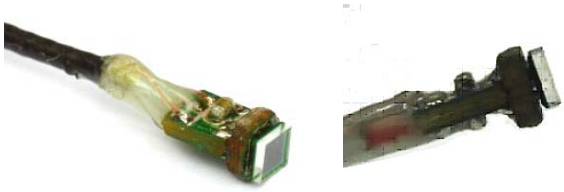
muC301
Image Sensor Module
(Preliminary spec)

This is a family of products based on the most advance CMOS mixed signal technology. It integrates image array, signal processing, timing and control circuitry, all on a single chip. It is ideal for applications requiring a small footprint, low power and low cost.



Features:

- Small size : 2.65mm diameter
- Resolution: 400x400 pixels
- Operation voltage 3.3V
- Low power consumption (48mW typ.)
- Cable size: 1.95mm OD
- Cable length: 1M

Application Example

- Inspection device
- Endoscope

Pin Description

1.	VDD	3VDC
2.	GND	Ground
3.	CLK	Clock input from backend
4.	VTO	Analog video out
5.	SDA	I2C data
6.	SCL	I2C clock

Application Note

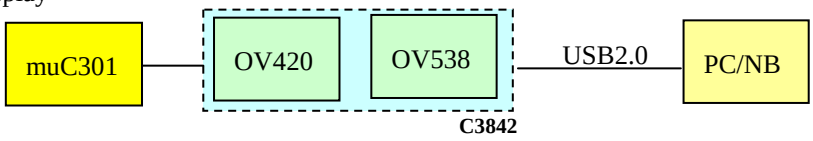
This module needs the backend chip OV420 to work with. For details of backend solution, please refer to the related doc, C3842 (USB application) and C6203, C9203 (handheld application)

Specification

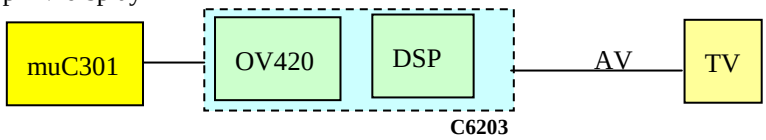
Imager	CMOS imager sensor OV6930
Optical Format	1/10.6”
Clock rate	4MHz
Max exposure	876 x T_{line}
Video Output	Analog
Scan mode	Progressive
Data format	Raw RGB
Picture Element	400x400 pixel
Pixel size	3.0x3.0um
Effective image area	1224x1212um
S/N Ratio	38dB
Dynamic range	68dB
Operation Voltage	3.3VDC
Operation Current	15.4mA max
Connector	6pin cable
Connection	VDD, GND, CLK, VTO, SDA, SCL
Dimension	Sensor board: 2.65mm diameter Main board: 2.65x3mm

Application Block Diagram

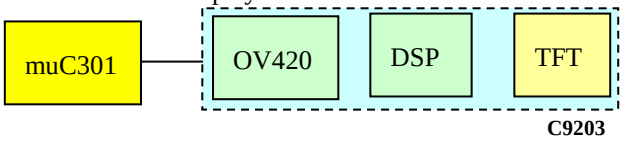
1. PC Display



2. Desktop TV display



3. Portable/handheld TFT display

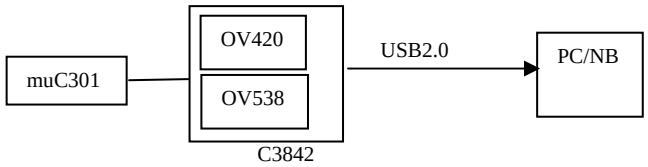


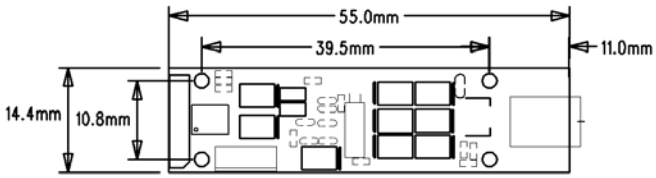
C3842
USB Module
For muC301

General Description

The C3842 is specially designed for interface micro-camera module, muC301. It has built in a delicate DSP for the interface for muC301 as well as the USB2.0 transceiver. A demo program has been designed for evaluation purpose.

Block Diagram





Features

- Small in size, 14.5x55mm
- USB2.0 compatible
- Mini-USB connector
- Low power consumption 60mA

Demo Software Functions

- Preview / freeze
- Save image to PC/NB
- Flip/mirror
- Auto/Manual color control
- Auto/Manual gain control
- Mask enable / disable
- Lens Barrel effect correction