Specification

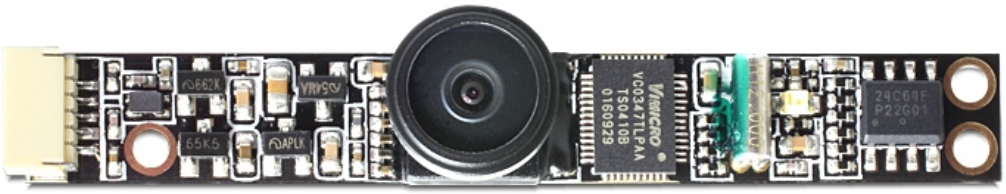
95953 95954 95955

Delock USB 2.0 IR camera module 1.92 Mpix

EAN: 4043619959532
EAN: 4043619959549
EAN: 4043619959556

95954
55°

95955
64°



95953
120°

Edition: 07/2013

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1. Profile

The Delock 9595x camera module includes a powerful 1/4" CMOS sensor.
This product is designed for IPCs sensors, safety systems and human machine interactions and support USB 1.1/2.0 driver free interface.
It does not have a built-in IR filter. It is suitable for shooting in the dark with IR lighting.

2. Character:

- Total height: 95954: 55°: 6.30 mm +/- 0.10 mm
  95955: 64°: 12.00 mm +/- 0.10 mm
  95953: 120°: 13.00 mm +/- 0.10 mm
- The dimension of lens's seat: 8.0 × 8.0 mm.
- Without IR Filter
- Working temperature: 0°C ~ 50°C
- Storage temperature: -40°C ~ 80°C

3. Capability Parameter:

3.1 Sensor Specification:

Sensor type		OV2643
Active pixel array area		3590 um x 2270 um
Power supply	Core	1.5 VDC ± 5%
	Analog	2.6 to 3.0 V
	I/O	1.70 V ~ 3.0 V
Temperature range	Operation	-20°C ~ 70°C
	Stable image	0°C ~ 50°C
Output formats		YUV / Ycb Cr 4:2:2; RGB 5:6:5 / 5:5:5; GBR 4:4:4; 8/10 BIT RAW RGB Data
Optical format		1/4 inch
Frame rate		15 fps for UXGA, 30 fps for SVGA, 30 fps for 720P, 60 fps for QVGA and any lower resolution
Scan mode		Progressive
Maximum exposure interval		1227 xtROW
Gamma correction		Programmable
Pixel size		2.2 um x 2.2 um
Full resolution		1600 x 1200 pixels (UXGA)
Sensor package dimension		5035 um x 4635 um

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3.2 DSP Specification:

VC0347TLPA comes with programmable sensor master clock output and is integrated with the parallel sensor interface. VC0347TLPA has also integrated a JPEG encode engine providing high quality video streams. With a matched sensor, VC0347TLPA can stream video at 15fps under 1.3 Mega pixels resolution (SXGA or 1280x1024), or capture still images at up to 3 Mega pixels resolution. With these features, VC0347TLPA can also offer 30fps video streaming at HD720P (1280x720). VC0347TLPA is fully compliant with USB Video Class (UVC) 1.0 standards and USB HID Class 1.11. VC0347TLPA is fully compliant with USB 2.0 High-Speed (HS) and backward compatible with USB 1.1 protocol.
VC0347TLPA is a UVC device that will work with any Operating System that support UVC standards, such as Windows XP (with Service Pack 2), Vista, 7 and 8.

VC0347TLPA has integrated 2 channels of PDM interface for connecting digital microphones.

- Support for off-shelf VGA/SXGA/UXGA CMOS sensor
- USB2.0 PHY compatible with USB2.0 HS/FS and USB 1.1
- Fully compliant with USB Video Class 1.0 standards
- Support HID (configurable by EEPROM)
- Microsoft WHQL compliance
- Support Win 2000 using a Vimicro driver (only for certain FW versions)
- Vista premium logo compliance
- Support various OS including 32-bit and 64-bit Windows
- Build-in OTP (one time programmable device, max. size 64K) ROM
- Support motion JPEG sensors data bypass mode
- Support watch-dog function
- Support programmable sensor clock output (12 MHz, 24 MHz, 25 MHz, 27 MHz, 36 MHz, 48 MHz, 50 MHz, 54 MHz, 64 MHz, etc.) and enables targeted sensor to output max frame rate
- Support parallel sensor interface

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- Imaging applications
  - Still image capture and preview at up to 3M pixel resolution
  - Video streaming up to 60fps@VGA resolution, 15fps@SXGA, 30fps@720P and 15fps@UXGA under USB isochronous mode
- JPEG compression for video streaming
  - Be able to insert sync markers for every row of micro blocks
  - 1080p JPEG at 15 fps
- Hardware digital size on YUV
  - 1x ~ 2x scale up (support 800x600 scale up to 1600x1200)
  - Flexible scale down
- Output video format
  - YUY2
  - MJPEG
  - Bayer (raw 8 or 10 bits/pixel)
- One dedicated PWM output
- Separate 2-wire serial bus for sensor and EEPROM
- GPIOs for typical camera control support
  - snapshot button
  - LED indicator
- Support remote wake up from suspend status by GPIO triggers
- PDM (puls density modulated) interface for digital microphone
- Power management
  - Optimized design for low power consumption
  - Normale, suspend, unconfig mode

