

## HCC-1000 High-Speed High-Resolution CMOS Camera

**462 Frames/sec. at 1024 x 1024 Pixels  
with Internal Memory**



### Features:

- 1024 (H) x 1024 (V) square pixels
- 462 frames/sec. at full resolution
- 512 MByte or 1024MByte internal memory
- Progressive scan
- 8-bit digital output (RS-644) with up to 30 frames/sec
- Control via RS-232 or IEEE 1394 Firewire
- C-mount compatible sensor size (2/3")
- Power supply: 12 V, 800 mA
- Very compact design: 90 Ø x 109 mm

At a resolution of **1024 x 1024** effective pixels and an image rate up to approx. **462 frames/sec.**, the **HCC-1000** sets new standards in the high speed camera field.

Even 1825 frames/sec. can be recorded at a resolution of 1024 (H) x 256 (V).

In order to acquire the data at that high speed, a RAM memory of **512 MByte or 1024 MByte** has been integrated directly into the **HCC-1000**. The **1024 MByte** can be stored 1024 images at a full resolution - accordingly more at a lower resolution.

The camera naturally offers the possibility of reacting to a trigger event by e. g. storing 50 % before and 50 % after the trigger event.

The choice of different operating modes and adjustments is effected via a serial RS232 interface or IEEE 1394 Firewire.

Adjustments are e. g. the resolution, image rate, exposure time, number of frames during record, pre/post trigger and parameters for the image output. All parameters can be stored in an EEPROM and therefore are again available after switching-on.

### Technical Data

- Resolution: 1024 (H) x 1024 (V) pixels  
or 1024 (H) x 512 (V) pixels  
or 1024 (H) x 256 (V) pixels
- Progressive scan
- Pixel size: 10 µm x 10 µm
- Active sensor size: 10.24 (H) mm x 10.24 (V) mm
- CMOS-sensor
- Image rate: 1024 x 1024 up to 462 fps  
1024 x 512 up to 923 fps  
1024 x 256 up to 1825 fps
- Memory: 512 Mbyte or 1 Gbyte  
(depending on the option)
- Sensor saturation: = 80000 e
- Sensitivity: approx. 255 counts at 200 LUX  
and 2 ms exposure
- Digital output: 8-bit, RS-644 (LVDS)
- Frame system: 1035 lines
- Output frame rate: approx. 30 fps
- Output pixel clock: 33 MHz
- Power supply: + 12 V, approx. 0.5 A
- Environmental temperature: 0° to 40° C
- Lens mount: C-mount
- CE standard
- Made in Germany

### 37-pin D-SUB Jack

| Pin | Function | Pin | Function |
|-----|----------|-----|----------|
| 1   | PCLK     | 20  | PCLK     |
| 2   | LEN      | 21  | LEN      |
| 3   | FEN      | 22  | FEN      |
| 4   | D0 (LSB) | 23  | D0       |
| 5   | D1       | 24  | D1       |
| 6   | D2       | 25  | D2       |
| 7   | D3       | 26  | D3       |
| 8   | D4       | 27  | D4       |
| 9   | D5       | 28  | D5       |
| 10  | D6       | 29  | D6       |
| 11  | D7 (MSB) | 30  | D7       |
| 12  | -        | 31  | -        |
| 13  | -        | 32  | -        |
| 14  | -        | 33  | -        |
| 15  | -        | 34  | -        |
| 16  | GND      | 35  | GND      |
| 17  | -        | 36  | -        |
| 18  | -        | 37  | -        |
| 19  | -        |     |          |

### 15-pin D-SUB Jack

| Pin | Function                         |
|-----|----------------------------------|
| 1   | ] + 12 V DC                      |
| 2   |                                  |
| 3   | ] GND                            |
| 4   |                                  |
| 5   | } RS232                          |
| 6   |                                  |
| 7   |                                  |
| 8   |                                  |
| 9   | -                                |
| 10  | - ] Trigger Input (Opto-Coupler) |
| 11  |                                  |
| 12  | - ] Reset Input (Opto-Coupler)   |
| 13  |                                  |
| 14  | Strobe Out                       |
| 15  | Strobe Out                       |

