



Frame grabbers

Matrox Meteor-II >>

Low-cost frame grabber for standard analog monochrome or color video acquisition.



Key features

- > PCI, CompactPCI® or PC/104-Plus™ form factor
- > captures from NTSC, PAL, RS-170 and CCIR video sources
- > up to 12 video inputs¹
- > trigger input
- > 32-bit / 33 MHz PCI bus-master
- > real-time transfer to system or VGA memory
- > extensive on-board buffering for reliable capture
- > supports packed or planar transfers of color or multiple monochrome streams
- > power output² and RS-232 serial interface³
- > programmed using Matrox Imaging Library (MIL) sold separately
- > supports 32-bit Microsoft® Windows® XP

Matrox Meteor-II

Matrox Meteor-II is part of the Matrox Meteor-II family of high-performance frame grabbers for cost-sensitive applications. Designed to capture from standard analog color or monochrome video sources, Matrox Meteor-II combines extensive functionality with unprecedented value in a frame grabber. OEMs and integrators use this technology to build powerful, yet cost-effective PC-based imaging systems.

Real-time capture to system or display

Matrox Meteor-II can transfer acquired images to either system (host CPU) memory for processing or display (VGA) memory for video-in-a-window at live video rates.

Image formatting

Image data can be reformatted in real-time prior to transfer to host system or display. Formatting features include cropping (ROI capture), independent horizontal and vertical sub-sampling from 2 to 16 (by decimation), and arbitrary down scaling.

Power output²

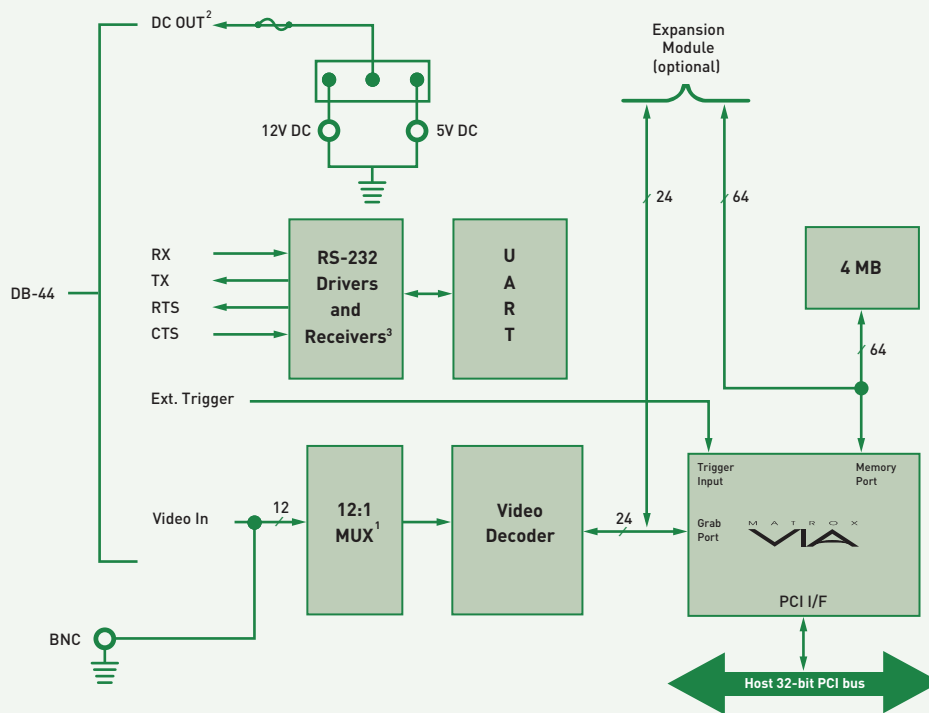
Matrox Meteor-II can supply 5 or 12V DC power to cameras. Power is taken directly from the PC power supply, preventing any overload to the PCI bus.

RS-232 serial interface³

Matrox Meteor-II features an RS-232 serial interface to enable remote programming of a camera (i.e., gain, gamma control, operation mode), motion control unit or PLC.



