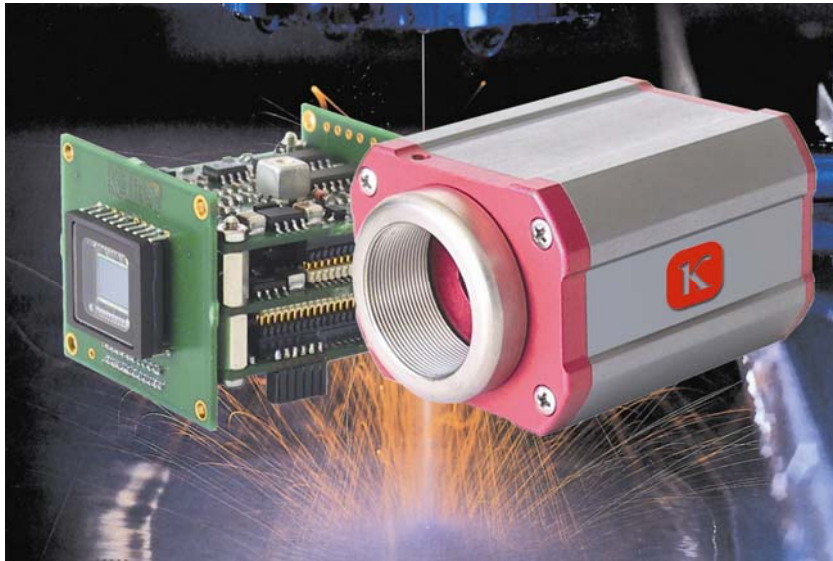


Monochrome Cameras

III CF 8/5 MX and DSP



Kappa presents the new monochrome system CF 8/5 MX with increased resistance to temperature, shock, and vibrations. The system is based on the new Kappa technology platform.

With a great scope of functions and a variable mechanical design the system is made for QA applications and machine integration. The extremely small and light weight camera can be operated at a variable supply voltage (9-36 V) with low power consumption.

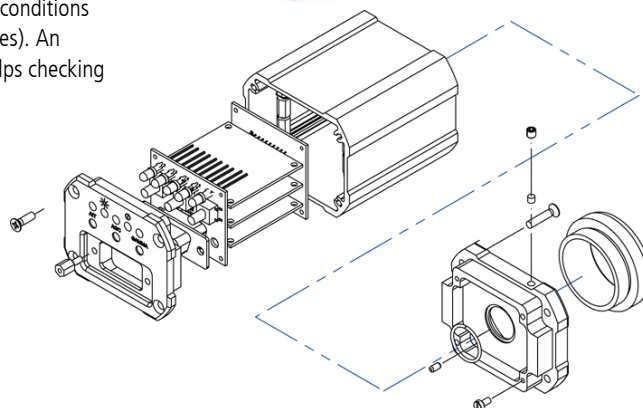
The basic features are 12 bit digital signal processing, more than 58 dB signal-to-noise ratio and longtime integration in combination with the software Kappa ImageBase and a frame grabber.

Numerous functions are available via RS 232: Fine adjustment of AIT, AGC, Gamma, horizontal image mirror and selectable measuring windows.

The patented DRE function provides clear view under difficult viewing conditions (e.g. poor contrast live images). An integrated line generator helps checking the positioning.

With the control unit MXC 200 you can use the functions AIT, AGC, Gamma, as well as DRE and LG computer-independent.

With the Reset/Restart function the camera can be synchronized to external events. Self tests for operating temperature, working voltage and test pattern generator assure a controlled operation. Kappa recommends: QA, industrial image processing and laser applications.