	1080p	720p	UXGA	SVGA	VGA
Solution	1920 x 1080	1280 x 720	1600 x 1200	800 x 600	640 x 480
MJPG framerate	15 fps	30 fps	15 fps	30 fps	30 fps

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4. Optical Lens Specification:

	Field of view	F	Elements
95953	D=170° H=107° V=80°	F/2.5	4
95954	D=60° H=46° V=32°	F/3.0	4
95955	D=80° H=60° V=45°	F/3.0	5

5. Wiring diagram:

component side

(5pin 1.0mm pitch) connector definition:

Pin No.	Symbol	Input/Output	Description
1	USBGND	I	Ground
2	USBGND	I	Ground
3	USBD+	O	USB data cable+
4	USBD-	O	USB data cable-
5	USB+5V	I	+ 5V power supply

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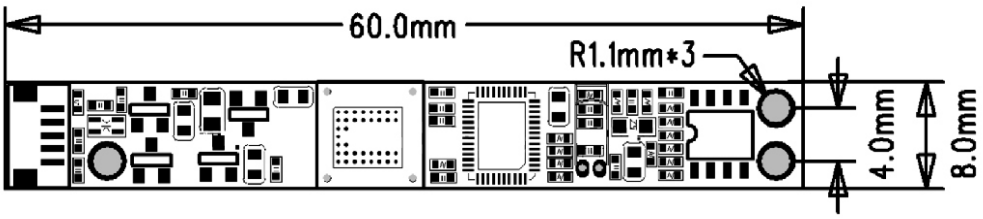
6. Structural diagram



lens height

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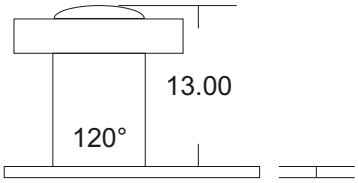

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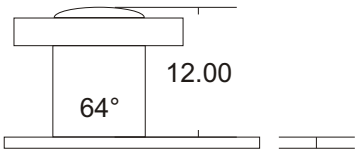

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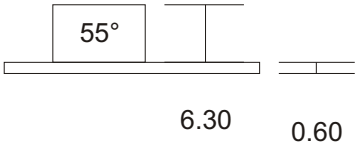

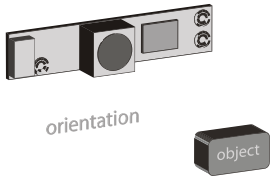

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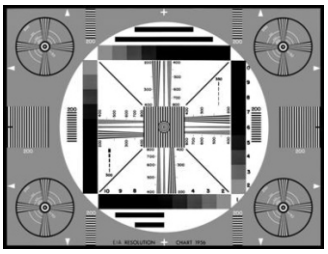
7. Function test:

Optical test condition:
- All the tests are under the enviroment level of 100K without dust.
- The brightness of test board: brigthness 400 + 500 Lux the brigthnes difference between center an four corners will be less than 15 %.

Resolution test (chart and condition)



Items	Contents
Test picture	MTF test drawings
Condition (effective distance: 35 cm ~ infinite)	Lamp source: cold lamp house color temperature: 6500 K brithness: 450 +/- 50 Lux, test height: 400 mm
MTF spec.	center: 300 TV/lines four corners: 200 TV/lines

Items	Contents
Test drawings	test drawings (right)
Condition	Lamp source: cold lamp house color temperature: 6500 K brithness: 450 +/- 50 Lux, test height: 400 mm
Standard	No obviously dark corner by eyes.

Spot test:

Condition	Specification
Make the camera to white light board and check if have spots	The difference of brithness between spot and nearby this spot will be less than 5 %.

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WEEE note

The WEEE (Waste Electrical and Electronic Equipment) directive, which came into force on 13 February 2003, lead to a comprehensive change in the disposal of used electric products. It is the main purpose of this directive to avoid electric waste products (WEEE), while simultaneously promoting the re-usage, recycling and other forms of reconditioning in order to reduce the amount of waste. The WEEE logo on the product and the package shows that the product should not be disposed of with regular garbage. You are responsible for disposing all used electric and electronic devices at the corresponding collection sites. The separate collection and meaningful re-usage of electronic waste helps to deal with natural resources more economically. In addition, re-using electronic waste contributes to the preservation of the environment and human health. Additional information regarding the disposal of electric and electronic devices, their re-usage and the collection sites can be found at your local authorities, disposal companies, specialist shops and the manufacturer of the product.

RoHS conformity

This product complies with the directive 2002/95/EC of the European parlament and the council from January 27th 2003 concerning the restricted use of dangerous substances in electrical and electronical devices (RoHS) as well as its modification. This product is compliant with Directive 2011/65/EU of 3 January 2013.

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Support Delock
If you have further questions, please contact our customer support support@delock.de.
You can find current product information on our homepage: www.delock.com.

Final clause
Information and data contained in this manual are subject to change without notice in advance. Errors and misprints excepted.

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EU Import: Tragant Handels- und Beteiligungs GmbH
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