

MicroVista[®] M716 VisNIR Low-Light CMOS Cameras



M716-01



M716-02



M716-03

MicroVista[®] M716 cameras represent EOTECH's next-generation high-performance CMOS sensor technology. With high sensitivity in the visible (Vis) and near-infrared (NIR) bands, and with NIR enhancement that extends the spectral range to 1060 nm, the back-illuminated CMOS sensor supports up to a 1280 x 1280 image format with 9.117 μm square pixels at up to 120 frames per second (fps). With excellent sensor full-well capacity (>100 dB) and low noise (2.6 e⁻), combined with its 16-bit maximum pixel depth, M716 cameras deliver outstanding intra-scene dynamic range. The cameras include a local tone mapping (LTM) algorithm to improve low light region visibility in high dynamic range scenes.

The M716 camera line includes the following configurations, all with the same CMOS imager:

- **M716-01:** MIPI Camera with a fixed lens, 65° H x 40° V FoV, 1280 x 840 image format, maximum 90 fps, ICD documentation available for integration
- **M716-02:** MIPI Camera with a C-Mount lens receptacle, 1280 x 1280 image format, maximum 120 fps, ICD documentation available for integration
- **M716-03:** USB-C Camera with a C-Mount lens receptacle, 1280 x 1280 image format, maximum 90 fps, GUI software (MS Windows based)

The M716-01 and M716-02 cameras are ideal for integration into multi-sensor suites, EO payloads, or other applications requiring VisNIR imaging capabilities. Exceptional performance, small form factor, and low power consumption make the M716 cameras ideal for a broad range of applications.

ORDER INFORMATION

M716-01 65 Deg MIPI Camera **301523-01**

M716-02 C-Mount MIPI Camera **301820**

M716-03 C-Mount USB-C Camera **302101**

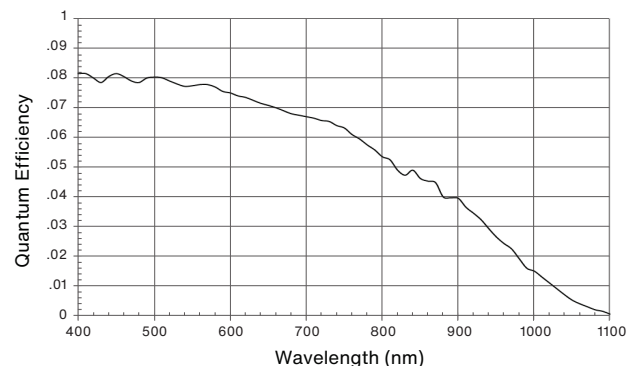
APPLICATIONS

- Surveillance and perimeter security
- Military night operations
- Gimballed multi-sensor suites
- Particle counting and measuring
- Spectroscopy
- Microscopy
- Biometrics
- Medical imaging

FEATURES / BENEFITS

- High visible and NIR sensitivity: 400 nm - 1060 nm
- High dynamic range, low noise performance
- Frame rate up to 120 fps for full-frame (1280 x 1280) video

M716 QE VS. WAVELENGTH



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MicroVista[®] M716 VisNIR Low-Light CMOS Cameras

TECHNICAL SPECIFICATIONS

	M716-01 65 Deg MIPI Camera	M716-02 C-Mount MIPI Camera	M716-03 C-Mount USB-C Camera
IMAGE SENSOR	Back-illuminated CMOS, optimized for NIR response		
PIXEL SIZE	9.117 μm square		
IMAGE FORMAT	1280 × 840	1280 × 1280	
SPECTRAL RESPONSE	400 nm - 1060 nm		
NOISE	2.6 e- read noise, 50 e-/pixel/s dark current @ 25°C, integrated fixed pattern noise reduction		
DYNAMIC RANGE	> 100 dB		
DIGITAL OUTPUT BIT DEPTH	8, 12, 16 bits		8, 16 bits
FIELD OF VIEW	65° horizontal × 40° vertical	N/A	
LENS F/#	f/1.25	N/A	
LENS MOUNT	N/A	C-Mount	
SHUTTER TYPE	Rolling shutter		
POWER CONSUMPTION	1.3 W @ 90 fps and 8-bit output		1.4 W @ 90 fps and 8-bit output
DIMENSIONS	25 × 25 × 32mm including lens, 36.4mm flange diameter including alignment ears	45.72mm diameter x 27.31mm including lens receptacle	45.72mm diameter x 41.95mm including lens receptacle
WEIGHT	30g	27g without chassis nut 44g with chassis nut	65g without chassis nut 81g with chassis nut
MOUNTING HOLE DIAMETER, FASTENER	26.5mm through-hole, supplied chassis nut (M25 x 0.7)	30.4mm through-hole, supplied chassis nut (M30 x 1.5)	
ALIGNMENT FEATURE	Chassis Alignment Ears / Slot @ 12:00 Position		
OPERATING TEMPERATURE	-40°C to +65°C		
OUTPUT SIGNAL FORMAT	4-lane CSI-2 MIPI		USB-C
INCLUDED DOCUMENTATION	Interface Control Document (ICD)		Camera Operating Manual, GUI Operating Manual
INCLUDED SOFTWARE	N/A		MS Windows GUI

NOTE: These commodities are controlled by the U.S. Export Administration Regulations and may not be transferred in contravention thereof.

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