

Re: Low cost image sensor

Source: <http://coding.derkeiler.com/Archive/General/comp.arch.embedded/2005-06/msg01360.html>

- *From:* allenb_deja@xxxxxxxxxxxx
 - *Date:* 28 Jun 2005 09:58:11 -0700
-

Hi Paul,
Thanks for the reply.

Paul Carpenter wrote:

> On 28 Jun, in article
> <1119945188.468544.97470@xx>
> allenb_deja@xxxxxxxxxxxx wrote:
>>Hi,
>>I have been searching the web for a low cost image sensor.
>>The application is for reading a type of barcode, approximately 20mm x
>>5mm, but I could make do with an area as small as 10mm x 3mm. A
>>resolution of 0.1mm would be more than adequate, and I only require
>
> Are you really reading a 2D barcode as compared to normal 1D barcodes?
> In other words is the important factor the 20mm dimension which has to be
> read to 0.1mm resolution which actually means a minimum of 200 pixels
> realistically 400 pixels would be better to ensure the resolution.

This isn't a standard bar code, however the resolution in the Y direction is much less critical, it only needs to be about 0.5mm. For the X direction, 200 pixels would be more than adequate.

>
> You need a square pixel device for certain (not all are).
>
>>monochrome. Ideally I would like no moving parts, and no lens. The item
>>to be scanned would be placed directly on the sensor, illuminated from
>>behind.
>
> No lens at all or built in lens? There are plenty fo cheap lens manufacturers
> who no doubt make something you could use.
>
>>I have found something like the VV6501C001 from STMicroelectronics,
>>cheap enough for this application <\$6 US, however the array size is 3.6
>>x 2.7 mm, and the resolution is much higher than I need, although this
>>is not a problem. Unfortunately the physical package does not allow
>>these to be stacked in a linear array, or else I could use 3 or four of
>>these type of devices.
>

Re: Low cost image sensor

- > Why are you looking at an area scan (VGA res) device? Most 1D bar code
- > scanning is either
- >
- > a) Moving optics and single photodiode sensor
- >
- > b) Line scan camera chip and simple lens
- >
- >>Any suggestions would be appreciated, for this to be cost effective, we
- >>are looking at a maximum of \$20US in small quantities.
- >
- > IF you scanning a 1D barcode and its orientation (matching in plane but
- > may be mirrored), then kook at Line scan devices from manufacturers such
- > as Sony, Silicon Video Inc and others.
- >
- > Last time I had a quote was for a 1024 pixel line scan from Silicon Video
- > for less than 14 pounds in UK (about \$18) for TWO devices.
- >
- > These types of devices are used all other the world in lots of equipment
- > bar code scanners, copiers, faxes, even desktop scanners and many other
- > places in industry.
- >

The final product, will be a small handheld battery operated device, the item to be scanned is placed on it, a button is pressed, and the result is displayed on an LCD. The reason why I mentioned no lens, is for mechanical simplicity and compactness, if the item is placed directly on the lens, I would imagine that the sensor would need to be some distance away.

Thanks,

- > --
- > Paul Carpenter | paul@xx
- > <<http://www.pcserviceselectronics.co.uk/>> PC Services
- > <<http://www.gnuh8.org.uk/>> GNU H8 & mailing list info
- > <<http://www.badweb.org.uk/>> For those web sites you hate

-
- **Follow-Ups:**
 - ◆ **Re: Low cost image sensor**
◇ From: Paul Carpenter

 - **References:**
 - ◆ **Low cost image sensor**
◇ From: allenb_deja
 - ◆ **Re: Low cost image sensor**
◇ From: Paul Carpenter

Re: Low cost image sensor

- Prev by Date: *Re: How PC parallel port Is connected internally?*
- Next by Date: *Re: RF Switcher and Current Monitor Sample*
- Previous by thread: *Re: Low cost image sensor*
- Next by thread: *Re: Low cost image sensor*
- Index(es):
 - ◆ *Date*
 - ◆ *Thread*