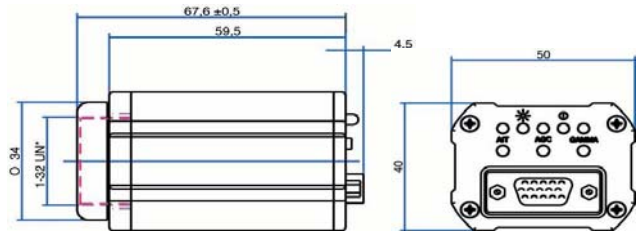


12 Bit digital signal processing
>58 dB signal to noise ratio
RS 232 control
Reset/Restart function
Variable supply voltage (9-36 V)
Low power consumption
Selftests
Line generator (LG)
Dynamic Range Enhancement (DRE) function provides clear view under difficult viewing conditions
Longtime integration
NIR version available
Control unit (MXC 200) available for PC-independent operation (see separate datasheet)

Monochrome Cameras

CF 8/5 MX und DSP

Technical Data



Sensor

Type	1/2" interline transfer CCD *	
Video norm	CCIR	EIA
Area	6.4 x 4.8 mm, 752 x 582 pixel	6.4 x 4.8 mm, 768 x 494 pixel

Signal Processing

System	12 Bit DSP	
Signal/noise ratio	>58 dB (measured in a dark image at 20 ms integration, field integration and 0 dB amplification)	
Sensitivity	(measured at 3000 K, 20 ms integration, field integration, Gamma = 1 and 50 % video level without IR filter)	
Normal integration	CF 8/5 ...:	0,06 lux at 14 dB 0,004 lux at max gain
	CF 8/5 ... NIR:	0,04 lux at 14 dB 0,003 lux at max gain
Longtime (10 s)	CF 8/5 ...:	0,00012 lux at 14 dB 0,000008 lux at max gain
	CF 8/5 ...NIR:	0,00008 lux at 14 dB 0,000006 lux at max gain
Resolution	740 lines (horizontal)	750 lines (horizontal)
Signal outputs	monochrome video, 1 V _{pp} / 75 Ω	
Short integration	1/50 to 1/100 000 s automatic [AIT], 1/50 s fix	1/60 to 1/100 000 s automatic [AIT], 1/60 s fix
Longtime integration	1/25 to 40 s [at AGC/AIT = off] (external image memory or frame grabber)	1/30 to 40 s [at AGC/AIT = off] (external image memory or frame grabber)
Amplification (AGC)	0 to 26 dB automatic [AGC], 0 dB fix, 0-36 dB (RS 232 adjustable)	
Gamma	0,45 / 1, switchable	
Synchronization	internal/external, Reset/Restart	
RS 232	AIT, AGC, Gamma etc. (additional accessories required, see "Optional")	

Additional Functions with CF 8/5 MX

Module LG:	line generator for two reticles, adjustable (via RS 232)
Module DRE:	dynamic contrast adaptation (via RS 232)

General

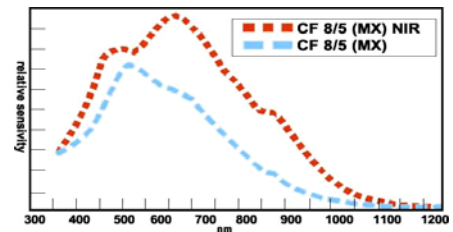
Power supply:	9-36 VDC, 2 W
Connections:	Kappa CSI (Camera System Interface)
Operating temperature:	-10° C to +45° C
Relative humidity:	10 % to 90 %, non-condensing
Lens mount:	C-mount, focal plane adjustable, CS-mount on request
Filter:	infrared blocking filter, removable
Housing dimensions:	67 x 50 x 40 [mm]
Weight:	CF 8/5 (MX, NIR): approx. 170 g
Standard equipment:	camera, operating manual
Order no.:	CF 8/5 DSP 951-1110, CF 8/5 MX (LG + DRE) 951-1114, CF 8/5 DSP/NIR 951-1111

* other sensors available(1/3" - 1/4"). Information about additional functions and detail interface description on request.

Optional

Integration into the modular software package Kappa ImageBase (KIB) via PCI-bus frame grabber.
Software for serial control and control cable (see extra datasheet)
Control Unit MXC 200 (see extra datasheet)
Stand adapter 1/4",

We are constantly checking the accuracy of the technical data. We are prepared to provide more detailed information on request. Technical data are subject to change without notice



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