



## Datasheet Zinc3265 PCIe

### Zinc3265 PCIe

65.4 Megapixel Small, Rugged,  
Low Power with Large Feature Set

#### Innovative Approach

**Zinc3265 PCIe** is an ultra-thin high speed, low-cost, low-power Global shutter CMOS camera with a Gen3 PCIe interface supporting up to 4 lanes over Samtec high speed connector/cable which supports 65.4 Megapixel high quality video at rates up to 50.0 fps.

#### Intelligent Design

With an extremely compact form factor, the **Zinc3265 PCIe** fits into small spaces. The superior sensor performance provides high quality images with great dynamic range, low noise and excellent low-light vision capabilities.

#### Key Features:

- 65.4 Megapixel up to 50.0 fps
- Monochrome and Color sensor variation
- Up to 15 W power at full rate
- Full image processing feature set
- PCI Express Gen 4 standard compliant
- Gen<i>Cam compliant
- Up to 4 PCI Express links
- F, M42, EF or Active EF lens mounts available
- Commercial and Industrial grade options
- Full EMVA1288 report
- Full built-in self-test (BIT)
- Full built-in voltage testing
- Customization as per user requirements

#### Applications:

- Flat Panel Inspection
- PCB Inspection
- Security & Surveillance
- UAV
- Machine Vision
- Robotics
- Microscopy & Medical Imaging
- Space

# TECHNICAL DATA

General	
Pixel Size	3.2 $\mu\text{m}$ x 3.2 $\mu\text{m}$
Resolution	9344 (H) x 7000 (V)
Sensor Size	37.4 mm diagonal
Sensor	Gpixel GMAX3265
Sensor Type	CMOS
Output Interface	PCI Express Gen 4
Supported Interface rates	Gen 1, Gen 2 or Gen 3
Interface Connector	Samtec
Number of Connectors	4
Output Resolution	8, 10 or 12 bit
Maximum Frame Rate	High Speed Version <ul style="list-style-type: none"> <li>• 50 fps @8 bit resolution</li> <li>• 40 fps @10 bit resolution</li> </ul> Normal Speed Version <ul style="list-style-type: none"> <li>• 31 fps @8 bit resolution</li> <li>• 31 fps @10 bit resolution</li> <li>• 31 fps @12 bit resolution</li> </ul>
Tap Geometry	1X-1Y
Image Acquisition	Continuous / Triggered
Camera Control	Gen<i>Cam
Electronic Shutter	Global
Monochrome / Color	Monochrome or Color
Temporal Noise	<2.3 e- at 25 °C
Full Well Charge	10900 e-
Dynamic Range	>65 dB at 520 nm
Signal-to-Noise Ratio (SNR max)	38.1 dB at 520 nm
Quantum Efficiency (QE)	>65.3% at 520 nm
Shortest Exposure	13.35 $\mu\text{s}$
IR Filter (optional)	<ul style="list-style-type: none"> <li>• UV cut below 400 nm</li> <li>• IR cut above 700 nm</li> </ul>
Exposure control	Automatic/Manual
Gain control	Automatic/Manual
Color Control	<ul style="list-style-type: none"> <li>• RGB offsets</li> <li>• Auto / Manual White balance</li> <li>• LUT</li> </ul>
Image enhancement	<ul style="list-style-type: none"> <li>• Defect pixel correction</li> <li>• Gain (Analog / Digital)</li> <li>• Auto / Manual black level</li> <li>• Binning</li> <li>• Auto Exposure / Gain</li> <li>• Flat field / Fixed pattern noise correction</li> </ul>

Additional on camera processing	<ul style="list-style-type: none"> <li>• ROI</li> <li>• Image flip</li> <li>• Frame counter</li> <li>• Operational Time Counter</li> <li>• Binning</li> </ul>
Power Input	• External 10 V - 28 V input
Power Consumption	<15 W at 24 V DC
Configuration software	Gen<i>Cam Standard software
Synchronization	Protocol/External I/O Trigger
Exposure Strobe output	Yes

Mechanical	
Dimensions (including lens mount)	62 mm x 62 mm x 44.4 mm (2.4" x 2.4" x 1.7")
Weight (without lens)	450 g (15.9 oz)
Lens Mount	F, M42, EF or Active EF
Sensor Alignment	Active
Ingress Protection	Optional IP67 (with protective lens tube)

Environmental Conditions	
Operating ambient air temperature	Commercial : 0°C to +50°C ( 32°F to +122°F) Industrial : -40.0°C to +70°C ( -40°F to +158°F)
Operating ambient air humidity	10% to 90% RH non-condensing
Storage ambient air temperature	Commercial : 0°C to +55°C ( 32°F to +131°F) Industrial : -40.0°C to +75°C ( -40°F to +167°F)
Storage ambient air humidity	10% to 90% RH non-condensing
Operational Shock	Tested per MIL-STD-810G Method 516.6, 3-axis Shock 75G
Operational Vibration	Tested per MIL-STD-810G Method 514.6, 3-axis Vibration Category 20
MTBF	1,600,000 hrs @ 50C (Telecordia)

Certifications	
Electromagnetic - EMC standards	<ul style="list-style-type: none"> <li>• The European Council EMC Directive 2004/108/EC</li> <li>• The Unites States FCC rule 47 CFR 15</li> </ul>
EMC - Emission	<ul style="list-style-type: none"> <li>• EN 55022:2010 Class B</li> <li>• FCC 47 Part 15 Class B</li> </ul>
EMC - Immunity	<ul style="list-style-type: none"> <li>• EN 55024:2010 Class B</li> <li>• EN 61000-4-3</li> <li>• EN 61000-4-4</li> <li>• EN 61000-4-6</li> </ul>
Flammability	PCB compliant with UL 94 V-0
RoHS	Compliant with the European Union Directive 2011/65/EU (RoHS2)
REACH	Compliant with the European Union Regulation No 1907/2006

