

# Accurate Megapixel Camera Solutions

Enabling superior image quality with lower system costs



**ONYX family**  
**GiGE™**  
VISION

## Description

The ONYX family of CCD cameras offer an unprecedented combination of Adimec's superior image quality and fast frame rates with the flexibility and cost effectiveness of Gigabit Ethernet. Designed to be highly reliable in consistent image quality with the versatility of GiGE, the ONYX family ensures low maintenance costs and easy integration.

Using the platform approach to provide standard electrical, optical, and mechanical interfaces, easy upscaling can be achieved while having the ability to make the internal firmware unique and tailored to fit your applications. The state-of-the-art sensor technology combined with Adimec's advanced proprietary electronics provide excellent linearity over the full dynamic range through optimized embedded video processing.

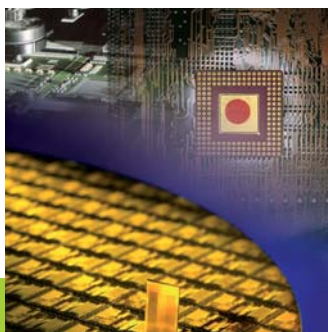
The ONYX family allow high-end OEM systems to meet the needs to be unrivaled in ingenuity, throughput, measurement accuracy and flexible interfacing.

## Key specifications

- 1 and 2 Megapixel resolutions, higher resolutions planned
- 62 dB dynamic range with exceptional linearity over full range
- Flexible interfacing using GiGE
- Unparalleled image quality with industry-leading channel matching
- Unrivaled image quality over full temperature range
- Burst mode for frame speeds up to 120 fps @ 1 Mega pixel
- World-class accuracy and repeatability

## Applications

- Semiconductor manufacturing
- Factory automation
- Electronics manufacturing
- Intelligent Traffic Systems
- Metrology



## Adimec

Adimec designs and manufactures cameras for OEM customers with demanding applications whose goal is to be a product leader in their market. Unlike competitors who are offering general-purpose cameras, our products and support are focused to offer the benefits the OEMs need to be ahead.

**Adimec**

[www.adimec.com](http://www.adimec.com)

## Specifications ONYX family

	ONYX-1000	ONYX-1600	ONYX-2000
Sensor	1/2" Interline CCD with	2/3" Interline CCD with	
Pixel size	5.5 µm square pixels		
Resolution	1024 x 1024 (1M)	1600 x 1200 (2M)	1920 x 1080 (2M)
Frame Rate	60 fps @ full resolution	34 fps @ full resolution	32 fps @ full resolution
Sensitivity	5.6 Lux (Mono.), 12.6 Lux (Color) @ 33 ms Integration time, 1 x gain		
Readout Noise / Full Well Capacity	14 e <sup>-</sup> / 18 ke <sup>-</sup>		
Dynamic Range	62 dB		
Defect Pixel Correction	Selectable on/off		
Blooming Protection	300x		
Smear	-100 dB		
Electronic Shutter	Global		
Gain	Selectable between 1x and 32x in steps of 0.01		
Image Acquisition	Continuous - Control Delayed Transfer* - Double Transfer* - Delayed Double Transfer*		
Vertical Binning	2x, 4x* and 8x*		
Video Output	GigE Vision		
Monochrome/ Color	Available in Monochrome and color (Bayer RGB)		
Output Resolution	Selectable 8, 10 and 12 bit		
I/O Interface	Programmable strobe output and trigger input		
Power Input	10.2 - 27.6 Vdc		
Power Dissipation	5.1 W @ 12 Vdc	< 8 W @ 12 Vdc	
Operating Temperature	-10°C to +50°C		
EMC / EMI	EN61000-6-3 and EN61000-6-2		
Sensor Position	Factory aligned and stable		
Testing	100% Factory test on all specifications		
Reliability	MTBF > 75,000 h		
Compliance	CE, RoHS		

All specifications are typical at 25°C - Subject to change without notice - Detailed information on request.

\* Optional

### Unique Camera feature

- GigE Vision Interface
- Member of camera product platform
- 14 bit ADC and channel matching down to sub LSB level
- Extremely low read noise
- Horizontal and vertical image flip
- Tight tolerances combined with 100% factory testing
- Excellent anti-blooming and smear characteristics

### System Benefits

- Allows maximum interface flexibility and reduction of overall system costs
- Allows tailored solutions for qualified OEMs
- Highest image quality under all challenging conditions
- Higher accuracy at lower light levels
- Greater flexibility in camera orientation
- Provides greater reliability, easier OEM integration and improves OEM system matching
- Reliable image capturing even with bright light sources

The ONYX family will allow high-end systems to use the scalability and flexibility of GigE without sacrificing performance or image quality, even at high frame speeds. With Adimec's proprietary electronics and military-grade durability, the ONYX family is an addition to the Adimec's successful portfolio of high performance 1-4 megapixel cameras that has a unique combination of speed, image quality, and reliability allowing OEMs to benefit worldwide.

Adimec has the ability to offer additional camera functionality and create customer special cameras for qualified OEM programs.

**For maximum image quality, performance, and reliability in demanding applications - Choose Adimec**

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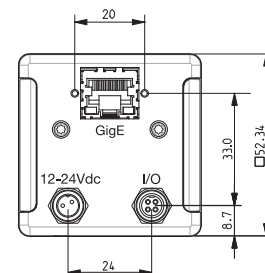
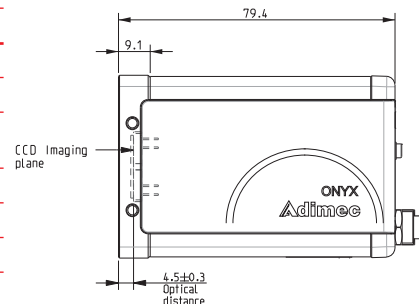
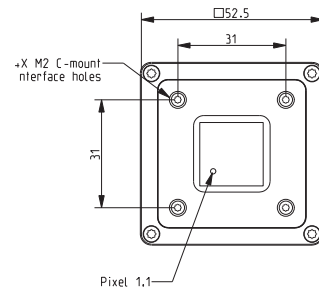
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### Adimec

Adimec is a leading worldwide supplier of high performance, innovative, and reliable camera products for use in:

- Machine Vision
- Medical Imaging
- Military Targeting and Observation

Adimec's mission is to serve leading OEMs around the world who value quality and reliability as essential to their success.

Contact us today to find out why top corporations rely on Adimec.

