



Genie™ Nano Cameras

Smaller, faster, stronger, cheaper.

최상의 속도와 이미지 품질을 제공하는 초소형 GigE Vision Camera

Genie Nano는 Teledyne DALSA 제품군 중 가장 저렴하고 강력한 성능을 가진 CMOS Area Scan 카메라로 GigE vision, CameraLink 두 가지의 인터페이스를 지원합니다. Genie Nano는 업계 선도적인 CMOS 센서를 장착하였으며, 더불어 독자적인 카메라 기술을 통한 혁신적인 스피드, 혹독한 환경을 대비한 강건한 바디 설계, 그리고 가격 대비 그 이상의 다양한 기능을 제공합니다.

Teledyne DALSA의 특허인 TurboDrive™ 기술은 Genie Nano가 최상의 이미지 품질을 유지함과 동시에, GigE 카메라의 한계보다 150% 또는 그 이상의 높은 프레임 속도를 가능케 합니다. 모든 Teledyne DALSA의 GigE 카메라와 마찬가지로, Genie Nano는 AIA GigE Vision 표준을 기반으로 카메라를 PC로 직접 연결할 수 있습니다.



TURBODRIVE BY TELEDYNE DALSA

GigE VISION

주요 특징

- 표준 PC의 이더넷 포트와 하드웨어 사용
- 최대 100m 케이블 길이 지원 (CAT-5e 또는 CAT-6)

품질 보증

- CE, FCC 및 RoHS

프로그램 가능성

- Partial 스캔 모드에서 더욱 빠른 프레임 속도
- 노출제어 기능을 탑재한 글로벌 셔터
- 다중 노출 가능
- 멀티 ROI 가능(최대16 ROI)
- MetaData 지원
- IEEE1588 (네트워크 간 정확한 동기화 가능) 지원
- Binning
- Look-up table

안정성

- 내구성을 고려한 강건한 바디 설계
- 3년의 보증기간
- 이미지 신뢰성 진단(Trigger to Image-Reliability) 프레임워크를 활용해 전송된 이미지에 대해 완벽한 시스템 수준의 모니터링과 제어, 진단 가능

대표 어플리케이션

- 전자 제품 제조 검사
- 산업용 계측
- ITS(지능형 교통 시스템)
- 스포츠 시뮬레이션
- 의료기기

Features and Details

Specifications: Nano-M1950

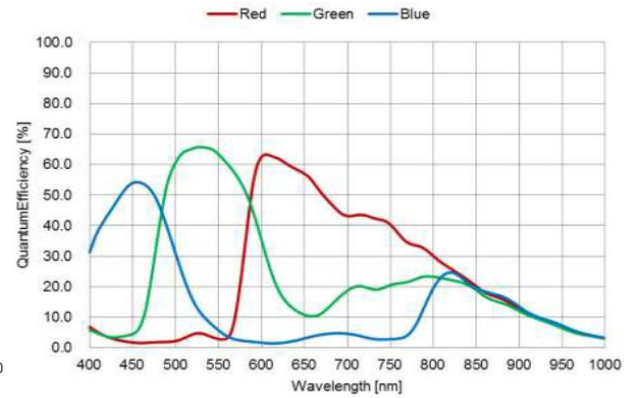
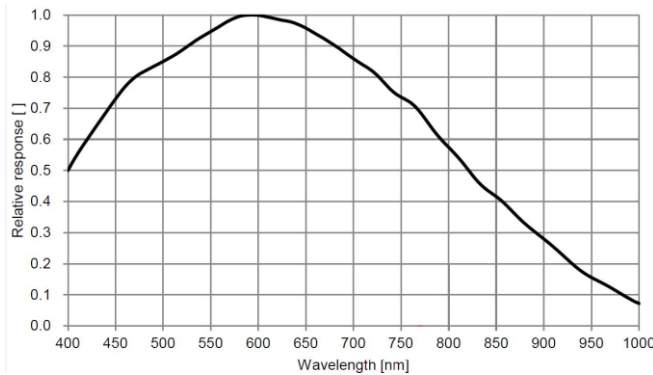


