

Requirements and Compatibility

For user manuals and dimensional drawings, visit the product page resources tab on ni.com.

Last Revised: 2014-11-06 07:15:02.0

Basler sprint Cameras



- 2k, 4k, and 8k resolution options using the Basler CMOS sensor
- Line rates up to 140 kHz
- Camera Link provides minimum delay and jitter times for applications that require strict timing
- Camera Link full configuration carries over 5.4 Gbit/s
- Synchronization via external signal or free run
- Pair with the NI PCIe-1433 or NI PXIe-1435 for optimum performance

Overview

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

Basler sprint cameras are designed for applications involving high sensitivity, excellent image quality, and the highest speeds, such as web and surface inspection and optical coherence tomography. With this speed and image quality, you can increase efficiency and throughput in many vision applications.

Camera Link is the ideal interface for applications that require determinism, throughput, and inspection speed. NI offers a wide range of frame grabbers that support Camera Link and feature superior performance using the NI-IMAQ driver, which is part of NI Vision Acquisition Software.

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Driver Information

- NI-IMAQ

Software Compatibility

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

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Application and Technology

Basler sprint 4k Pixel Camera Specifications

Basler sprint Camera	Sensor Size (pixels per line)	Sensor Type	Mono/Color	Camera Link Pixel Clock	Max. Data Speed	Max. Line Rate	Video Output Format (taps)	Weight
spL4096-39km	4096	Dual Line CMOS	Mono	40/80 MHz	160 MHz	38.6 kHz	2/4	360 g
spL4096-39kc	4096	Dual Line CMOS	Color	40/80 MHz	320 MHz	38.6 kHz	2/3/4/6/8	360 g
spL4096-70km	4096	Dual Line CMOS	Mono	40/80 MHz	320 MHz	70 kHz	2/4/8	360 g
spL4096-70kc	4096	Dual Line CMOS	Color	40/80 MHz	640 MHz	70 kHz	2/3/4/6/8	360 g
spL4096-140km	4096	Dual Line CMOS	Mono	40/80 MHz	640 MHz	140 kHz	2/4/8	360 g

Additional Specifications for All 4k Pixel Cameras

Pixel Size	10 m x 10 m
Pixel Depths	Selectable 8-bit, 10-bit, or 12-bit
Synchronization	Via external signal or free run
Exposure Control	Edge-controlled, level-controlled, or programmable
Housing Size (L x W x H)	48 mm x 87 mm x 62 mm
Housing Temperature	Up to 50 °C
Lens Mounts	F-mount, M42
Power Requirements	12 VDC ($\pm 10\%$), maximum 10.0 W @ 12 VDC
Conformity	CE, FCC, RoHS

Basler sprint 8k Pixel Camera Specifications

Basler sprint Camera	Sensor Size (pixels per line)	Sensor Type	Mono/Color	Camera Link Pixel Clock	Max. Data Speed	Max. Line Rate	Video Output Format (taps)	Weight
spL8192-39kc	8192	Dual Line CMOS	Color	40/80 MHz	640 MHz	38.6 kHz	2/3/4/6/8	580 g
spL8192-70km	8192	Dual Line CMOS	Mono	40/80 MHz	640 MHz	70 kHz	2/4/8	580 g

Additional Specifications for All 8k Pixel Cameras

Pixel Size	10 m x 10 m
Pixel Depths	Selectable 8-bit, 10-bit, or 12-bit
Synchronization	Via external signal or free run
Exposure Control	Edge-controlled, level-controlled, or programmable
Housing Size (L x W x H)	49 mm x 102 mm x 102 mm
Housing Temperature	Up to 50 °C
Lens Mounts	V-92 mount for specific lens mount adapter
Power Requirements	12 VDC ($\pm 10\%$), max 10.0 W @ 12 VDC
Conformity	CE, FCC, RoHS

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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.

- **Classroom training in cities worldwide** - the most comprehensive hands-on training taught by engineers.
- **On-site training at your facility** - an excellent option to train multiple employees at the same time.
- **Online instructor-led training** - lower-cost, remote training if classroom or on-site courses are not possible.
- **Course kits** - lowest-cost, self-paced training that you can use as reference guides.
- **Training memberships** and training credits - to buy now and schedule training later.

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Extended Warranty

NI offers options for extending the standard product warranty to meet the life-cycle requirements of your project. In addition, because NI understands that your requirements may change, the extended warranty is flexible in length and easily renewed. For more information, visit ni.com/warranty.

OEM

NI offers design-in consulting and product integration assistance if you need NI products for OEM applications. For information about special pricing and services for OEM customers, visit ni.com/oem.

Alliance

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