Matrox Meteor-II



Simple connection

Matrox Meteor-II has a single 44-pin external connector for video input, separate synchronization and control signals, DC power output and RS-232 serial interface.

PCI interface

Matrox Meteor-II features a 32-bit PCI bus master/slave host interface. The bus master mode performs transfers without requiring continuous host intervention. Extensive buffering ensures reliable real-time transfer of incoming image data to host memory even under high bus latency conditions, which typically occurs in systems with concurrent image capture, display, graphics, network access, disk access and general external I/O.

The PCI interface supports image data sub-sampling from 2 to 16 (by decimation) to further reduce required PCI bus bandwidth. The PCI interface also supports packed or planar transfers of color or multiple monochrome streams. Acquisition related events such as start and end of frame/field or sequence capture can be routed to the host CPU as interrupts to optimize concurrent acquisition and processing (double-buffering).

Field-proven application development software

Matrox Meteor-II is supported by the Matrox Imaging Library (MIL), a comprehensive collection of software tools for developing industrial imaging applications. MIL features interactive software and programming functions for image capture, processing, analysis, annotation, display and archiving. These tools are designed to enhance productivity, thereby reducing the time and effort required to bring your solution to market. Refer to the MIL datasheet for more information.

Specifications

Acquisition

- analog composite (CVBS) or Y/C NTSC/PAL
- analog composite RS-170/CCIR
- supports VCRs
- square pixel or CCIR-601 digitization
- pixel jitter: 4-5ns
- programmable gamma correction table
- controllable AGC (freeze with manual adjust)
- RGB 8:8:8 or YUV 4:2:2 pixel formats
- two TTL auxiliary inputs and outputs
- opto-isolated differential trigger input (sync. to video)
- connect and switch between either 12 CVBS, 6 Y/C or combination¹

Formatting

- input cropping (ROI capture)
- independent horizontal and vertical sub-sampling from 2 to 16 (by decimation)
- arbitrary down scaling

RS-232 interface³

- supports RX, TX, RTS and CTS signals
- not visible to OS (controlled through MIL API)

Host interface

- 32-bit PCI bus master/slave
- 4 MB buffer
- support for packed or planar image data formats
- independent horizontal and vertical sub-sampling both from 2 to 16 (by decimation)
- interrupts for start and end of field, frame and sequence capture
- universal 32-bit card edge connector

Dimensions and environmental information

- PCI version⁴:
 - 18.8 cm L x 10.67 cm H (7.4" x 4.2")
- 3U CompactPCI[®] version⁵:
 - 16 cm L x 10 cm H (6.3" x 3.9")
- PC/104-Plus[™] version⁶:
 - 11.56 cm L x 9.6 cm H (4.55" x 3.78")
- operating temperature: 0° C to 55° C (32° F to 131° F)
- relative humidity: up to 95% (non-condensing)
- FCC class A
- CE class A

Software Driver

- Matrox Imaging Library (MIL) driver for 32-bit Microsoft[®] Windows[®] XP

Ordering Information

Hardware

Part number	Description
METEOR2/4 (PCI)	Standard analog color/ monochrome frame grabber
MET2-C/4 (CompactPCI®)	
MET2+/4 (PC/104-Plus™)	

Software

Refer to MIL datasheet.

Input cables

Part number	Description
DBHD44-TO-13BNC	2.13 m (7') input cable, high density DB-44 to thirteen BNCs. Includes six SVHS adapters.
DH44-TO-13BNC/0	1.82 m (6') input cable, high density DB-44 to thirteen BNCs and open end (to access sync. and control signals). Includes six SVHS adapters.

Notes:

1. Up to 7 CVBS or 3 Y/C inputs or combination on CompactPCI® version.
2. Power output not available on PC/104-Plus™ version.
3. RS-232 interface not present on PC/104-Plus™ version.
4. Vertical dimensions are from bottom edge of goldfinger to top edge of board.
Horizontal dimensions are from edges of the board excluding bracket.
5. Vertical and horizontal dimensions are from edges of board excluding
bracket and connector.
6. Vertical and horizontal dimensions are from edges of board.
7. Contact local representative or Matrox Imaging Sales for availability.

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