

CCD-1300QHS

Fast progressive Scan CCD-Camera
up to 150 images/sec.



Features

- 640 (H) x 512 (V) pixels at 75 fps or 320 (H) x 256 (V) pixels at 150 fps
- Progressive scan
- Interline-Transfer sensor (IT)
- Asynchronous shutter up to 1/40000 sec. (Image on Demand)
- Effective camera dynamics: $\geq 1:700$ ($\geq 57\text{dB}$)
- Digital RS-644 output with 12-bit (LVDS)
- Single Output (40 MHz)
- C-Mount compatible sensor size
- Very compact design

The **CCD-1300QHS** is with a resolution of 640 x 512 or 320 x 256 effective pixel a further member of the high quality CCD-camera-line from Allied Vision Technologies GmbH.

The **CCD-1300QHS** reaches up to 150 fps at 320 x 256 pixels and is so specially suitable for high speed systems in the industrial process automation.

Because of the very light-sensitive CCD-sensor with 12.9 x 12.9 μm a considerable higher light-sensitivity (about five times) than at CMOS-sensors is achieved.

By means of the progressive interline-transfer-sensor very short exposure times up to 1/40000 second can be reached at full resolution. The exposure time can be adjusted in steps of 25.4 μs . Because of the asynchronous mode (image on demand) the exposure starts 7 μs after an external trigger impulse.

The RS-644 digital output supplies image data with 12-bit precision, of which also less can be used, depending on the applications.

By means of the 2/3" sensor with 12.9 x 12.9 μm pixel size all standard C-mount lenses and optics can be used.

Technical Data

- Resolution: 640 (H) x 512 (V) pixels
switchable to 320 (H) x 256 (V) pixels
- Progressive scan
- Pixel size: 12.9 μm x 12.9 μm
- Active sensor size:
8.3 mm (H) x 6.6 mm (V) at 640 x 512
4.1 mm (H) x 3.3 mm (V) at 320 x 256
- Interline transfer sensor
- Electronic shutter up to 1 /40000 sec.;
adjustable in 25.4 μs steps
- Image on demand
- Image rate up to 75 / 150 fps
- Effective dynamics: $\geq 1:700$ (≥ 57 dB)
- Sensor saturation: ≥ 25000 e
- Anti-Blooming
- Digital output: 12-bit, RS-644
- Frame system: 525/333 lines
- Pixel clock: 40 MHz
- Video gain: 1 or 2 (+ 6 dB)
- Power supply: + 12 V (SELV),
(- 4 %, + 10 %) approx. 0.7 A
- Ambient air temperature: 0° to 40°C
- C-mount: lens mount
- CE conform
- Made in Germany

RS-644 Digital Output (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	30	/D7
12	D8	31	/D8
13	D9	32	/D9
14	D10	33	/D10
15	D11 (MSB)	34	/D11
16	GND	35	GND
17	/TRES	36	TRES
18	/SV2	37	Mode
19	/SPEED		

Power and Control Input (15-pin D-Sub Jack)

Pin	Function
1	+ 12 V DC (0.53 A, max. 0.70 A)
2	
3	GND
4	
5	(reserved)
6	---
7	---
8	---
9	Mode (Open) \Rightarrow Continuous Mode (GND) \Rightarrow Image on Demand
10	Trigger Input (Opto-Coupler)
11	
12	Exposure Output (Opto-Coupler)
13	
14	line-sync output (active-low)
15	frame-sync-output (active-low)

