



e-con Systems India Pvt Ltd

**17, 54th Street,
Ashok Nagar
Chennai-600083**

www.e-consystems.com



e-CAM21_USB - Datasheet

**Revision 1.0
Tuesday, May 31, 2011**

Customer/Partner

Internal



Contents

Contents	2
Revision History	3
General Description	4
Features	4
Automatic image control	4
Image Quality Control	4
Focusing type	4
Image/Video Format Support	4
System Support	4
Power Saving Support	5
USB Interface	5
Operation voltage	5
RoHS / REACH compliant	5
Key Specifications:	5



e-CAM21_USB**Revision History**

Rev No	Date	Major Changes	Author
1.0	May 31, 2011	Initial Draft Version	Lakshmi Narsimhan



General Description

The e-CAM21_USB CMOS camera module is specially designed and fabricated by e-con Systems India Pvt. Ltd. for notebook PC, Netbook, Smartbook, Tablet PC, MID and IPC applications. The e-CAM21_USB camera module combines a CMOS sensor with integrated lens to deliver high performance images quality. It has a USB 2.0 high speed interface and has the capability of video streaming in 2MP mode at 15fps or SVGA mode at 30fps.

This camera module is complaint with USB video class 1.1 and can work with Microsoft's native driver available with Win XP32/64, Vista 32/64 and Win7 operating system without installing another camera capture driver.

Features

Automatic image control

- Automatic Exposure Control
- Automatic White Balance Control
- Automatic Gain control

Image Quality Control

- Colour Saturation
- Contrast
- Gamma
- Sharpness
- Brightness
- Backlight
- Hue

Focusing type

- Fixed Focus

Image/Video Format Support

- YUY2
- MJPEG

System Support

- Windows CE
- Linux with UVC driver.
- WinXP 32/64
- Windows Vista 32/64
- Windows 7
- Mac OS X 10.4.8 or later



Power Saving Support

- Suspend
- Hibernation

USB Interface

- High speed USB2.0 PHY interface

Operation voltage

- USB 5V input

RoHS / REACH compliant

Key Specifications:

Module Specification	
Size(L x W x H)	8.0±0.2 (D) X 72.4±0.2 (W)X 4.61±0.2 (H)
PCB Thickness	0.7±0.1 mm
Video format	YUY2 / MJPG
USB	2 HS/FS Auto Sense and Switch
Image resolution	1600x1200
	1280x1024
	800x600
	640x480
	352x288
	320x240
	176x144
	160x120
Supported OS	Windows CE Linux with UVC driver. WinXP 32/64 Windows Vista 32/64 Windows 7 Mac OS X 10.4.8 or later
Video Class Compliant	Yes N/A
LED	5271 174F
PID (Product ID)	
VID (Vender ID)	



Frame Rate							
	176X144	320x240	352X288	640X480	800X600	1280X1024	1600X1200
YUV2	30	30	30	30 (Default)	20	8	6
MJPEG	30	30	30	30 (Default)	30	15	15

Sensor Specification	
Type / Optical Size	CMOS 1/5"
Pixel size	1.75μm X 1.75μm

Lens Specifications	
Lens Construction	3P + IR Filter
F No.	2.0
FOV	71.56°
TV – Distortion	Under 1%
Focus Range	60 cm ~ 720 cm

Operating Conditions			
	Parameter	Rating	Unit
	Input voltage	USB 5V±250mV	V
Current	Drive On	Under 150mA	A
	Video Streaming	TBD	
	Suspend	<500 uA	
	Temperature Range	Operational @ 0°C ~ 60°C	°C
		Stable image @ 0°C ~ 55°C	

USB Connector PIN Description		
PIN No	SYMBOL	FUNCTION
1	GND	Camera System GND
2	USB_DN(D+)	USB Data Bus DP (D+)
3	USB_DN(D-)	USB Data Bus DN (D-)
4	5VCC_CAM	Camera System power 5V input
5	NC	NC
6	NC	NC
7	NC	NC
8	NC	NC

