

Requirements and Compatibility

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Basler pilot Cameras

GigE Vision Area Scan Cameras



- VGA to 5 MP resolution options with CCD sensors
- Capture rate up to 210 fps
- GigE Vision provides up to 100 m cable lengths for maximum flexibility
- Up to 1 Gbit/s GigE Vision interface
- 2 optoisolated inputs and 4 optoisolated outputs
- Compatibility with NI-IMAQdx high-performance GigE Vision driver for Windows and real-time OS

Overview

Basler is a leading global manufacturer of digital cameras for industrial applications, medical devices, traffic systems, and the video surveillance market.

Basler pilot cameras offer excellent image quality that rivals more expensive cameras and a flexible, high-performance interface.

GigE Vision is a widely adopted camera interface that leverages standard, inexpensive cables and hardware for easy implementation. The GigE Vision standard offers the most flexibility, with long cable lengths up to 100 m, and the ability to connect multiple cameras to a single port using network hubs.

NI-IMAQdx, a high-performance GigE Vision driver (part of NI Vision Acquisition Software), is optimized for Intel Pro 1000 chipsets to help you reduce CPU loads when acquiring from GigE cameras. For the best experience, you can use GigE Vision cameras with the powerful stand-alone NI Embedded Vision System and NI GigE Vision plug-in boards.

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Driver Information

- NI-IMAQdx

Software Compatibility

- LabVIEW Vision Development Module
- NI Vision Builder for Automated Inspection

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Application and Technology

Basler pilot Camera Specifications

Basler pilot Cameras	Resolution (H x V pixels)	Sensor	Sensor Technology	Sensor Size (optical)	Pi (m)
piA640-210gm/gc	648 x 488	Kodak KAI-0340	1/3 in.	Progressive Scan CCD, global shutter	7.4
piA1000-48gm/gc	1004 x 1004	Kodak KAI-1020	2/3 in.	Progressive Scan CCD, global shutter	7.4
piA1000-60gm/gc	1004 x 1004	Kodak KAI-1020	2/3 in.	Progressive Scan CCD, global shutter	7.4

piA1600-35gm/gc	1608 x 1208	Kodak KAI-2020	1 in.	Progressive Scan CCD, global shutter	7.4
piA1900-32gm/gc	1928 x 1084	Kodak KAI-2093	1 in.	Progressive Scan CCD, global shutter	7.4
piA2400-17gm/gc	2456 x 2058	Sony ICX625	2/3 in.	Progressive Scan CCD, global shutter	3.4

Additional Specifications for pilot Cameras

Mono/Color	Mono/Color
Interface	Gigabit Ethernet
Video Output Format	Mono 8:8 bits/pixel, Mono 16:12 bits/pixel, YUV 4:2:2:16 bits/pixel Raw 8:8 bits/pixel (R, G, or B), Raw 16:12 bits/pixel (R, G, or B) and Packed formats
Synchronization	Via external signal or free run
Exposure Control	Edge-controlled, level-controlled, or programmable
Housing Size (L x W x H)	86.7 mm x 44 mm x 29 mm
Housing Temperature	Up to 50 °C
Lens Mount	C-mount
Digital I/O	2 optoisolated input ports, 4 optoisolated output ports
Power Requirements	12 to 24 VDC; via Hirose 12-pin connector (max. 10 m cable length)
Conformity	CE, FCC, RoHS, IP30

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Support and Services

System Assurance Programs

NI system assurance programs are designed to make it even easier for you to own an NI system. These programs include configuration and deployment services for your NI PXI, CompactRIO, or Compact FieldPoint system. The NI Basic System Assurance Program provides a simple integration test and ensures that your system is delivered completely assembled in one box. When you configure your system with the NI Standard System Assurance Program, you can select from available NI system driver sets and application development environments to create customized, reorderable software configurations. Your system arrives fully assembled and tested in one box with your software preinstalled. When you order your system with the standard program, you also receive system-specific documentation including a bill of materials, an integration test report, a recommended maintenance plan, and frequently asked question documents. Finally, the standard program reduces the total cost of owning an NI system by providing three years of warranty coverage and calibration service. Use the online product advisors at ni.com/advisor to find a system assurance program to meet your needs.

Calibration

NI measurement hardware is calibrated to ensure measurement accuracy and verify that the device meets its published specifications. To ensure the ongoing accuracy of your measurement hardware, NI offers basic or detailed recalibration service that provides ongoing ISO 9001 audit compliance and confidence in your measurements. To learn more about NI calibration services or to locate a qualified service center near you, contact your local sales office or visit ni.com/calibration.

Technical Support

Get answers to your technical questions using the following National Instruments resources.

- **Support** - Visit ni.com/support to access the NI KnowledgeBase, example programs, and tutorials or to contact our applications engineers who are located in NI sales offices around the world and speak the local language.
- **Discussion Forums** - Visit forums.ni.com for a diverse set of discussion boards on topics you care about.
- **Online Community** - Visit community.ni.com to find, contribute, or collaborate on customer-contributed technical content with users like you.

Repair

While you may never need your hardware repaired, NI understands that unexpected events may lead to necessary repairs. NI offers repair services performed by highly trained technicians who quickly return your device with the guarantee that it will perform to factory specifications. For more information, visit ni.com/repair.

Training and Certifications

The NI training and certification program delivers the fastest, most certain route to increased proficiency and productivity using NI software and hardware. Training builds the skills to more efficiently develop robust, maintainable applications, while certification validates your knowledge and ability.

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OEM

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Alliance

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