Supported Features	Nano-M1950	
Resolution	1932 x 1216	
Sensor	Sony IMX392 (2.4M)	
Pixel Size	3.45 μm x 3.45 μm	
Shutter type	Full frame electronic global shutter function	
Full Well charge; dependent on Firmware Design Loaded	11ke (max)	
Firmware option	8-bit Standard Design	12-bit Standard Design (Factory)
Field programmable		
Max. Internal Frame Rate Full resolution	151 fps	119 fps
Maximum Sustained Frame Rate Output (with TurboDrive v1)	102 fps (8-bit)	102 fps (8-bit) 50.1 fps (12-bit)
Maximum Sustained Frame Rate Output (without TurboDrive)	51 fps (8-bit)	51 fps (8-bit) 25.5 fps (12-bit)
Pixel Data Formats	Mono 8-bit	Mono 8-bit Mono 12-bit
Trigger to Exposure Minimum delay	2 Line Time (Synchronous Exposure Alignment) 0 μs (Reset Exposure Alignment)	
Trigger to Exposure Start jitter	0 μs to 1 Line Time (Synchronous Exposure Alignment) 0 μs (Reset Exposure Alignment)	
Actual Exposure Time Minimum (see "exposureTimeActual" feature)	19 μs (increment of 5.2 μs steps)	20 μs (increment of 6.6 μs steps)
Min. Time from End of Exposure to Start of Next Exposure (second frame)	10 lines–13.73 μs (38.97 μs)	10 lines–13.73 μs (52.87 μs)
Horizontal Line Time:	5.27 μs	6.66 μs
Readout Time	(H Line Time) x (lines in frame +23) — in μs	
Auto-Brightness	Yes , with Auto-Exposure and AGC (FPGA Gain or Sensor Gain)	
Black offset control	Yes (in DN)	
Gain Control	In-sensor Gain (1.0x to 251x) In-FPGA Digital Gain (1x to 4x) in 0.007x step	
Binning Support	Yes, In-FPGA	
	(Summing and Averaging 2x2, 4x4)	
Decimation Support	No	
Defective Pixel Replacement	No	
Image Correction	no	
Image Flip Support	Yes, In-Sensor, Vertical and Horizontal	
Multi-ROI Support	Yes, In-Sensor, up to 16 ROI (mutually exclusive with in-sensor binning)	
On-Board Image Memory	90MB	
Output Dynamic Range (dB)	75.4 dB	
SNR (dB)	39.6 dB	

