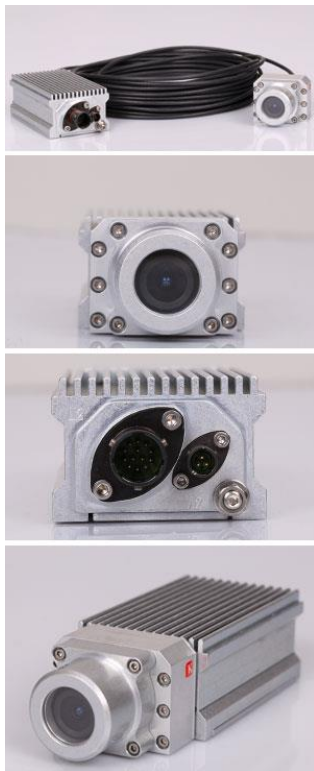


# Flight Eye FE 320 LCR

## Cockpit image data camera

The FE 320 LCR cockpit image data camera provides Full HD 1080p, Ethernet IP and H.264 compression. Perfectly attuned to the HENSOLDT SferiRec® LCR lightweight crash recorder, it meets every ED-112 requirement: HDR video quality under extreme light conditions, frame rate adjustments, distortion-free images at wide field of view, and uninterrupted, digitally stabilized video streaming even under heavy aircraft vibrations. The product is compliant to ED-155.

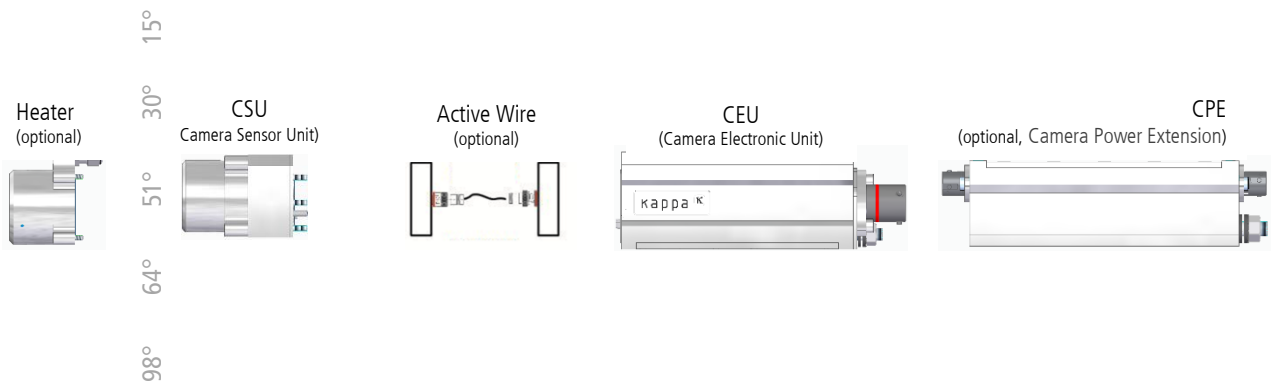


### Components FE 320 LCR

CSU (Camera Sensor Unit), CEU (Camera Electronic Unit), CPE (Camera Power Extension, optional), active wire (optional), heater (optional)

Sensor	Exchangeable heads   CSU
Sensor	IMX252 (Sony)
Type	CMOS
Shutter	global
Color	RGB
Optical format	1/1.8"
Number of pixels (H x V)	2048 x 1536 pixels
Pixel size (H x V)	3.45 μm x 3.45 μm
Image size (H x V)	Full HD1080p: 6.62 mm x 3.73 mm; diagonal 7.6 mm (1/2.35")
Interface	
Data interface	Gigabit Ethernet (GigEVision 2.0)
Control interface	SferiRec®, GenlCam, XML File,
Memory	internal SD-Card for loop recording
Video stream	RTP/RTSP unicast/multicast, GVSP unicast/multicast
Trigger	external hardware trigger, software trigger
Compression	H.264, 1-16 Mbit/s, dual compression, High Profile (Level 5)
Time synchronization	PTPv2 (IEEE1588)
Image resolution	up to 1920 x 1080 pixels (Full HD1080p)
Frame rate	adjustable framerate and resolution up to 1080p60/ 720p100/ 360p180
Latency	Approx. 80 ms between sensor and camera output @ 1080p60
Software	SDK X, KCC X, IP Configurator, Software Update tool

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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# Flight Eye FE 320 LCR

## Cockpit image data camera

### Function

Exposure	manual/ automatic, up to 1/frame rate
Gain	manual/ automatic, 0 dB to 24 dB (analog gain, sensor specific)
Corrections	hot pixel correction
Color processing	white balance (optimized for 5600 K), color saturation adjustment
Gamma	0.45/ linear
Diagnostics	built-in tests during power-up and operation
Overlay	Time, crosshair, user-adjustable text, date time

