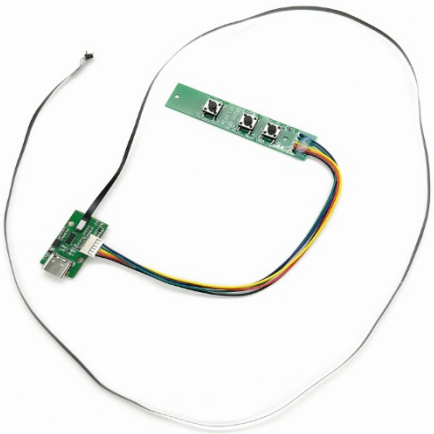
Introduction:

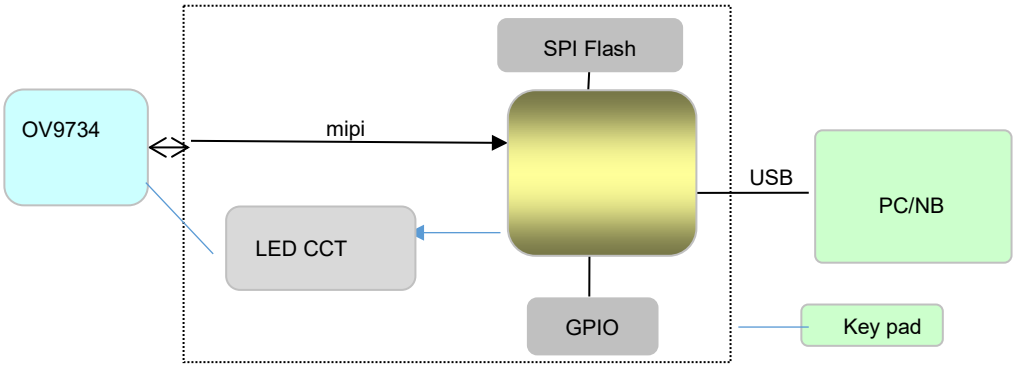
UCSPF1 is an advanced USB module with flexible OV9734 camera from COMedia Ltd. This module is not only compact in size, but also cost-effective. It is suitable for medical and industrial applications.

Key Features

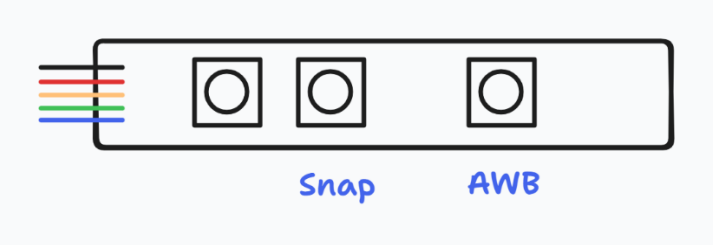
- ✓ Max Resolution:1280*720@30fps
- ✓ Interface: USB 2.0, type C connector
- ✓ Protocol: UVC, Plug & Play
- ✓ Power: 5V by USB port
- ✓ Built in LED driving circuit for camera tip LED
- ✓ Small in size (26mm x 14 mm)
- ✓ Snapshot and AWB Functions
- ✓ Flexible cable length 60/70cm
- ✓ Support mjpeg and YUY2 format



Block Diagram



GPIO and Keys Design



Electrical Characteristics

	Condition	Typ.	Unit
Operation voltage	Supply by PC USB port	5	V
Operation current	Video streaming	90	mA
Standby current	No streaming but plugged in PC	10	mA

Lens spec

Composition	4 elements
Effective focal length	0.75
F No	5.80
Back Focal length	1.08mm
TV Distortion	-20%
Relative illumination	51.5%@1.0f
IR cut filter	Built in

Operation

1. Preparation
   a. Plug in flexible camera module, note the orientation of connector. Wrong polarity may cause damage of camera.
   b. Plug in the key board, if available.
   c. Connect to PC/NB thru USB cable with one end type C connector plug to the module

2. Preview in PC
   a. Before you can preview video on PC screen, you need to have PC cam viewer, such as Amcap from Microsoft.
   b. It is UVC compliance, no need to install driver manually but you need to wait a while when first time plug in the camera. It will install the right driver by itself. You will find there is USB camera listed in PC hardware manager after that.
   c. When turn on the software, video will stream on the screen.
3. White balance calibration
   a. To do white balance calibration, point the camera to a white target, press and hold AWB key, it will calibrate the color and make RGB channel balance. Release key in 2-3 seconds.
   b. If it is under or over exposure, it may not do the calibration correctly.

4. Snapshot
   a. Press once SNAP key, the module will get the image and send to the host thru UVC protocol. (need software support)

Mechanical Dimensions