



Genie™ Nano Cameras

Smaller, faster, stronger, cheaper.

Compact GigE Vision cameras with unprecedented speed and uncompromised image quality.

Introducing Genie Nano, a GigE vision CMOS area scan camera that redefines **low cost** performance. Genie Nano starts with industry leading image CMOS sensors from VGA to 18M Pixels resolution and adds proprietary camera technology for **breakthrough speed**, a robust build quality for wide operating temperature, and an unmatched feature set—all at an **incredible price**. Teledyne DALSA's proprietary **TurboDrive™** technology allows Genie Nano to deliver its full image quality at faster frame rates—often 150% or higher—with no changes to your GigE network. Like all Teledyne DALSA GigE cameras, the Genie Nano is based on AIA GigE Vision Standard to directly link the camera to a PC.



TURBODRIVE BY TELEDYNE DALSA

Key Features

- Uses standard PC Ethernet port & hardware
- Supports cable lengths up to 100 m (CAT-5e or CAT-6)
- Simplified set-up with field proven Sapera LT software featuring CamExpert
- Engineered to accommodate industrial environment with a ruggedized screw mount RJ-45 connector

Programmability

- Higher frame rates achievable in partial scan mode
- Global electronic shutter with exposure control
- Multi-exposure feature
- Multi-ROI feature
- Metadata support
- IEEE1588 (Precision Time Protocol) support
- Binning
- Look-up-table and More

Reliability

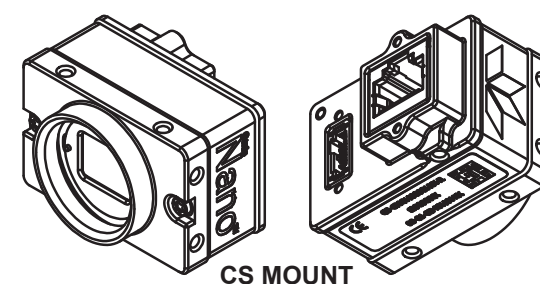
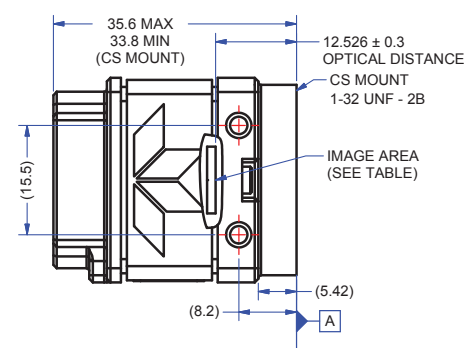
- Robust all-metal body
- 3 year warranty
- Trigger to Image Reliability (T2IR) framework improves the reliability of your inspection system and protects you from data loss

Typical Applications

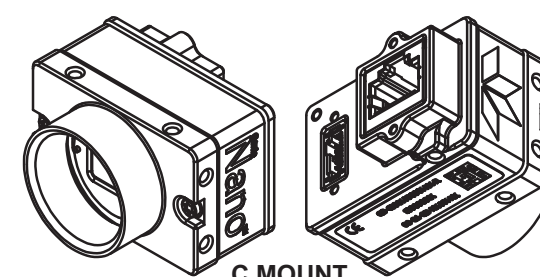
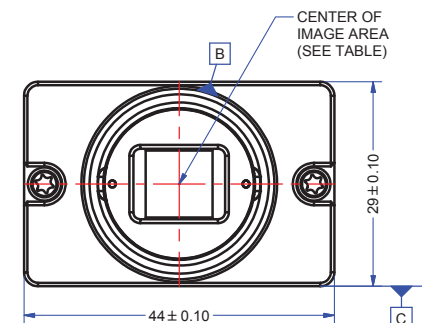
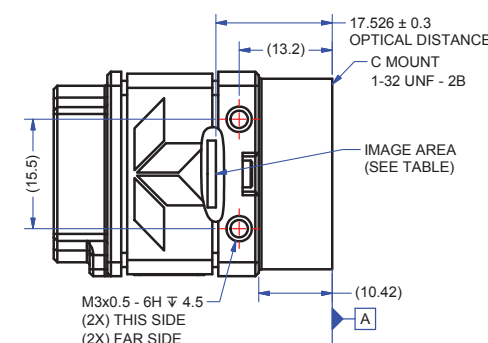
- Electronics manufacturing inspection
- Industrial metrology
- Intelligent traffic systems

Regulatory Compliance

- CE, FCC and RoHS



CS MOUNT



C MOUNT

NOTES:
1. UNITS: MILLIMETERS.
2. IMAGE AREA IS ALIGNED TO DATUMS A, B & C.

