



Scientific Imaging

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Megapixel FireWire Cameras

CM-DIG-LT-M - Monochrome
CM-DIG-LT-C - COLOR

Highlights

MVIA CM-DIG-LT-M and CM-DIG-LT-C Cameras offer high-resolution megapixel capability with the convenience of FireWire (IEEE 1394) to capture low latency video streams and digital still images. Available in a Camera Kit for operation "out of the box," and a Developer's Kit that includes all of the software and hardware necessary for customized application development. The CM-DIG-LT-M and CM-DIG-LT-C are encased in a rugged yet lightweight magnesium housing.



Features

- All-in-one megapixel FireWire C-mount cameras
- Stream uncompressed video or capture still images
- FireWire digital interface simplifies installation and eliminates the need for framegrabbers
- Flexible and full-featured CMOS image sensor with high resolution 1.3 megapixel array (1280 × 1024 pixels)
- Up to 12.7 fps at 1280 × 1024 resolution, 60 fps at 640 × 480
- FireWire cable carries video data, control signals and power—no additional cables required.
- Application Programming Interface (Developer's Kit only)
- Includes software application, providing controls for:
 - Gamma correction, signal gain, exposure time
 - Imager subwindow size and position
 - Image flip and mirror
 - Choice of 8-bit or 10-bit data and data rate
- Supports 3rd party software applications via industry standard interface protocols:
 - DirectShow®
 - TWAIN™

Suggested Applications

- Microscopy
- Medical and biometric imaging
- Video conferencing systems
- Surveillance and security cameras
- Webcasting systems
- Photo ID systems



General Description

The CM-DIG-LT-M and CM-DIG-LT-C Cameras use the FireWire digital bus protocol to streamline the capture, digitization and processing of megapixel video streams. These Cameras are designed to simplify real-time uncompressed video streaming and digital still image acquisition while maintaining uncompromising video and digital still-image quality.

One FireWire cable can manage power distribution, PC-based control and real-time video streaming capabilities of the Camera.

The Developer's Kit offers an extensive Application Program Interface (API). This API is designed to simplify the most common tasks associated with configuring and controlling the Camera. Software developers can easily adapt existing programs or develop new imaging applications quickly.

The CM-DIG-LT-M and CM-DIG-LT-C are compatible with Windows 98 SE, Windows® 2000 and Windows® XP.



Configurations

Camera Kit (CM-DIG-LT-M, CM-DIG-LT-C)

- Color Or Monochrome MegaPixel Firewire Camera (no lens provided)
FireWire adapter card
FireWire cable
Quick Start installation card
Camera Kit software
Windows® 98 SE, 2000 and XP Drivers
TWAIN interface
Application: LiveImage and Capture Software
Online User's Manual
Warranty card

Developer's Kit (CM-DIG-LT-M-DEV, CM-DIG-LT-C-DEV)

- All elements from the Camera Kit, plus:
All necessary software and documentation to create custom applications
Extensive API
Source code examples of applications (upon request)
Access to technical support
1/4-20 Mount

A wide variety of accessories are available with these cameras including cables, adapter cards, FireWire repeaters, lenses, tripods and mounts.

Specifications

Imaging Chip

Type.....1/2" Kodak KAC-1310 1.3 megapixel CMOS
Resolution..... 1280 x 1024 active pixels
Pixel Size6.0 µm x 6.0 µm, square
Array Dimensions7.68 mm x 6.14 mm
Frame Rate, in frames per second (fps), 8-bit pixels

Table with 3 columns: Resolution, @ 16 MHz, @ 24 MHz (Dev Kits only). Rows include 32x32, 320x240, 640x480, 800x600, 1024x768, 1280x1024.

Color MosaicRGB Bayer with standard microlenses (PL-A662)
ShutterContinuous and single frame rolling shutter capture
GammaSoftware programmable
Optical Fill-Factor.....40% mono / 64% color
Saturation Signal40,000 electrons
Quantum Efficiency ..38% peak RGB
Responsivity.....0.6 V/Lux-sec peak RGB
Total Dark Noise70 e- rms
Dark Current.....6250 e-/pixel/sec
Dark Current Doubling Temperature9°C
Dynamic Range.....>54dB

Electrical

Voltage.....8 V-30 V DC
Power.....3 W typ. (250 mA at 12 V, supplied by FireWire cable)

Physical

Operating Temp.+5°C to +60°C
Lens mount.....C-mount lens adapter
Weight.....175 g (without lens)
Compliance.....FCC Class B; CE
Camera HousingMagnesium

Interface

Operating System.....Windows® 98 SE, 2000 and XP
Data Format8-bit or 10-bit, uncompressed
Interface Type2, 6-pin FireWire ports (400 Mbits/s)
Max. Data Rate24 Mbytes per second

System Requirements

- Microprocessor:
Minimum-450 MHz Pentium® III or equivalent
Recommended-1.5 GHz Pentium® 4 or equivalent
128 MB system RAM
25 MB hard drive free space
Video card with 24 or 32 bit True Color graphics
8 MB of video memory



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