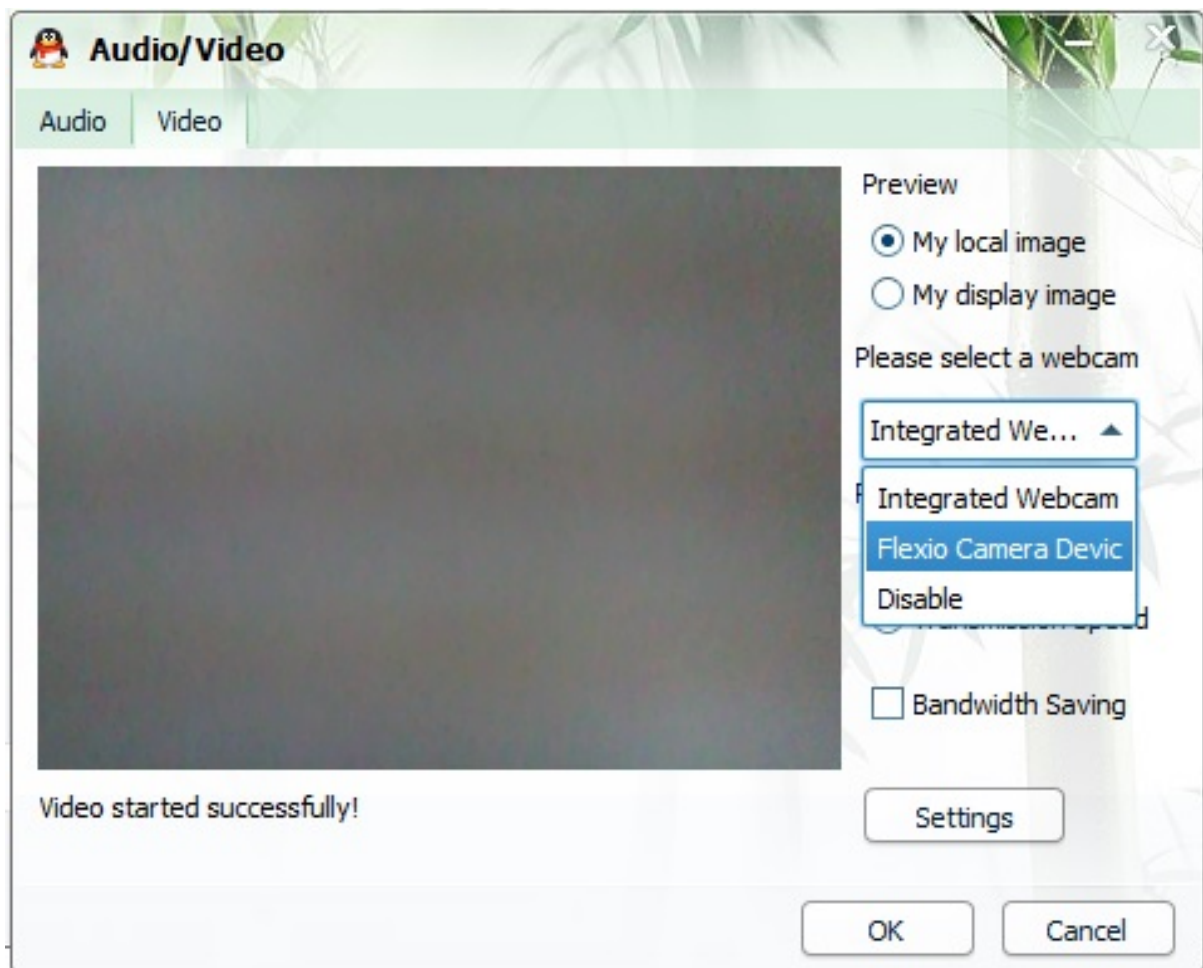
Figure 4: Open the video device

Note

The resolution is $160 * 120$ and the video image format is RGB565. The frame interval includes 20, 15, 10, and 5, and the default frame interval is 20.