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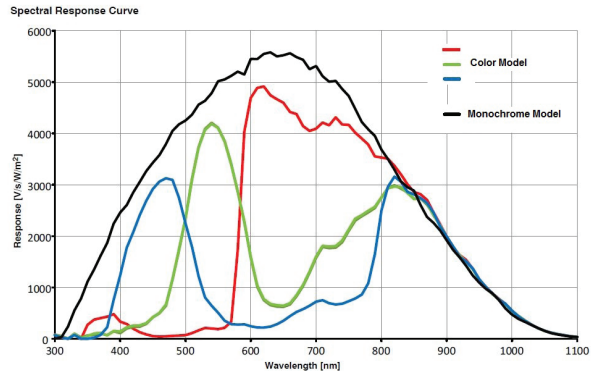
GENIE NANO INDIVIDUAL MODEL SPECIFICATIONS

	Active Resolution	Sensor Model	Frame Rate (Burst Mode)	Pixel Size	Dynamic Range	Max. Image Circle	Data Format	Part Number (for C-mount option)
 M640/M640-NIR	640 x 480	On-Semi Python300	862 fps	4.8 μm	62.1 dB	1/4" Optical Format	8 or 10-Bit Mono	G3-GM10-M0640 G3-GM12-M0640 (NIR)
 C640	640 x 480	On-Semi Python300	862 fps	4.8 μm	62.1 dB	1/4" Optical Format	8 or 10-Bit Bayer	G3-GC10-C0640 G3-GC10-C0640IF (with IR cut-off filter)
 M800/M800-NIR	800 x 600	On-Semi Python500	566 fps	4.8 μm	62.1 dB	1/3.3" Optical Format	8 or 10-Bit Mono	G3-GM10-M0800 G3-GM12-M0800 (NIR)
 C800	800 x 600	On-Semi Python500	566 fps	4.8 μm	62.1 dB	1/3.3" Optical Format	8 or 10-Bit Bayer	G3-GC10-C0800 G3-GC10-C0800IF (with IR cut-off filter)
 M1280/M1280-NIR	1280 x 1024	On-Semi Python1300	213 fps	4.8 μm	62.1 dB	1/2" Optical Format	8 or 10-Bit Bayer	G3-GM10-M1280 G3-GM12-M1280 (NIR)
 C1280	1280 x 1024	On-Semi Python1300	213 fps	4.8 μm	62.1 dB	1/2" Optical Format	8 or 10-Bit Bayer	G3-GC10-C1280 G3-GC10-C1280IF (with IR cut-off filter)
 M1920	1920 x 1200	Sony IMX249	39 fps	5.86 μm	75.5 dB	1/1.2" Optical Format	8 or 12-Bit Mono	G3-GM11-M1920
 C1920	1920 x 1200	Sony IMX249	39 fps	5.86 μm	75.5 dB	1/1.2" Optical Format	8 or 12-Bit Bayer	G3-GC11-C1920 G3-GC11-C1920IF (with IR cut-off filter)
 M1940	1920 x 1200	Sony IMX174	84 fps	5.86 μm	68.3 dB	1/1.2" Optical Format	8 or 10-Bit Mono	G3-GM10-M1940
 C1940	1920 x 1200	Sony IMX174	84 fps	5.86 μm	68.3 dB	1/1.2" Optical Format	8 or 10-Bit Bayer	G3-GC10-C1940 G3-GC10-C1940IF (with IR cut-off filter)
 M1930/M1930-NIR	1920 x 1200	On-Semi Python2000	116 fps	4.8 μm	62.1 dB	2/3" Optical Format	8 or 10-Bit Mono	G3-GM10-M1930 G3-GM12-M1930 (NIR)
 C1930	1920 x 1200	On-Semi Python2000	116 fps	4.8 μm	62.1 dB	2/3" Optical Format	8 or 10-Bit Bayer	G3-GC10-C1930 G3-GC10-C1930IF (with IR cut-off filter)
 M2020	2048 x 1536	Sony IMX265	55 fps	3.45 μm	76.4 dB	1/1.8" Optical Format	8 or 12-Bit Mono	G3-GM11-M2020
 C2020	2048 x 1536	Sony IMX265	55 fps	3.45 μm	76.4 dB	1/1.8" Optical Format	8 or 12-Bit Bayer	G3-GC11-C2020 G3-GC11-C2020IF (with IR cut-off filter)
 M2050	2048 x 1536	Sony IMX252	140 fps	3.45um	56.4 dB	1/1.8" Optical Format	8-Bit Mono	G3-GM10-M2050
 C2050	2048 x 1536	Sony IMX252	140 fps	3.45 μm	56.4 dB	1/1.8" Optical Format	8-Bit Bayer	G3-GC10-C2050 G3-GC10-C2050IF (with IR cut-off filter)
 M2420	2448 x 2048	Sony IMX264	35 fps	3.45 μm	76.4 dB	2/3" Optical Format	8 or 12-Bit Mono	G3-GM11-M2420
 C2420	2448 x 2048	Sony IMX264	35 fps	3.45 μm	76.4 dB	2/3" Optical Format	8 or 12-Bit Bayer	G3-GC11-C2420 G3-GC11-C2420IF (with IR cut-off filter)
 M2450	2448 x 2048	Sony IMX250	90 fps	3.45 μm	56.4 dB	2/3" Optical Format	8-Bit Mono	G3-GM10-M2450
 C2450	2448 x 2048	Sony IMX250	90 fps	3.45 μm	56.4 dB	2/3" Optical Format	8-Bit Bayer	G3-GC10-C2450 G3-GC10-C2450IF (with IR cut-off filter)
 M2590/M2590-NIR	2592 x 2048	On-Semi Python5000	51 fps	4.8 μm	62.1 dB	1" Optical Format	8 or 10-Bit Mono	G3-GM10-M2590 G3-GM12-M2590 (NIR)
 C2590	2592 x 2048	On-Semi Python5000	51 fps	4.8 μm	62.1 dB	1" Optical Format	8 or 10-Bit Bayer	G3-GC10-C2590 G3-GC10-C2590IF (with IR cut-off filter)
 M4060	4112 x 2176	Sony IMX255	56 fps	3.45 μm	56.4 dB	1" Optical Format	8-Bit Mono	G3-GM10-M4060
 C4060	4112 x 2176	Sony IMX255	56 fps	3.45 μm	56.4 dB	1" Optical Format	8-Bit Bayer	G3-GC10-C4060 G3-GC10-C4060IF (with IR cut-off filter)
 M4040	4112 x 3012	Sony IMX253	40 fps	3.45 μm	56.4 dB	1.1" Optical Format	8-Bit Mono	G3-GM10-M4040
 C4040	4112 x 3012	Sony IMX253	40 fps	3.45 μm	56.4 dB	1.1" Optical Format	8-Bit Bayer	G3-GC10-C4040 G3-GC10-C4040IF (with IR cut-off filter)

