

# Fetura+<sup>TM</sup> Advanced Zoom Lens System

High-Performance, High Speed



# The Fetura+ Advantage

**Fetura+ Advanced Zoom Lens** is the culmination of over 30 years of research, design and engineering, resulting in the performance apex of optical zoom lens technology. Featuring self-contained electronics, direct-drive linear rail technology and unparalleled high-performance image quality. The Fetura+ is the ideal solution for nearly all high-end zoom applications.

## Unrivaled Accuracy, Precision and Durability

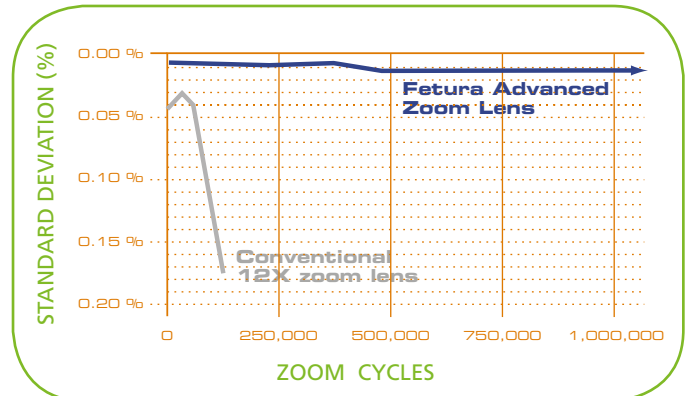
The novel linear rail design and robust engineering ensure consistent repeatability guaranteed for over 1-million zoom cycles. The direct-drive encoded drive mechanism eliminates positional deviations, consistently providing unmatched accuracy and precision over the complete product lifetime.

02



## 9-Times Longer Service Life = Added Value

Fetura+ robust engineering translates to an extended service life well beyond 1-million zoom cycles... a feat that would exhaust as many as nine conventional motorized zoom lenses\*. This extreme durability results in an operational cost nearly 1/3 that of conventional motorized zoom solutions and guarantees maximum operational uptime, reduced servicing, and most importantly customer satisfaction.



MAGNIFICATION REPEATABILITY\*

\* Results of comparative service life testing of Fetura and conventional 12X motorized zoom lenses.



PRECISION IN ANY ORIENTATION

## Compatibility with Optem FUSION

Optem FUSION is the most versatile Zoom System on the market with unrivaled flexibility, providing OEMs with an off-the-shelf solution for nearly any micro-imaging application. Optem FUSION offers magnifications of 0.045X up to 41X across a wide range of working distances and supports a multitude of accessories for focusing, illumination and motorization in addition to support for nearly all camera mounts on the market. Existing FUSION systems with motorized zooms can be upgraded by simply exchanging the zoom with a Fetura+.



# FETURA+™

ADVANCED ZOOM IMAGING

## Unmatched Zoom Speed

The unique synchronized linear rail mechanism enables the Fetura+ to propel the zoom across its entire 12.5:1 zoom range in under 1 second. This unprecedented optomechanical speed removes the zoom-imaging bottleneck and makes Fetura+ the ultimate solution for the growing demands of high throughput machine vision.

## Streamlined Integration

With integrated control electronics and a rich intuitive software command set, the Fetura+ facilitates near plug and play integration. Combined with a standard RS-232 interface and industrial grade connectors, the Fetura+ reduces development cycles when time-to-market is critical.

