

GENIE NANO

POSSIBILITY



Genie™ Nano



Smaller, faster, stronger, cheaper.
Better in every way that matters.



GENIE NANO

POSSIBILITY

Built on a proven platform and a rich legacy of **performance** and **versatility**.

- » GigE Vision®
- » State-of-the-art CMOS sensors
- » Higher frame rates
- » Wider, deeper feature set
- » Small and robust quality build
- » Our lowest price ever



Powerful features. Accelerated system performance.

Fits Tight Spaces
44 mm × 29 mm × 21 mm

Slimmest body width available

Wide Temperature Range
-20 °C to 60 °C (housing)

Reliable in harsh environments

Versatile I/O
2 inputs + 2 opto-coupled outputs

Easy integration and deployment

TurboDrive
Up to 2x faster transmission

Achieve data rates beyond GigE
Vision limits

Super Light-Weight
46 grams

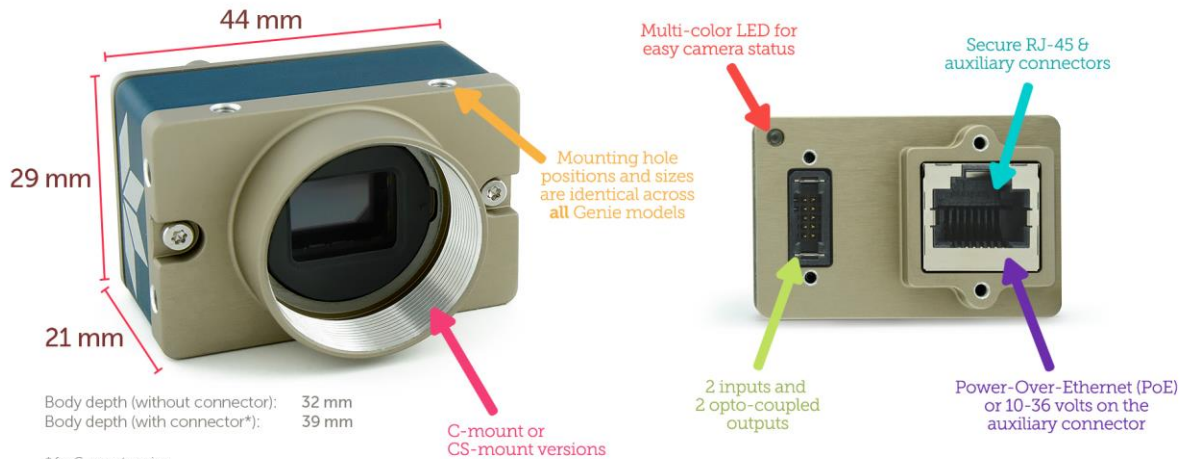
Ideal for UAV or robotics

Trigger-to-Image Reliability
System level track and trace

Protection from data loss and
improved reliability



Small package. Big functionality.



Introducing TurboDrive™

Break through the GigE limit.

TurboDrive technology allows Genie Nano to transfer full image quality at faster frame rates — with no changes to your GigE network.

- » Proprietary patent pending technology
- » Does not affect image integrity
- » Enabled through CamExpert, or through the Sopera LT API

Genie Nano with Sony IMX174	Standard	With TurboDrive
Actual fps received at computer	52 fps	84 fps*
Effective bandwidth received at computer	115 MB/s	184 MB/s

GIG
VISION



* Transfer speed with TurboDrive is image dependent. Refer to TurboDrive Primer on our web site.



Advanced Acquisition Features

(Firmware v1.0)



Multi-ROI Windows (in-sensor), up to 16 ROIs

- » Capture only the data you need – for increased throughput

Burst acquisition

- » Grab at the highest sensor rate to capture fast events

General purpose counter and timer

- » Centralize acquisition controls – never miss an event or strobe

Trigger-to-Image Reliability

- » Improved system reliability and customer confidence
- » Packet re-send statistics
- » Over-trigger event monitors
- » In-camera image accumulation count

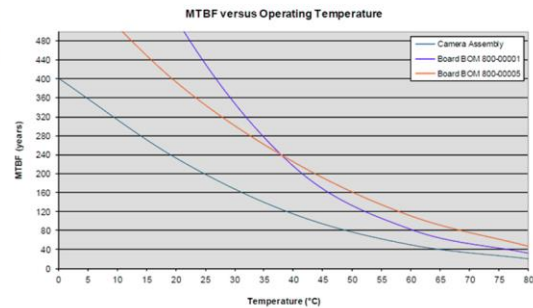


Built for **endurance** and **reliability**

A wide operating temperature range, from -20 to 60 °C (housing), helps extend camera life and increase system reliability.

CAMERA ASSEMBLY			
Temperatures	MTBF (hours)	MTBF (years)	Failure Rate*
0 °C	3514728	401.2	0.284517
20 °C	2040096	232.9	0.490173
40 °C	1005703	114.8	0.994329
60 °C	434538	49.6	2.301294
80 °C	177030	20.2	5.648757

* Failures / 10⁶ hours



CMOS Sensor Platform

SONY Pregius

IMX174 and IMX249 (2.3M), mono and color (1/1.2" sensor)

Future Deployment

- » IMX252 and IMX265 (3.2M), mono and color (1/1.8" sensor)
- » IMX250 and IMX264 (5.1M), mono and color (2/3" sensor)
- » All new Sony Pregius sensors

ON Semiconductor®



- » Python 0.3/0.5/1.3M mono, NIR, and color versions
- » Python 2.3/5.1M mono, NIR, and color versions
- » Aptina - mono/color (rolling shutter)



Features Roadmap

Multi-ROI Windows (FPGA based) for the IMX249

- » Capture only the data you need – increased throughput

Multi-Exposures in Cycling Mode

- » Improves image quality for better analysis

Auto-Brightness (AGC and Exposure)

- » Improves image quality in challenging lighting conditions

Color Enhancement

- » Improves image quality for better quality control

Multicast Feature

- » Commands and image distribution to simplify setup

Precise Time Protocol support

- » Simultaneously control multiple cameras



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www.teledynedalsa.com/genie-nano