

Ultra-high quality data:

Ultra low dark current. Ultra low noise. High-speed acquisition.
Full dynamic range.

MityCCD is a family of high-performance scientific cameras built for the most demanding OEM applications. Configurable, programmable, customizable, the MityCCD utilizes key technologies that combine to deliver the highest value possible.

- Low noise analog front-end electronics are well matched to the target sensors and deliver a very low noise signal.
- A digital subsystem consists of a 16-bit ADC, USB and Ethernet communication interfaces, and a high-performance CPU engine.
- Maintenance-free vacuum chamber and TE cooling for low dark current.
- Selection of mechanical enclosures that fit many environments.

If our standard offerings do not meet your specific requirements, Critical Link can configure and customize our key technologies to quickly deliver a fully custom solution.

Ready to go with a wide range of built-in sensors:

- Back Illuminated
- Front illuminated
- Deep Depletion
- Open Electrode
- InGaAs

Ready to configure: with your choice of sensor. Create a custom camera with all the benefits of MityCCD by integrating almost any sensor with Critical Link's camera platform

In addition to the MityCCD cameras, Critical Link has just introduced the MityCAM (CMOS sensor) for machine vision applications.

MityDSP™ Onboard!

All cameras have MityDSP™ – an embedded CPU platform – onboard, enabling your application to run complex and demanding applications directly on the camera, without having to transport data to an external host.

Unlike most cameras available for the OEM market today, with the MityCCD, your camera is fully configurable at the software level.

Optimized for the most demanding OEM applications:

- Raman Spectroscopy
- Spectro-photometry
- Low-light Imaging
- Portable Scientific Imaging
- Semiconductor Inspection
- DNA Sequencing



Cameras covering the full light spectrum – and the full price-performance spectrum.

FEATURES		BENEFITS		CAMERA TYPE		
				E	H	S
On-board Processing						
On-board CPU		Deploy your application directly on the camera		✓	✓	✓
Full featured SDK		Supports rapid application development		✓	✓	✓
Sensor Chamber						
Evacuated Chamber		High performance cooling, permanent, maintenance free		✓		
Hermetically Sealed		Factory sealed sensors to avoid condensation			✓	✓
TE Cooling (from 20 °C ambient)						
-40 °C		Standard: TE cooled to -40 °C for reduced dark current		✓		
-15 °C		Standard TE: cooled to -15 °C for reduced dark current			✓	
-10 °C		Standard TE cooled to -10 °C for reduced dark current				✓
-25 °C		Optional: TE cooled to -25 °C for reduced dark current			○	
-40 °C		Optional: TE cooled to -40 °C for reduced dark current				○
Spectral Response						
UV		Usable from 200 nm to 1000 nm		○		
Visible		Usable from 350 nm to 1000 nm		○	○	
NIR		Usable to >1000 nm without significant etaloning		○	○	
IR		Usable from 800 nm to 1.7 um (InGaAs)				✓
Data Acquisition and Binning Modes						
On-chip Binning		Fastest read-out rates and best SNR		✓	✓	
Area Mask Binning		Pixel by pixel binning to prevent non-linear optical artifacts		✓	✓	✓
Multiple Binning Patterns		Allows continuous changing of binning patterns for optimal binning from frame to frame (e.g. changing illumination)		✓	✓	✓
Digital Binning		Increase output dynamic range via digital integration up to 32 bits		✓	✓	✓
Communications Options						
USB 2.0		Provides high speed access to local PC		✓	✓	✓
Ethernet		Operates camera using standard 10/100 Mbit network equipment		✓	✓	✓
Digital I/Os		Control external devices such as shutters, lasers, etc. as well we external triggering		✓	✓	✓
Mechanical Housing						
Standard Housing		Compact camera design easily fits into mechanical enclosures.		✓	✓	✓
Open Frame		Lower cost, readily integrates into system.			✓	✓
Enclosed Housing		Compact design enclosed with heat sink.			✓	✓
Customization						
Mechanical		Custom housings - contact Critical Link		✓	✓	✓
Application		Custom application to best match your needs - contact Critical Link		✓	✓	✓

Camera/sensor types (custom options available):

E: E2V

H: Hamamatsu

S: Sensors Unlimited

Features: ✓ Standard, ○ Optional

Critical Link is an embedded systems engineering firm, providing end-to-end product engineering, custom off-the-shelf platforms – the MityCCD and the MityDSP - used as product building blocks, and ongoing production services. When it comes to embedded systems, *Think Link – It's Critical.*

