SIONYX

R2

PRODUCTION CAMERA MODULE LENSED

MONOCHROME + COLOR

-V65 MODEL

1-INCH 1280 X 1024 EXTREME LOW LIGHT CMOS CAMERA

MODEL NUMBERS

MONOCHROME XRB-1350-S65, -V65, -V57

COLOR XRB-1351-S65, -V65, -V57

The SIONYX XRB-1350 / 1351 camera modules provide a fully integrated embedded vision ready component that features our Gen2 extreme low light camera core with lens mount or environmental enclosure and easy user connectivity via flex ribbon cable. This module comes fully loaded with SIONYX's proprietary and fully optimized image processing algorithms to ensure the maximum capability in user performance results. The FPGA executes a real time image pipeline with auto exposure, contrast, gain and tone mapping/gamma algorithms. The XRB-1350 / 1351 delivers the industry's smallest Size, Weight, and Power (SWAP) combination with unprecedented near infrared sensitivity. SIONYX enables unassisted night vision imaging and detection in the 700nm – 1,100 nm range to advance industrial vision at a low price point.

APPLICATIONS

- INDUSTRIAL VISION
- FLUORESCENCE MICROSCOPY
- MEDICAL DIAGNOSTICS
- SILICON CHARACTERIZATION
- DAY / NIGHT SURVEILLANCE
- WEAPON SITES + TARGETING
- SEE SPOT
- VEHICLE SITUATION AWARENESS
- ROBOTIC + UAV NAVIGATION
- NIGHT VISION

FEATURES + BENEFITS

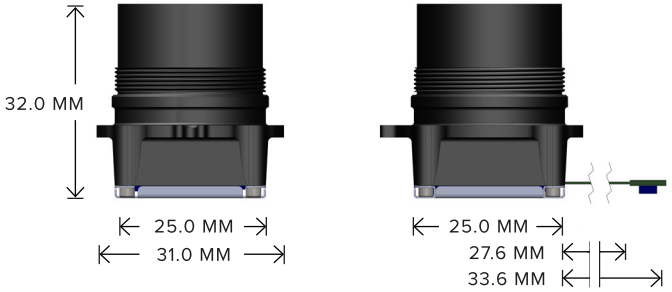
- 2nd Gen SIONYX low light technology delivers 0.5 mLux performance
- Packaged camera core with lens option is daytime safe with high reliability
- 2D noise reduction for improved image clarity
- MIPI CSI2 output interface for ease of integration in embedded systems
- Serial and I2C control interface for user flexibility
- Unmatched lower power consumption provides longer battery life
- Best Si CMOS QE 700nm - 1100nm enables new applications at low cost

KEY PERFORMANCE PARAMETERS - Aerospace

SENSOR	SIONYX XQE-1350 / XQE-1351 1.3MP CMOS
MINIMUM ILLUMINATION	0.5 mLUX AT 60 FPS AND F 1.28
MOONLESS NIGHT PERFORMANCE	TO BELOW MOONLESS STARLIGHT
OPTICAL FORMAT	1-INCH (15.6 mm), 9.5 MICRON PIXEL SIZE
AUTO EXPOSURE RANGE	14 uSEC TO 0.5 SEC
HOT/DARK PIXELS	< 0.039%
VIDEO OUTPUT	MIPI CSI2 - 4 LANE - 400 MHz
VIDEO TYPE	UNCOMPRESSED 10 BIT MONOCHROMATIC
	16 BIT YUV422 COLOR
IMAGE LATENCY	< 120 MICROSECOND
SHUTTER TYPE	PROGRESSIVE, ROLLING
VIDEO RESOLUTION	1280 X 1024
FRAME RATE (FPS)	120, 90, 60, 45, 30 OR 2 MINIMUM
CONNECTOR	CONNECTOR FLEX CABLE WITH HIROSE 48P HEADER
	(0.4 mm PITCH / 1.5 mm HEIGHT)
COMM PART	UART SERIAL AND I2C
LENS MOUNT	INTEGRATED LENS, CUSTOMIZATION POSSIBLE
OPERATING & STORAGE TEMPERATURE	-40°C TO +65°C | -55°C TO +125°C
POWER SUPPLY	3.3, 1.8, + 1.2 VDC
POWER CONSUMPTION	1.1 W TYPICAL
DIMENSIONS (mm) (-V)	31 (W) X 32 (H) X 25 (L)
WEIGHT	< 31 g

All product specifications, and data, are subject to change without notice due to continuous quality improvement initiatives. Visit SIONYX.com for the most current data documentation.

V-MODEL, LENSED & ENCLOSED CAMERA MODULE



S-MODEL, LENSED CAMERA MODULE

MODEL NO.	TYPE
XRB-1350-V65	MONOCHROME ENCLOSED CAMERA MODULE 65 DEGREES
XRB-1350-V57*	MONOCHROME ENCLOSED CAMERA MODULE 57 DEGREES
XRB-1351-V65	COLOR ENCLOSED CAMERA MODULE 65 DEGREES
XRB-1351-V57*	COLOR ENCLOSED CAMERA MODULE 57 DEGREES
XRB-1350-S65	MONOCHROME LENSED CAMERA MODULE 65 DEGREES
XRB-1351-S65	COLOR LENSED CAMERA MODULE 65 DEGREES
XRB-1350-V65S	MONOCHROME ENCLOSED CAMERA MODULE
	65 DEGREES, COMMERCIAL
XRB-1351-V65S	COLOR ENCLOSED CAMERA MODULE
	65 DEGREES, COMMERCIAL

* Available custom order configuration, volume based
For commercial scientific / industrial applications select “S” model number.
[Note: Commercial Operating & Storage temperature -20°C to 55°C | -40°C to 105°C, Hot/Dark Pixels < 0.39%]