General Description

The epc901 is a 1024 x 1 line imager for very fast imaging, capable of acquiring up to 44 k lines per second (fps). With its 4 frame store buffers, up to 500 fps in burst mode is possible. In addition, it is a very low noise device with a very high sensitivity over a wide wavelength range from 400 .. 1050 nm. Detailed chip performance details can be found in the epc901 datasheet.

The epc901 CC (Card-edge Connector Chip Carrier) is an easy-to-use board containing an epc901 chip. It allows easy connection to a main PCB board. Lens mounting for standard lenses/lens holders is prepared.

This board is primarily used for epc901 chip evaluation with the ESPROS evaluation kit but is also well suited for production of linear encoders, triangulation systems, spectrometers, surface scan inspection and the like.

Features

- epc901 chip assembled on carrier for easy-to-use application
- Easy lens mounting by using standard lens mounts and lenses

Applications

- Linear and rotary encoder
- Triangulation light barrier / distance measurement
- Line sensor / camera
- Surface scan inspection
- Multi-touch displays / electronic white boards
- Finger print readers
- Spectrometers
- Check & ticket readers
- Speed measurement
- Bar code readers

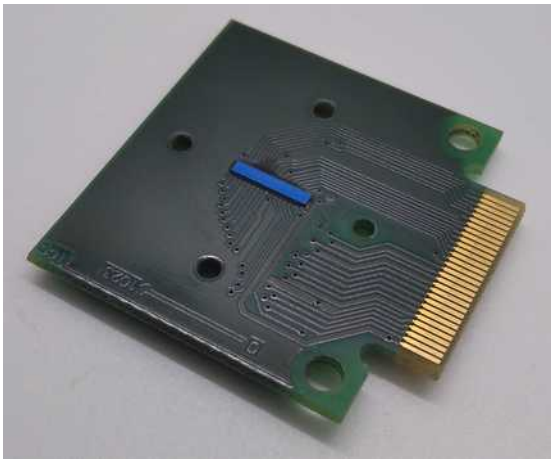

Figure 1: epc901 CC Chip Carrier

1. Ordering information

Part #	Part Name	Description	Package	RoHS
P100 209	epc901-xxx-CC-002	epc901 on chip carrier	PCB 37.25 x 36.00 x 3.00 mm	yes

Table 1: Ordering Information

Note: “xxx” defines the version number of the epc901 chip

2. Operation

This module contains the epc901 chip and all necessary power supply decoupling capacitors. The board is designed to be connected to a standard 60 pin card edge connector. All pins necessary to operate the epc901 chip are accessible by the card edge connector. The operation description of the epc901 chip is described in the data sheet epc901.

