

RTCA DO-160G Aviation Camera Datasheet

v2.11



ELECTRONICS

- 1.3 Megapixel 1/3.2" CMOS Sony Starvis IMX017 image sensor SoC System on a Chip.
- EyeNix DSP (ISP) Digital Signal Processor.
- Resolution, 1000 TVL.
- Analogue Output 1280 (CVBS) NTSC / PAL.
- An optional **3G/HDS DI + CVBS** version is available.
- Low light, 0.05 LUX @ F2.0.
- Input Power +28 VDC (+15 DVC to +32 VDC).

CAMERA BODY FINISH

- Internal - Alodine IAW MIL-DTL-5541 Type I, Class 3.
- External - Anodize black IAW MIL-A-8625 Type III, Class 2.

CAMERA CHASSIS (BODY)

- Camera Housing milled from 6061-T6 aluminum alloy.
- Industry standard 3-pin connector for electrical interface. Pin A = CVBS signal, Pin B = Power @ +28 VDC and C = GND.
- Part Number, Revision Level and Serial Number etched on ID Label IAW MIL-STD-130.
- "FWD" Marketing Machined into the housing



ADDITIONAL NOTES

- Adheres to RTCA/DO-160G commercial aviation requirements. Formal laboratory test reports are available upon request.
- Camera housing mates to the Sikorsky S92 existing mounting bracket. No modifications required.
- Connector Index Keyway facing forward (FWD) at 12:00 o'clock position when the camera is installed on the aircraft.
- Camera is oriented on the aircraft with 56° FOV along longitudinal axis (Front/Aft) and 72° along the lateral axis (Left/Right).
- Camera 3-pin connector (Signal, Power, and Ground) mates to existing wiring harness without a need for modifications. **Custom connector options are available.**
- Aircraft grounding with the outer shell of the camera connector.
- True "Plug and Play" Replacement of previous generation cameras while maintaining existing mounts and mounting locations.

FEATURES

- **WATERPROOF HOUSING**
- **LIGHTWEIGHT ASSEMBLY:**
389.4 GR / 13.7 OZ
- **MATERIALS TO WITHSTAND**
SALTWATER
ENVIRONMENT
- **FOG PROOF LENS CAVITY:**
NITROGEN PURGED
- **OPERATING TEMP: -40 C**
TO +55 C

RELATED PART NUMBERS

BW-CAM-VQSR-NTSC

BW-CAM-VQSR-PAL

BW-CAM-VQSR-HD

Bad Wolf Technologies, LLC

10602 N Port Washington Road Suite 201, Mequon, WI 53092, USA

+1 (414) 639-9085 | www.badwolftech.com | sales@badwolftech.com

Certified WOSB | Cage Code 6XSP8 | NAICS Code: 334310 | NSN 5836-01-676-1067 | DUNS Number: 078890938



STANDARD DEFINITION (ANALOG)

SPECIFICATIONS: CVBS PAL / NTSC

PLATFORMS

- Rotorcraft
- Fixed Wing
- Naval Vessels
- Mobile Land-Based Vehicles
- Drones / UAS

APPLICATIONS

- Search and Rescue (SAR)
- Air Ambulance / Medevac
- Flight Training
- Flight Test and Evaluation
- Cockpit and Cargo Hold Monitoring
- Aerial Firefighting
- Aerial Inspection (Infrastructure / Utilities / Maritime)
- Border Patrol and Security Operations
- Aerial Surveillance and ISR (Intelligence, Surveillance, Reconnaissance)

CAMERA	
IMAGING DEVICE	1/3.2" 1.27 Megapixel SONY Starvis ISX017/IMX017
SCANNING SYSTEM	Interlaced
TOTAL PIXELS	1297(H) x 977(V)
EFFECTIVE PIXELS	1280(H) x 960(V)
LENS (DEFAULT)	3.24 mm, glass finish 60/40
MIN. ILLUMINATION	0.05 LUX @F2.0 (IAW Customer Specification)
SYNC SYSTEM	INTERNAL
ELECTRONIC SHUTTER	1/50(PAL), 1/60(NTSC) ~ 1/142,800 second
FIELD OF VIEW	56°V x 72°H
IRIS CONTROL	AUTO
S/N RATIO	More than 52dB (AGC OFF)
MATING CONNECTOR	P/N: D38999/26WA98SN
BACK SHELL	P/N: M85049/38S9W
VIDEO	
HORIZONTAL RESOLUTION	1,000 TVL
INPUT POWER	+28 VDC (+15 to +32 VDC)
INPUT CURRENT	50 mA
ANALOG OUTPUT	1280H (CVBS NTSC/PAL)
VIDEO OUTPUT	1.0 to 1.2 Vp-p Composite 75(Ω)
PHYSICAL	
WEIGHT	389.4 gr / 13.7 oz
DIMENSIONS	4.73" x 1.75" 1.75"
HOUSING	Sealed, nitrogen-filled, used to protect electronics and optics
WATERPROOF	Per RTCA/DO-160G qualifications
ENVIRONMENTAL	
OPERATING TEMP.	-40°C to +55°C (Qualified IAW Customer Requirements. Capable of operating up to +75°C)
STORAGE TEMP.	-55°C to +85°C
MEAN TIME BETWEEN FAILURES (MTBF)	X > 40,000 hrs. per MIL-HDBK-217F2 Parts Count, ARW (Airborne Rotary Wing environment)