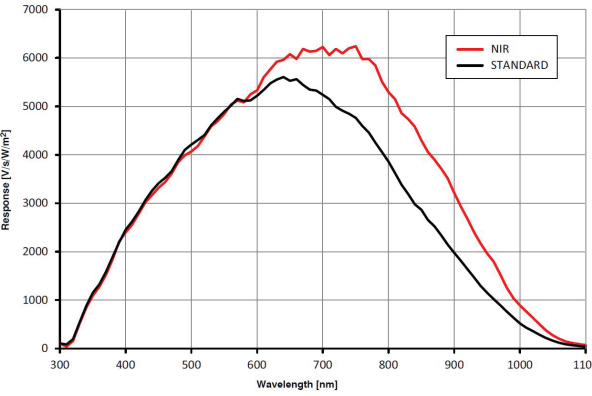
GENIE NANO FAMILY SPECIFICATIONS
(COMMON TO ALL MODELS)

Data Output Transfer	Gigabit Ethernet (1000 Mbit/s) only
Exposure Control	Programmable, or via external trigger
I/O Ports	2 opto-isolated inputs, 2 opto-isolated ouputs, 1 input/3 outputs option available on demand
Image Buffers (On-board memory)	90MB for VGA to 5 Mpixel models 200 MB for the 9M, 12M and 18 Mpixels models
Lens Mount	C and CS-Mount available
Size (L x H x W) (C-mount option)	21.2 mm x 29 mm x 44 mm (no lens adapter or connectors) 38.9 mm x 29 mm x 44 mm (with lens adapter and connectors)
Mass	~46 g
Operating Temp	-20 to +60°C (housing temperature)
Power Supply	10 to 36V or Power Over Ethernet (POE)
Power Dissipation (model dependent)	3.6 W to 4.6 W(12V) 4.0 W to 4.9 W (PoE)
Data Connector	Standard or screw mount RJ-45
Power and I/O Connector	SAMTEC TFM-105 type
Camera Specification	GigE Vision v1.2 compliant
Software Platform	Teledyne DALSA Sapera LT 8.0 for Windows, Teledyne DALSA GigE-V for Linux or 3rd Party GenICam compliant SDK