3. Schematic diagram

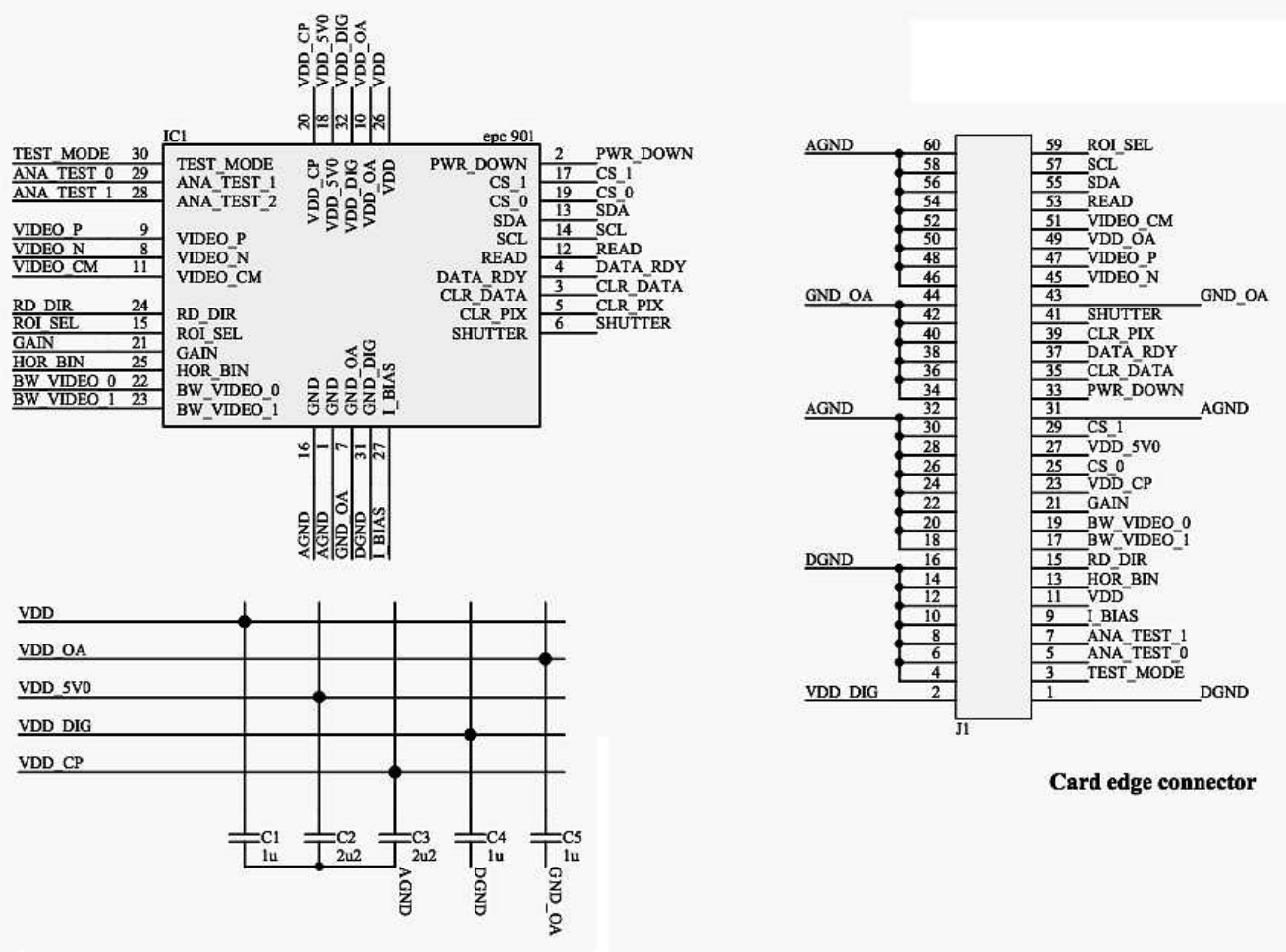

Figure 2: Schematic diagram

4. Board layout

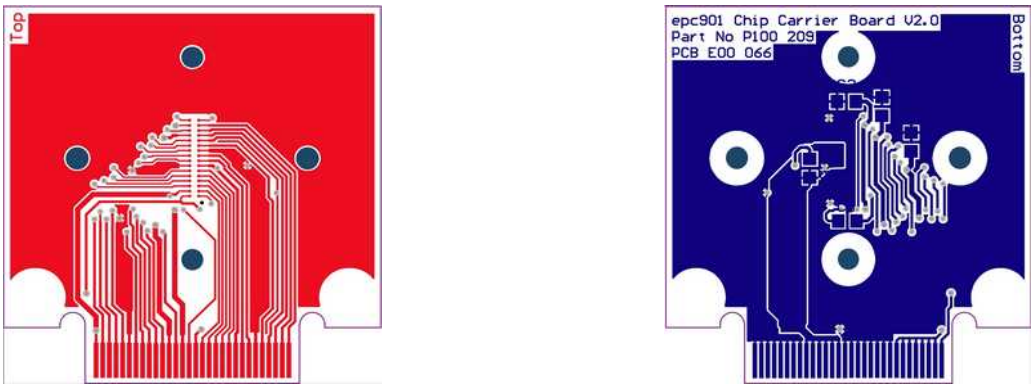

Figure 3: Layout top and bottom

5. Assembly

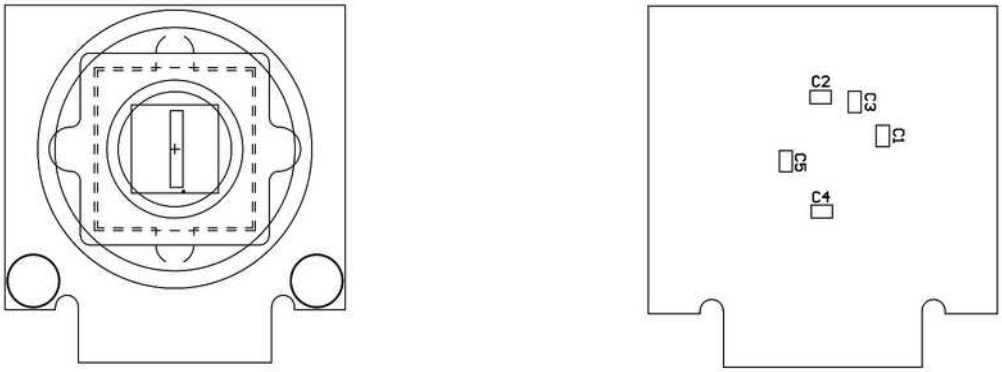

Figure 4: Assembly top and bottom

6. Mechanical dimensions

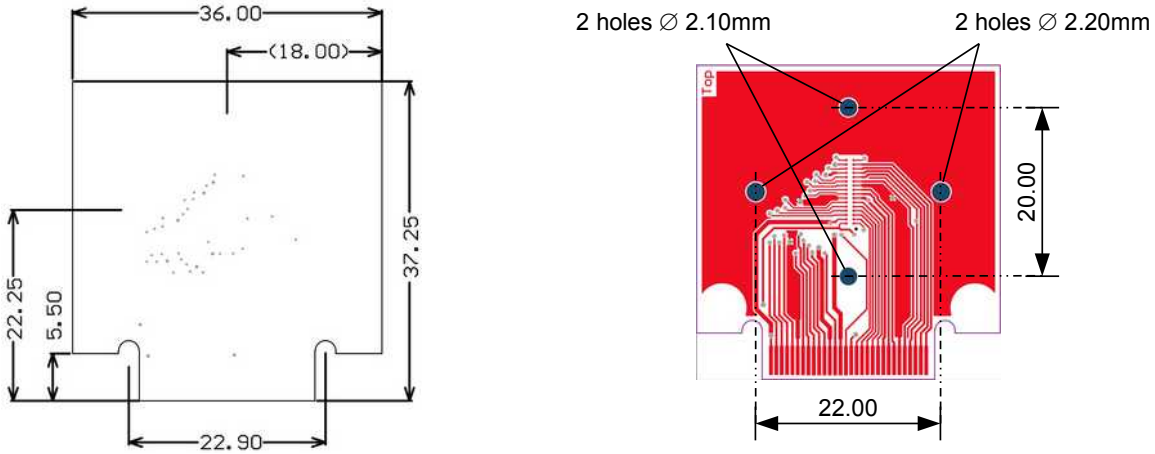

Figure 5: Dimensions in mm
(top view, PCB material is glass epoxy FR-4, thickness 1.6mm)

7. Socket for J1

Figure 6 and Figure 7 show possible 60 pin card edge connectors, e.g. SAMTEC MEC6-130-02-L-DV-A / -RA1

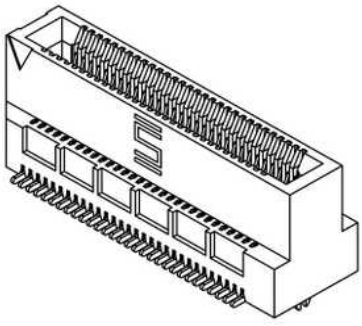

Figure 6: Vertical mount mini-edge card connector

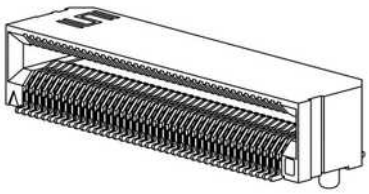

Figure 7: Right angle mini-card connector (Source: Samtec)

Note: J1 Pin 1 marking of the schematic diagram, PCB and assembly drawing are valid. J1 Pin 1 marking on connector housing can be misleading.

8. Change history

Chip Carrier Version	Changes
002	First release

9. IMPORTANT NOTICE

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