

SNAPPY WIDE 16M/28M/35M

A VERSATILE SENSOR FOR EFFICIENT AND COST-EFFECTIVE WIDE AREA SCANNING



Scanning 1D and 2D codes at high speeds in modern warehouses and logistics systems is a challenge that has resulted in the industry moving towards higher resolution imagers. This enables a single fixed camera to be deployed on a large conveyor belt system to scan packages across its entire width. The unique wide formats supported by Teledyne e2v's Snappy Wide™ sensor ensure that unused and costly pixels (typically redundant from square or 4:3 formats), are avoided and allow lower cost optics, which significantly reduces the system cost. High-end electro-optical characteristics ensure the best performance and superb overall image quality. Snappy Wide can also support ultra-high-speed dual line scanning applications.

SENSOR FEATURES

Ultra-high precision
A resolution of 8K x 4K (or less)

More objects captured in a single high resolution
shot with up to 32 ROIs

High image processing throughput
up to 65 fps frame rate @ full resolution

Excellent low-light SNR due to state-of-the-art
low-noise global shutter pixel

CUSTOMER BENEFITS

A reduced cost of optics compared with APS-C 8K x 8K
solutions and lower pixel-redundancy

Longer distance barcodes and objects identification,
with wider Field of View

High-speed logistics operation and compatibility
with 16x or 32x LVDS lanes

**Reduced illumination requirements, easier barcode
identification** and an image quality that is less affected
by system temperature



Sensor Characteristics

	SNAPPY WIDE 16M	SNAPPY WIDE 28M	SNAPPY WIDE 35M
Resolution (pixels)	8192 (H) x 2000 (V)	8192 (H) x 3500 (V)	8192 (H) x 4320 (V)
Image Size (mm)	21.08	22.27	23.15
Pixel Size (square)	2.5 µm		
Aspect Ratio	4:1	2.4:1	1.9:1
Max Frame Rate @10 bits (fps)	> 130	> 75	> 65
Bit Depth	8 - 10 - 12		
Readout Noise (e-)	4.0 @ 10 bits / 3.0 @ 12 bits		
Full Well Capacity (e-)	6,000		
SNR max (dB)	37.5		
Dynamic Range (dB)	62.5 @ 10 bits / 66 @ 12 bits		
Q.E. – %, @550 nm	60		

TYPICAL APPLICATIONS

- High-end logistics on large conveyors
- Wider horizontal FoV; high-throughput parcel sorting
- Ultra high-speed dual line linear scanner

KEY SPECIFICATIONS

- Native 35M resolution in 8k UHD format
- Pre-defined or customizable smaller resolutions for cost optimisation
- 2.5 µm CMOS global shutter pixel allowing true CDS
- Microlens array at 0° CRA (and optional RGB Bayer filter)
- Up to 65 fps @ full resolution at 10 bits
- Compliant with 59 x 59 mm² camera platforms and also matches smaller standard 4/3 lens format (with ROI crop)
- SPI control
- Versatile and cost-effective system integration
- Support of 16 and up-to 32 LVDS outputs @ 754 Mbps
- Power supplies: 3.3V, 1.8V, 1.2V
- Power consumption: ≤2.0 W @ full speed & full resolution
- 326 pins ceramic LGA package

EMBEDDED FEATURES

- Matching optical and mechanical centers
- ROI (up to 32, overlap and independent configurations allowed)
- High Dynamic Range modes to simplify post-processing
- Digital binning (row & column)
- Horizontal sub sampling (up to 1 over 32 rows)
- Look-up table
- Defective pixel correction
- FPN correction
- Flipping/mirroring
- Image statistics and context
- Multiple trigger modes
- On-chip voltage re-generation (LDO) for better performance
- On-chip temperature sensor
- Test pattern generator

ORDER CODES	8.1 K x 2 K	8.1 K x 3.5 K	8.1 K x 4.3 K
B&W VERSION	EV2S16MB-CLV0001-T	EV2S28MB-CLV0001-T	EV2S35MB-CLV0001-T
	EV2S16MB-CLV0011-T	EV2S28MB-CLV0011-T	EV2S35MB-CLV0011-T
BAYER COLOR VERSION	EV2S16MC-CLV0001-T	EV2S28MC-CLV0001-T	EV2S35MC-CLV0001-T
	EV2S16MC-CLV0011-T	EV2S28MC-CLV0011-T	EV2S35MC-CLV0011-T

* CLV0001 version: No foil
 * CLV0011 version: with foil

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 Revision Date: 2023 05 24