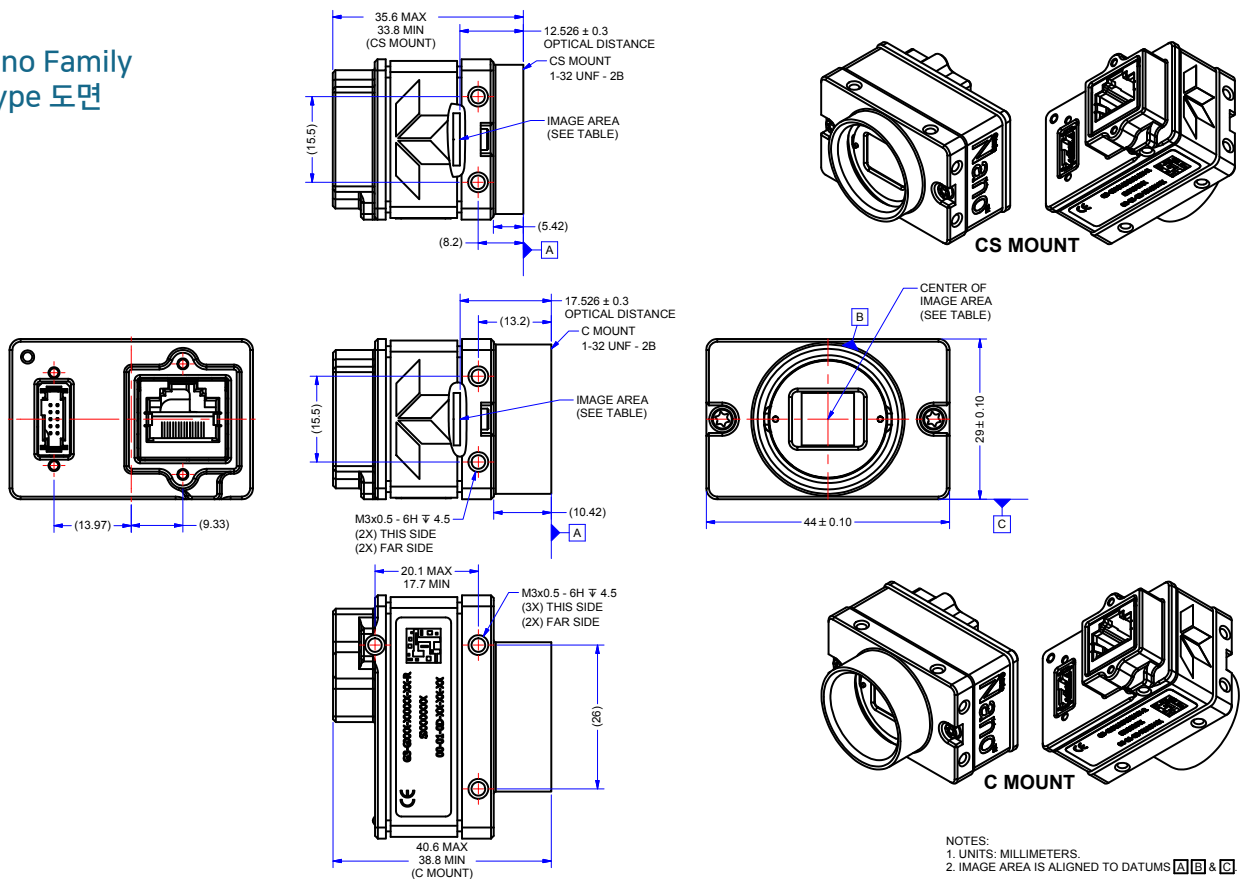
Specifications: Nano-C1950

Supported Features	Nano-C1950	
Resolution	1932 x 1216	
Sensor	Sony IMX392 (2.4M)	
Pixel Size	3.45 μm x 3.45 μm	
Shutter type	Full frame electronic global shutter function	
Full Well charge; dependent on Firmware Design Loaded	11ke- (max)	
Firmware option		
Field programmable	8-bit Standard Design	12-bit Standard Design (Factory)
Max. Internal Frame Rate Full resolution	151 fps	119 fps
Maximum Sustained Frame Rate Output (with TurboDrive v1)	102 fps (8-bit)	102 fps (8-bit) 50.1 fps (12-bit)
Maximum Sustained Frame Rate Output (without TurboDrive)	51 fps (8-bit)	51 fps (8-bit) 25.5 fps (12-bit)
Pixel Data Formats	Bayer 8-bit	Bayer 8-bit Bayer 12-bit
Trigger to Exposure Minimum delay	2 Line Time (<i>Synchronous Exposure Alignment</i>) 0 μs (<i>Reset Exposure Alignment</i>)	
Trigger to Exposure Start jitter	0 μs to 1 Line Time (<i>Synchronous Exposure Alignment</i>) 0 μs (<i>Reset Exposure Alignment</i>)	
Actual Exposure Time Minimum (see "exposureTimeActual" feature)	19 μs (increment of 5.2 μs steps)	20 μs (increment of 6.6 μs steps)
Min. Time from End of Exposure to Start of Next Exposure (second frame)	10 lines–13.73 μs (38.97 μs)	10 lines–13.73 μs (52.87 μs)
Horizontal Line Time:	5.27 μs	6.66 μs
Readout Time	(H Line Time) x (lines in frame +23) — in μs	
Auto-Brightness	Yes , with Auto-Exposure and AGC (FPGA Gain or Sensor Gain)	
Black offset control	Yes (in DN)	
Gain Control	In-sensor Gain (1.0x to 251x) In-FPGA Digital Gain (1x to 4x) in 0.007x step	
Binning Support	No	
Decimation Support	No	
Defective Pixel Replacement	Yes	
Image Correction	White Balance (+ Color Correction & Enhancement for RGB Output design)	
Image Flip Support	Yes, In-Sensor, Vertical and Horizontal	
Multi-ROI Support	Yes, In-Sensor, up to 16 ROI	
On-Board Image Memory	90MB	
Output Dynamic Range (dB)	75.4 dB	
SNR (dB)	39.6 dB	

Spectral Response



Genie Nano Family - GigE Type 도면



www.teledynedalsa.com

Americas
Boston, USA
+1 978-670-2000
sales.america@teledynedalsa.com

Europe
Krailling, Germany
+49 89 89 54 57 3-80
sales.europe@teledynedalsa.com

Asia Pacific
Tokyo, Japan
+81 3-5960-6353
sales.asia@teledynedalsa.com

Shanghai, China
+86 21 642 79081
sales.asia@teledynedalsa.com