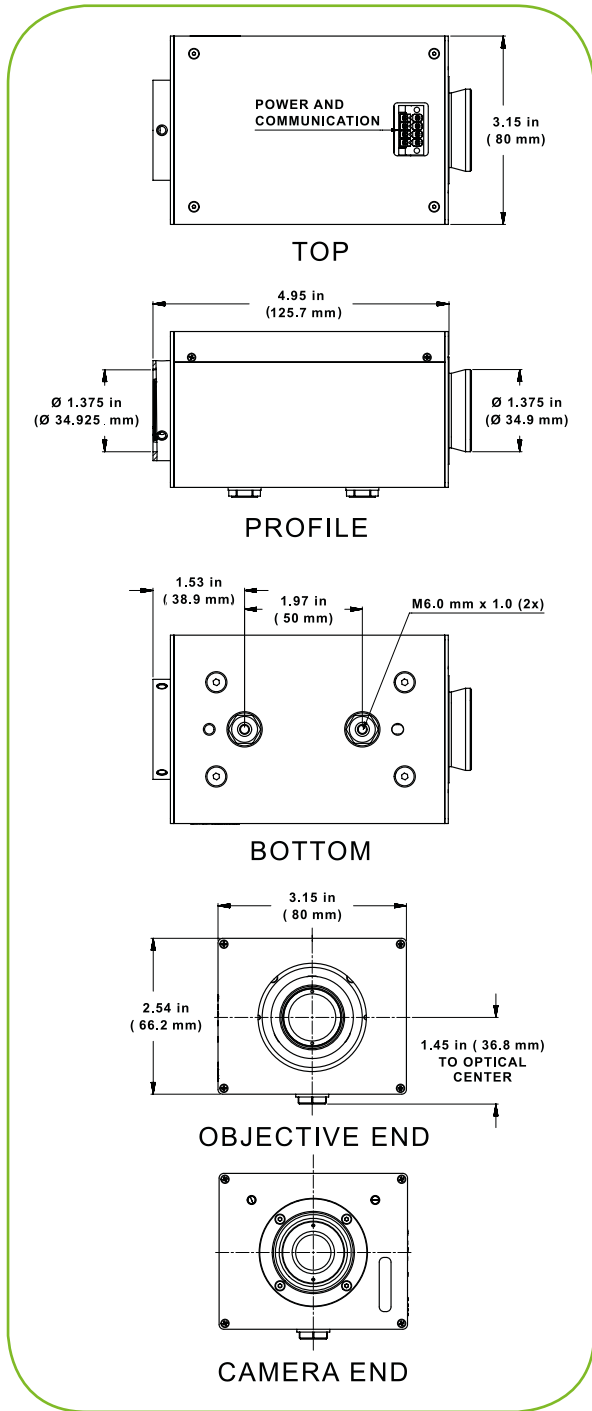
## Specifications <sup>1)</sup>

Optical	
Focal length	afocal
Operating wavelength range	400 nm to 700 nm
Zoom range	12.5:1
Magnification <sup>2)</sup>	0.52 to 6.5 ± 5 %
Resolution <sup>3)</sup> (low magnification) <sup>2)</sup>	58 lp/mm
Resolution <sup>3)</sup> (high magnification) <sup>2)</sup>	300 lp/mm
Optical distortion <sup>2)</sup>	< 3 %
Numerical aperture (low magnification)	0.02
Numerical aperture (high magnification)	0.1
Mechanical	
Zoom mechanism	Direct drive DC encoded (patent pending)
Lateral wander <sup>2)</sup>	42 µm
Repeatability	
Center repeatability (low magnification) <sup>2)</sup>	< 2 µm
Center repeatability (high magnification) <sup>2)</sup>	< 4 µm
Magnification repeatability (low magnification) <sup>4)</sup>	0.02 %
Magnification repeatability (high magnification) <sup>4)</sup>	0.06 %
Lifetime	> 1,000,000 cycles
Physical	
Height x Width x Depth	136 mm x 80 mm x 67 mm
Weight	< 1 kg
Environmental <sup>1)</sup>	
Operating temperature	10 °C to 40 °C
Storage temperature	-25 °C to 60 °C
Communication	
Protocol	RS-232
Power supply	20-28 V (DC)

<sup>1)</sup> See manual for complete product specifications  
<sup>2)</sup> At image plane with 1X camera tube and 2X lower lens  
<sup>3)</sup> On axis  
<sup>4)</sup> ΔTemperature < 2 °C



OPTEM FUSION ZOOM SYSTEM



## Your Key to Photonic Innovation...

Qioptiq serves a wide variety of applications across the industrial manufacturing sector. With a rich history of delivering innovative photonic components, modules and instruments to integrators, engineers and OEMs, we also offer custom-tailored photonic solutions to maximize the potential and capabilities of tomorrow's many processes and industrial manufacturing systems.

## ...and Manufacturing Advancement

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