PART NUMBERS:

BW-CAM-VQSR-NTSC
BW-CAM-VQSR-PAL

Bad Wolf Technologies, LLC

10602 N Port Washington Road Suite 201, Mequon, WI 53092, USA

+1 (414) 639-9085 | www.badwolftech.com | sales@badwolftech.com

Certified WOSB | Cage Code 6XSP8 | NAICS Code: 334310 | NSN 5836-01-676-1067 | DUNS Number: 078890938



HIGH DEFINITION (SDI)

SPECIFICATIONS: HD-SDI (Full HD)

PLATFORMS

- Rotorcraft
- Fixed Wing
- Naval Vessels
- Mobile Land-Based Vehicles
- Drones / UAS

APPLICATIONS

- Search and Rescue (SAR)
- Air Ambulance / Medevac
- Flight Training
- Flight Test and Evaluation
- Cockpit and Cargo Hold Monitoring
- Aerial Firefighting
- Aerial Inspection (Infrastructure / Utilities / Maritime)
- Border Patrol and Security Operations
- Aerial Surveillance and ISR (Intelligence, Surveillance, Reconnaissance)

CAMERA	
IMAGING DEVICE	1/2.8" Sony CMOS Exmor Starvis IMX327 LQR1-C
SCANNING SYSTEM	Progressive and interlaced
TOTAL PIXELS	1945(H) x 1109(V): 2.16 MP
EFFECTIVE PIXELS	1945(H) x 1097(V): 2.13 MP
LENS (DEFAULT)	4.0 mm, glass finish 60/40
MIN. ILLUMINATION	0.0073 LUX @F2.5, 30IRE
SYNC SYSTEM	INTERNAL
ELECTRONIC SHUTTER	60HZ: 1/30 ~ 1/30,000 SEC (AUTO) 50HZ: 1/25 ~ 1/30,000 SEC (AUTO)
FIELD OF VIEW	56°V x 72°H
IRIS CONTROL	AUTO
S/N RATIO	More than 52dB (AGC OFF)
MATING CONNECTOR	P/N: TV06RW-13-26SA
BACK SHELL	P/N: TVP00RW-13-26SA
VIDEO	
HORIZONTAL RESOLUTION	1920 px HDSDI, 960 pixels CVBS
INPUT POWER	+28 VDC (+15 to +32 VDC)
INPUT CURRENT	150 mA
VIDEO OUTPUT 1	HD-SDI 1920x1080p @ 30/60 fps Full HD
VIDEO OUTPUT 2 (optional)	CVBS (optional) 960H, 700 TVL
PHYSICAL	
WEIGHT	389.4 gr / 13.7 oz
DIMENSIONS	4.73" x 1.75" 1.75"
HOUSING	Sealed, nitrogen-filled, used to protect electronics and optics
WATERPROOF	Per RTCA/DO-160G qualifications
ENVIRONMENTAL	
OPERATING TEMP.	-40°C TO +55°C (Qualified IAW Customer Requirements. Capable of -40°C to +75°C operation)
STORAGE TEMP.	-55°C to +85°C
MEAN TIME BETWEEN FAILURE (MTBF)	X>36,500 hrs. per MIL-HDBK-217F2 Parts Count, ARW

*Pass by similarity

PART NUMBER:

BW-CAM-VQSR-HD

Bad Wolf Technologies, LLC
10602 N Port Washington Road Suite 201, Mequon, WI 53092, USA
+1 (414) 639-9085 | www.badwolftech.com | sales@badwolftech.com
Certified WOSB | Cage Code 6XSP8 | NAICS Code: 334310 | NSN 5836-01-676-1067 | DUNS Number: 078890938