

Flight Eye FE 350



High Definition Video with different focal lenses. Panoramic view from 17° up to 95° FOV. Full protection against icing, fogging and lightning. IP 67 housing for gimbals mounting and Ethernet interface. Kappa is your experienced partner in cameras for aerospace uses. Harsh environments and seamless integration are our forte. Certified to EN/AS 9100.

IP, H.264 ✓ Aircraft Outdoor Tasks ✓

Sensor-specific data

Type	2/3" interline transfer CCD progressive scan with micro lenses (ON Semiconductor KAI 02150)
Pixel size (H x V)	5.5 µm x 5.5 µm
Light-sensitive area (H x V)	10.56 mm x 5.94 mm (16:9)
Number of pixels (H x V)	1920 x 1080 active, 2004 x 1144 total
Spectral sensitivity (without IR filter)	350 nm – 1050 nm
Full well capacity	20 000 e ⁻
A/D-conversion factor	1,2 e ⁻ / increment
Filter	RGB Bayer filter / IR filter
Dynamic range	63 dB (measured in a dark image at the internal camera link interface, at 40 ms exposure and 0 dB gain)

Interface-specific data

Dual video stream	1920 x 1080p30, 640 x 360p30, RTSP multicast, RTP multicast, GVSP multicast
Compression	H.264, 1..8 Mbit/s, Dual compression
Stream configuration	GigE Vision, IP address, destination IP and ports
Ethernet	100 MBit/s
Time synchronization	IEEE1588, PTPv1, PTPv2
Mask	Blank-Out of image parts
Power-up	Adjustable configuration

Signal processing

System	14 bit digital
Gain	Manual/automatic (AGC): 0 to 20 dB
Exposure	1/30 to 1/100 000 s
Color processing	14 Bit color DSP
Gamma	0.3 to 2.2, loadable
Diagnostics	Integrated self-test
Measurement window	Position and size adjustable

General technical data

FOV, field of view (different camera versions)	Lenses 35 mm 23 mm 12 mm 8 mm 6 mm 4,8 mm H/V / FOV 17°/10° 26°/15° 48°/28° 67°/41° 83°/53° 95°/64°
Compliance	ROHS, RTCA DO-160
Reliability	MIL-HDBK-217; MTBF AUC 25°C: >36.000 h; MTBF AUC 50°C: >22.000 h; AIC 25°C > 56.000 h
Altitude	DO-160, section 4, category D2; 50.000 ft
Interfaces	Connectors system (power), Ethernet, control input/output
Temperature	DO-160, section 4, category D2; operational: -55°C.. +70°C; ground survival: -55°C.. +85°C
Temperature variation	DO-160, section 5, category A
Relative humidity	DO-160, section 6, category C, MIL STD 810 – Method 507.5 Curve B1
Power supply	MIL-STD 704 A ; 18,5 ..32,5V DC, galvanic isolation
Dimensions / weight	Ø 60 x 159 [mm] (without connectors) / 770 g (depending on model)
EMI	Emission: DO-160, section 21, category L/M; conducted and radiated; susceptibility: DO-160, section 20, category T, conducted susceptibility BCI; DO-160, section 20, category R, radiated susceptibility; ESD: DO-160, section 25, category A (15 KV)
Acceleration	MIL-STD 810G, method 513,6 procedure 1,2 (aircraft)
Shock	Operational: DO-160, section 7, category D; 6g for 20ms on the 3 axes crash safety: DO-160, section 7, category E
Vibration	DO-160, section 8, category R, curve B; MIL-STD-810G, method 514.6, D2 category 13; MIL-STD 810G, method 514.6, category 4; EUROCAE ED112/ EUROCAE ED-14D/RTCA DO-160D section 8, test level B2
Lightning induced transients	DO-160, section 22, pin injection B2
Protection type and waterproof	IP67, de-icing system, sapphire glass; RTCA DO-160F, section 10, category S
Additional tests RTCA DO-160F	Fungus: section 13; fluids: section 11, category F; salt/fog: section 14, category T
Acceptability for electronic assemblies	IPC-A-610 class 3 (optional)

Technical data are subject to change without notice.

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