

# ///MegaPlus™ 4.2i

The MegaPlus 4.2i is a high-performance digital camera that combines a spatial resolution of 4.2 million pixels, with up to 1024 gray levels for each pixel to deliver superior quality digital images.

The CCD sensor provides a 2029 x 2044-pixel array with 9 µm square pixels for unsurpassed sensitivity and accurate dimensional measurements. The camera also features Accumulation Mode, which significantly reduces dark current.

The standard MegaPlus 4.2i has a frame rate of up to 2.1 frames per second. With its high resolution, maximum dynamic range and large format, this camera is ideal for a wide range of demanding industrial applications.



## S N A P S H O T

### **Sensitivity**

1024 gray levels and minimal dark current provide the dynamic range and sensitivity required for demanding industrial applications.

### **Accuracy**

The accuracy required by metrology applications is provided by the MegaPlus 4.2i's square pixels with a 100% fill factor.

### **Ease of Use**

With a comprehensive command set and bundled control software, the MegaPlus 4.2i provides the ease of use you expect from Redlake's MegaPlus cameras.

///MegaPlus™ ...  
for imaging excellence  
when quality counts

  
**REDLAKE**  
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## MegaPlus™ 4.2i

### PERFORMANCE SPECIFICATIONS

#### CCD Imager

Imaging Device	Kodak KAF-4202, solid-state CCD, full-frame imager
Sensor Readout	Progressive scan
Pixel Size	9 μm (square format)
Resolution	2029 x 2044 pixels (4,147,276)
Pixel Spacing	9 μm, vertical and horizontal
Active Area	18.29mm horizontal x 18.40mm vertical
Fill Factor	100%

#### Image Quality

Image Uniformity	5% non-uniformity
Responsivity	2860 to 45370 8-bit counts/μW/cm <sup>2</sup> –second @ 550 nm (depending on gain)
Bit Depth	8 or 10 bits
Dynamic Range	67dB (10-bit)
Temporal Noise	<.05% rms
Dark Current	<10pA/cm <sup>2</sup> @ 25°C

#### Camera Exposure and Control

Camera Output	Digital Video
Pixel Clock Rate	10 MHz
Frame Rate	Up to 2.1 fps
Exposure Settings	Mechanical shutter: 10 to 100,000 ms
Operation Modes	Continuous, Control, Trigger
Gain Settings	2 to 24dB in steps of 2dB

#### Mechanical Description

Lens Mount	C or F mount
Dimensions	F-mount: 4.45"H x 3.9"W x 5.84"L (113.0 x 99.1 x 148.3mm) C-mount: 4.45"H x 3.9"W x 4.68"L (113.0 x 99.1 x 118.8mm)
Weight	3 lbs (1.26kg)

#### Environmental Requirements

Operating Temp	0° to 35°C (32° to 95°F), non-condensing
Vibration	3G, sinusoidal from 5 to 150 Hz
Shock	20G, non-operating

#### Power Requirements

Input Voltage	12 to 28 VDC
Power Consumption	8 watts, typical



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Note: Specifications are typical and subject to change. 1105-02