WEEE

Must be disposed of separately from normal household waste and must be recycled according to local regulations

# Zinc3265HSM-SF

Speed
– Normal Speed
HS – High Speed

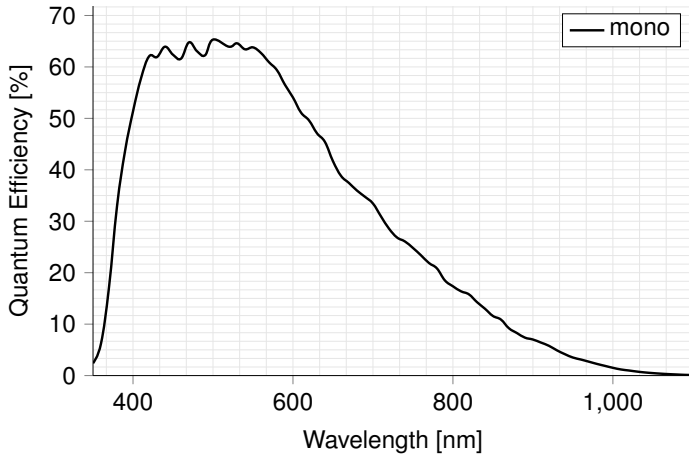
Color options
M – Monochrome
I – Mono with IR Filter
N – Color w/o IR Filter
C – Color

Grade
S – Commercial
R – Industrial

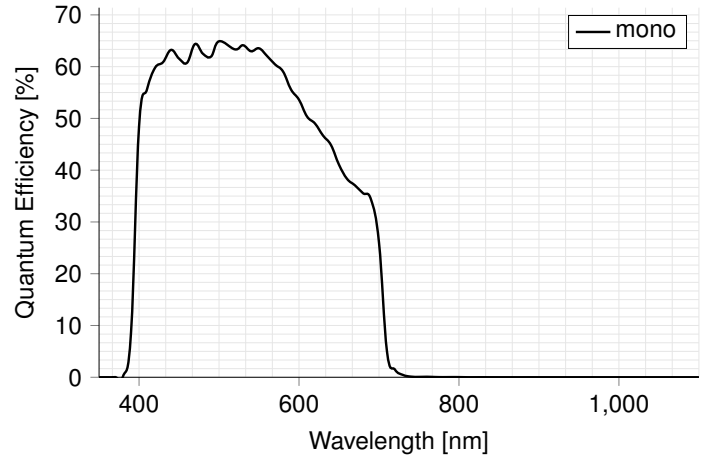
Lens mount
F – Nikon F-Mount
M – M42-Mount
E – Canon EOS-Mount
B – Active Canon Mount

# SPECTRAL RESPONSE

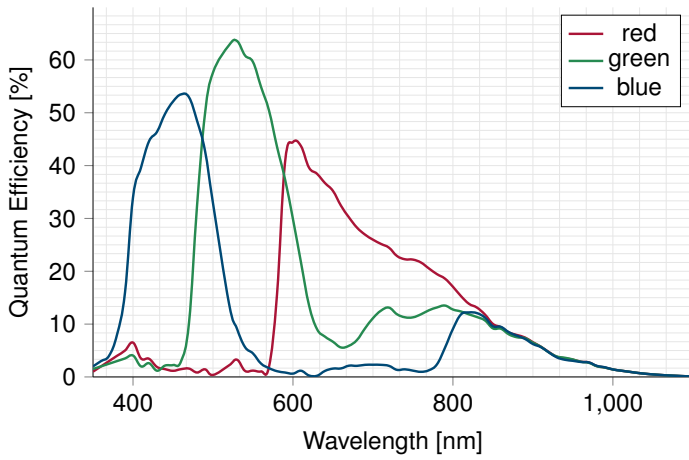
## Monochrome



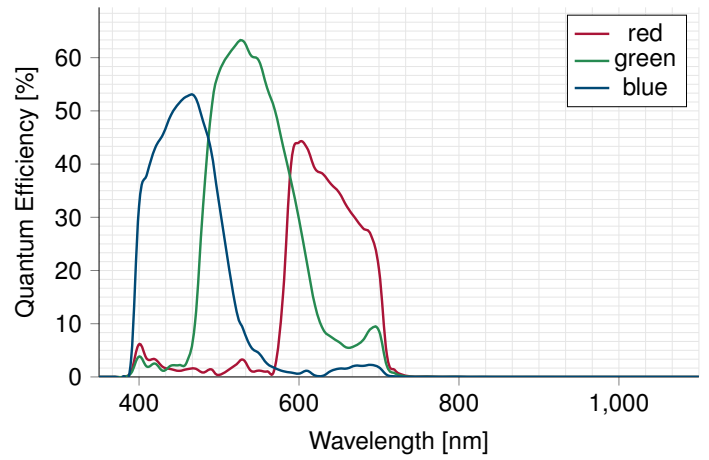
## Monochrome with IR Cut Filter



## Color



## Color with IR Cut Filter



# COMPATIBILITY

**KAYA Instruments** creates and maintains compatibility and interfaces for the most common and advanced vision image processing libraries and applications. Major support is available for **MVTec Halcon**, **National Instruments' LabVIEW** and **MathWorks' MATLAB**.

Supported vision standards:



Supported vision libraries:



Supported operating systems:



*Please check our website for an up-to-date list of other supported libraries and software package.*

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## KAYA Instruments

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