

# Take Scanning and Barcode Reading to the Next Level



## KEY BENEFITS

- » Small, low noise global shutter CMOS pixel (2.8 $\mu$ m x 2.8 $\mu$ m)
- » Cost effective with ultra-small optical format (1/3") at full HD format
- » Embeds unique features for the highest scanning speeds (Fast Self Exposure mode, dual-trigger modes)
- » Excellent SNR at low light (yields illumination system cost savings)
- » HDR modes for wide dynamic scenes (tolerance to light band reflection on curved reflective surfaces)
- » Tracking simultaneous image regions due to single and multi-ROI modes
- » Fast and easy to integrate with a new ultra-lightweight organic package
- » MIPI CSI-2 outputs for glueless embedded imaging systems

## FEATURES

- » Low noise global shutter with 1,920 x 1,080 active pixels
- » 2.8 $\mu$ m pixel size
- » B&W and color with 12° and 0° CRA options
- » Above 100fps @8 bits, above 68fps @10 bits, above 55fps @12 bits (at full resolution)
- » Embedded features for barcode reading and other 2D scanning applications
- » MIPI CSI-2, 1.2Gbits lanes (selectable down to single lane)
- » SPI and two wire control with 4 x chip addresses for multiple sensor platforms
- » 3.3V, 1.8V, 1.2V power supplies
- » Package: 112 pins Fan-out organic



From pixel performance, to integrated real-time features, to MIPI output; every aspect of the new Snappy family of CMOS sensors has been designed and optimized for cost-effective and fast scanning of end products for barcode and other 2D scanning applications.

Our patented Self Fast-Exposure mode assures that the first image frame is correctly exposed to enable the fastest possible identification and decoding by the image processing system, even in rapidly changing light conditions.

## TYPICAL APPLICATIONS

- » Barcode scanners
- » Embedded vision systems
- » IoT edge devices
- » Drones/UAV
- » Virtual reality/augmented reality
- » Biometric systems

## SENSOR CHARACTERISTICS

	SNAPPY 2MP		
Resolution – pixels	1,920 (V) x 1,080 (H)		
Pixel size – square	2.8µm		
Size type – inch	1 / 2.8		
Aspect ratio	16:9		
Max frame rate	>100fps @8 bit	>68fps @10 bit	>55fps @12 bit
Bit depth	8/10/12		
Readout noise – e-	3		
Qsat – e-	> 7,000		
Dynamic range – dB	65 (normal mode) 100+ (HDR mode)		
SNRmax – dB	>39		
Q.E. – %, @550nm	>62		

## ORDER CODES – PRODUCTION

- » EV2S02MB-OM20300-T  
Snappy 2MP: B&W, Fan-out organic, CRA 12°, Tray = 152 units
- » EV2S02MC-OM20300-T  
Snappy 2MP: Color, Fan-out organic, CRA 12°, Tray = 152 units
- » EV2S02MB-OM20000-T  
Snappy 2MP: B&W, Fan-out organic, CRA 0°, Tray = 152 units
- » EV2S02MC-OM20000-T  
Snappy 2MP: Color, Fan-out organic, CRA 0°, Tray = 152 units

## ORDER CODES – SAMPLES

- » EV2S02MB-OM20300-P  
Snappy 2MP: B&W, Fan-out organic, CRA 12°, TRAY = 2 units
- » EV2S02MC-OM20300-P  
Snappy 2MP: Color, Fan-out organic, CRA 12°, TRAY = 2 units
- » EV2S02MB-OM20000-P  
Snappy 2MP: B&W, Fan-out organic, CRA 0°, TRAY = 2 units
- » EV2S02MC-OM20000-P  
Snappy 2MP: Color, Fan-out organic, CRA 0°, TRAY = 2 units

## ORDER CODES – EVALUATION KITS

- » EV2E02MB-OU3D300-U  
DK Snappy 2MP: Mono, 12°, USB3-C, Fan-out
- » EV2E02MC-OU3D300-U  
DK Snappy 2MP: Color, 12°, USB3-C, Fan-out
- » EV2E02MB-OU3D000-U  
DK Snappy 2MP: Mono, 0°, USB3-C, Fan-out
- » EV2E02MC-OU3D000-U  
DK Snappy 2MP: Color, 0°, USB3-C, Fan-out