

MDC-1600, MDC-1600C

2 MEGA-PIXEL 12 BIT DIGITAL CAMERAS

- Progressive scan camera
- Camera Link Interface
- 12 bit digital output – single or dual
- 1600 x 1200 pixels @ 33 fps
- Programmable resolution and frame rate
- Programmable electronic shutter
- Programmable long integration
- Programmable external trigger
- Programmable strobe output
- Programmable Gamma correction
- Dynamic noise correction
- Programmable gain & offset
- Built in test patterns



MDC-1600 and **MDC-1600C** are advanced, high-resolution progressive scan CCD cameras, featuring programmable modes of operation and Camera Link™ output. The cameras are built around an interline transfer CCD with 1600 x 1200 pixels resolution, able to output a maximum frame rate of 33 frames per second (fps) at full resolution. MDC-1600 has a monochrome imager, while the MDC-1600C has a color imager. The cameras can be easily adapted to many diverse applications because the parameters and modes of operation are programmable, including image resolution, frame rates, gain, offset, asynchronous external triggering and capture duration, electronic shutter, long time integration, strobe output and gamma correction. The square imager format with uniform 7.4 μm square pixels provides superior image in any orientation. The interline transfer CCD permits full vertical and horizontal resolution of high-speed shutter images. The combination of electronic shutter and long time integration enables the camera capturing speed to be from 1/16,000 sec. to more than 10 sec. The cameras have an optically isolated external asynchronous trigger and can capture a single frame or a sequence of frames, the number of which can be programmed. A built-in Gamma correction (G=1.0 and G=0.45) optimizes the CCD dynamic range. The cameras have a standard Camera Link™ interface that includes 10/12 bits data transmission with one or two output taps, as well as camera control and asynchronous serial communication all on a single cable. The highly programmable nature of the cameras allow them to be used in a wide and diverse range of applications including machine vision, high-definition imaging and surveillance, medical imaging, intelligent transportation systems, character recognition and documents processing, and many more.

Camera Specifications

MDC-1600 and MDC-1600C Specifications	
Imager:	1" progressive scan interline transfer CCD
MDC-1600C	Color Imager
MDC-1600	Monochrome Imager
Spectral Response:	Visible, Near IR
Active Area:	13.38 mm x 9.52 mm (0.527" x 0.375")
Active Pixels:	1600 (H) x 1200 (V)
Pixel Size:	7.4 um x 7.4 um
Output resolution:	12 bit resolution
Camera Interface:	DIGITAL
DATA	Base Camera Link <ul style="list-style-type: none"> - 24 bits Data output, - Trigger input – CC1 - RS232 communication interface
I/O CONTROL	Level Sensitive <ul style="list-style-type: none"> - Trigger input - Strobe output
Data clock:	40.000 MHz
Video Output:	Digital – Camera Link 24 bits Data, one or two taps
Resolution:	Programmable - 1600 x 1200 pixels max.
Frame Rate:	Programmable - from 15 fps to 100 fps
Shutter Speed:	Programmable - 1/16000 sec. to 1/15 sec.
Long integration:	Programmable - 1/30 sec. To 10 sec.
Gamma:	Programmable G=1.0 and G=0.45
Offset:	Programmable for each output - 256 levels/output
Gain:	Programmable for each output - 1024 levels/output
Min. Illumination:	1.0 lux, f=1.4 without IR cut filter (no shutter)
External Trigger:	Asynchronous
Hardware	External, level sensitive, (3.3 - 5.0) V p-p, 10mA., optically isolated
Software	CC1, from the frame-grabber
Strobe output:	Active HIGH, for external light source synchronization
S/N ratio:	55dB minimum
AGS:	OFF
Lens mount:	C-mount, 1" lens format, 50 mm FL, F-mount (optional)
Electrical Characteristics	
Power:	12V DC +/- 10%, 500 mA (current measured at 25°C)
Physical Dimensions	
Housing:	Solid, aluminum, black anodized
Size (W x H x L):	76mm x 76mm x 49mm (3.00" x 3.00" x 1.92")
Weight:	400 grams, 14.3 oz
Operating Environment	
Operating temperature:	0°C to 50°C
Storage temperature:	-10° C to +70° C
Relative humidity:	80% non-condensing

Copyright ©2004, Imperx, Inc. All rights reserved.
Any unauthorized use, duplication or distribution of this document or any part thereof,
without the prior written consent of Imperx Corporation is strictly prohibited.