### General data

Housing version	Compact version (direct connection) Remote head version (remote distance up to 10m)																					
CEU, dimension, weight	58,5 mm x 39,5 mm x 116 mm (including connectors), appr. 360g																					
CSU, dimension, weight	50 mm x 39 mm x 52,5 mm; (including lens protection) @ 51°HFOV (without heater), appr. 150 g																					
Cable for remote heads	1 m, 3 m, 5 m and 10 m active wire cable available (option)																					
Power supply, weight	9-36V DC (compact & remote head version), option: 9-60 V DC (with CPE, power interruption 100ms), appr. 250g																					
Heater (optional)	De-icing, 28 V DC																					
Connectors	Power receptacle: Souriau part number 8STA20235PN - Recommended mating connector: Souriau part number 8STA60235SN; GigE receptacle: Souriau part number 8STA21035PN - Recommended mating connector: Souriau part number 8STA61035SN																					
FoV, field of view	FoV 15° (F/2), 30° (F/2,8), 51° (F/2,4), 64° (F/2,5), 98° (F/1,8)																					
Lens mount	S-mount																					
Filter	IR-cut filter / B270 protected lens cover																					
Operating temperature	DO-160G, Section 4, Category E1. Operating Low -55°C, Operating High +70°C Short Time Low -55°C(1h), Short Time High +70°C(1h)																					
Humidity	DO-160G, Section 6, Category B, 10 cycles																					
Shock	DO-160G, Section 7 Category E, Operational Shock: 6g - 20ms - 3 per axes, Crash Safety: 20g - 20ms - 3 per axes																					
Vibration	DO-160G, Section 8, Category R, Curve B Standard Random Vibration, 3h per axes																					
Acceleration	MIL-STD-810F method 513, 2g, all directions																					
Storage	DO-160G, Section 4, Category C2, Ground Survival Low -55°, Ground Survival High +85°																					
Salt Fog	DO-160G, Section 14, Category T																					
Altitude	DO-160G, Section 4, Category E2																					
Waterproofness	DO-160G, Section 10, Category S, optional 28 V de-icing system																					
Compliance	ROHS/ MIL-STD																					
EMC resistance (based on compact version with CPE)	<table border="0"> <tr> <td>Radiated emission of radio frequency energy (RE)</td> <td>DO-160G, § 21 Category H</td> </tr> <tr> <td>Conducted emission of radio frequency energy (CE)</td> <td>DO-160G § 21, Category H</td> </tr> <tr> <td>Conducted susceptibility, cables and power leads (CS)</td> <td>DO-160G § 20, Category R</td> </tr> <tr> <td>Radiated susceptibility, electric fields</td> <td>DO-160G, § 20, Category R</td> </tr> <tr> <td>Conducted susceptibility audio frequency</td> <td>DO-160G, § 18, Category B</td> </tr> <tr> <td>Power +28V DC systems</td> <td>DO-160G § 16, Category A DC 28 Power</td> </tr> <tr> <td>Voltage spikes</td> <td>DO-160G § 17, Category B</td> </tr> <tr> <td>Lightning direct effects</td> <td>DO-160G § 23</td> </tr> <tr> <td>Lightning indirect effects</td> <td>DO-160G § 22</td> </tr> <tr> <td>ESD</td> <td>DO-160G § 25 CAT A</td> </tr> </table>		Radiated emission of radio frequency energy (RE)	DO-160G, § 21 Category H	Conducted emission of radio frequency energy (CE)	DO-160G § 21, Category H	Conducted susceptibility, cables and power leads (CS)	DO-160G § 20, Category R	Radiated susceptibility, electric fields	DO-160G, § 20, Category R	Conducted susceptibility audio frequency	DO-160G, § 18, Category B	Power +28V DC systems	DO-160G § 16, Category A DC 28 Power	Voltage spikes	DO-160G § 17, Category B	Lightning direct effects	DO-160G § 23	Lightning indirect effects	DO-160G § 22	ESD	DO-160G § 25 CAT A
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Acceptability (for electronic assemblies)	IPC-A610 Class 3																					

Electrical characteristics	CSU + CEU	CSU + CEU + CPE	CSU + Active Wire + CEU	CSU + Active Wire + CEU + CPE	Heater (**additional consumption)
Power Consumption	6.5 W	7.0 W	7.5 W	8.7 W	+6.5 W **
Nominal current at 28V	230 mA	250 mA	270 mA	310 mA	+230 mA **
Max current at Power up	1,5 A	1,5 A	1,6 A	1,6 A	1,75 A
Peak Current	1,5 A	1,5 A	1,6 A	1,6 A	1,75 A

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