

LightWise LW-3-S-1394

3 Megapixel FireWire Camera



Features

- Low Noise Progressive Scan 3 Megapixel Color Image Sensor
- IEEE-1394 IIDC DCAM Specification Version 1.3 Compliant Interface
- High Frame Rate: 12 fps (2048x1536), 30 fps (1280x1024), 90+ fps VGA (640x480)
- Full ISG Color Image Processing Pipeline. RGB, YUV or Raw Bayer Data Out
- All color processing: color balance, hue, saturation and dynamic range parameters programmable.
- Ultra High Quality Smooth Digital Zoom and Pan for any Region of Interest. Fully controllable by host computer
- Automatic White Balance and Gain. Manual modes also supported.
- 2 1394 ports allows Cascading of cameras in remote installations
- Arbitrary Region of Interest
- Multiple Trigger Modes including Single-Shot
- Programmable I/Os for lighting and synchronization control
- On-board 32-Mbyte Multi-Image Buffer
- 1 Million gate Onboard FPGA and Programmable "Smart" architecture enables custom configurations
- Compatible with a wide range of 3rd Party Software Applications
- Soft-load Firmware-Upgradeable from Host Computer
- C-Mount Included
- API Specification and SDK Available
- Single 1394 Cable for Image, Power and Control. Accessory 1394 Connector.

The new LightWise area scan smart cameras combine advanced digital processing technology and the FireWire™ standard to give a low-cost, high performance solution to machine vision applications. These compact cameras shorten the typical integration time associated with vision systems and offer flexibility for OEM solutions. Fully compliant with the IEEE-1394 IIDC DCAM Specification Version 1.3, these cameras can be used with any compatible programs or other 3rd Party Software. Frame Rates up to 12 fps at full resolution and 90+ fps for VGA resolution. The cameras now include the ISG High Quality Digital Pan and Zoom Processor, which allows computer controlled, pixel accurate ROI panning and multi-tap filter based digital zoom for the ultimate flexibility in your application. All camera controls are done via the 1394 interface, which includes a fully programmable color image processing pipeline and dynamic range/gamma control LUT for any desired response curve. An on-board image buffer for up to 3 color or 9 monochrome images is also featured in these cameras, as well as a wide range of triggering and strobe control capabilities. These cameras come packaged with driver software and a user's manual.

Sensor Specifications

PARAMETER		TYPICAL VALUE
Optical Format		1/2-inch (4:3)
Active Imager Size		6.55mm(H) x 4.92mm(V) 8.19 (Diagonal)
Active Pixels		2,048H x 1,536V
Pixel Size		3.2um x 3.2um
Color Filter Array		RGB Bayer Pattern
Shutter Type		Global Reset Release, Electronic Rolling Shutter (ERS)
Maximum Data Rate/ Master Clock		48 MPS/48 MHz
Frame Rate	QXGA (2,048 x 1,536)	Programmable up to 12 fps
	UXGA (1,600 x 1,200)	Programmable up to 20 fps
	SXGA (1,280 x 1,024)	Programmable up to 27 fps
	XGA (1,024 x 768)	Programmable up to 43 fps
	VGA (640 x 480)	Programmable up to 93 fps
ADC Resolution		10-bit, on-chip
Responsivity		> 1.0 V/lux-sec (550nm)
Dynamic Range		61dB
SNR _{MAX}		43dB