RESPONSIVITY GRAPHS



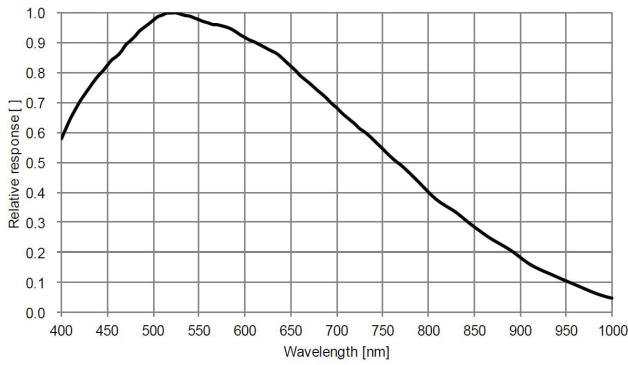
C640
C800
C1280
C1930
C2590



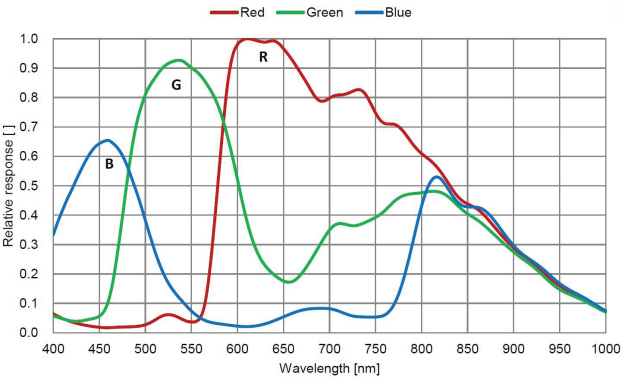
M640/NIR
M800/NIR
M1280/NIR
M2590/NIR
M1930/NIR

Spectral Sensitivity Characteristics

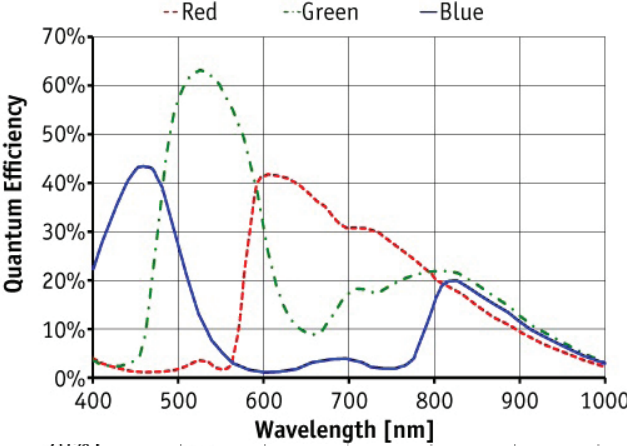
(Excludes lens characteristics and light source characteristics.)



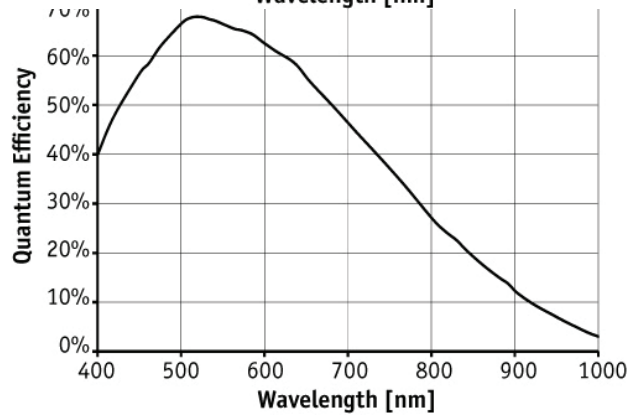
M4060
M4040
M2020
M2050
M2420
M2450



C4060
C4040
C2020
C2050
C2420
C2450



C1920
C1940



M1920
M1940