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 inputs[1]

> 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 output[2] and RS-232 serial interface[3]

> available software is sold separately and includes Matrox Imaging Library (MIL)/ActiveMIL, MIL-Lite/ActiveMIL-Lite and Matrox Inspector

> support for Microsoft® Windows® 98, Windows® Me, Windows NT® 4.0, Windows® 2000 and 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.
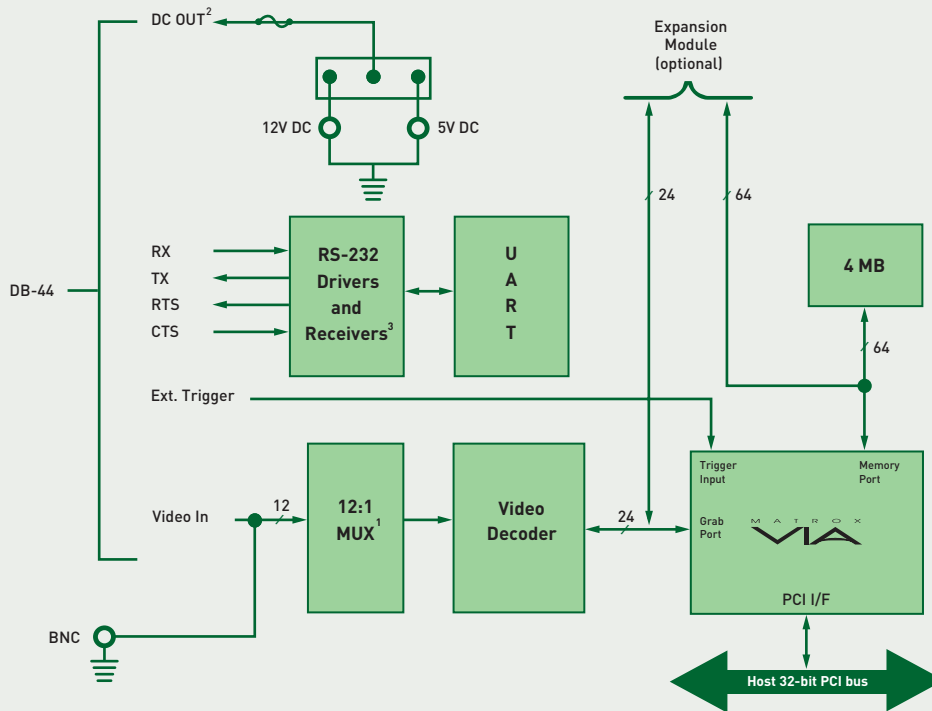
Power output[2]
Matrox Meteor-II can supply 5 or 12V DC power to cameras. Power is taken directly from the PC power supply, preventing any overload to the PCI bus.

RS-232 serial interface[3]
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
IMAGING

▶▶ Matrox Meteor-II

DC OUT[2]

Expansion Module (optional)

12V DC   5V DC

24   64

RX
TX
RTS
CTS

RS-232 Drivers and Receivers[3]

U A R T

4 MB

DB-44

64

Ext. Trigger

Trigger Input

Memory Port

Video In   12

12:1 MUX[1]

Video Decoder

24

Grab Port

MATROX **VIA**

PCI I/F

BNC

Host 32-bit PCI bus

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).

Software

Software support is available for Microsoft® Windows® 98, Windows® Me, Windows NT® 4.0, Windows® 2000 and Windows® XP, and consists of Matrox Imaging Library (MIL)/ ActiveMIL or MIL-Lite/ActiveMIL-Lite development toolkits for creating custom applications. Matrox Meteor-II is also supported by Matrox Inspector Windows®-based interactive imaging software.

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 combination[1]

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

RS-232 interface[3]
- 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 version[4]:
  - 18.8 cm L x 10.67 cm H (7.4" x 4.2")
- 3U CompactPCI® version[5]:
  - 16 cm L x 10 cm H (6.3" x 3.9")
- PC/104-*Plus*™ version[6]:
  - 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 Environment
- drivers for Microsoft® Windows® 98, Me, NT® 4.0, 2000 and XP
- programmed using MIL/MIL-Lite ('C' DLLs) with Microsoft® Visual C++® (.NET)
- programmed using ActiveMIL/ActiveMIL-Lite (ActiveX controls) with Microsoft® Visual Basic® or C++®

Ordering Information

Hardware

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

Ordered separately:
Software

Part number	Description
MIL LITE 7	MIL-Lite board control library (see MIL-Lite brochure for more details).
MIL 7 DEV P *or* U	Matrox Imaging Library (MIL) (see MIL brochure for more details).
Inspector 4 P *or* U	Matrox Inspector Interactive Windows® imaging software (see Inspector brochure for more details).

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.

**For more information, please call: 1-800-804-6243 (toll free in North America) or (514) 822-6020
or e-mail: imaging.info@matrox.com or http://www.matrox.com/imaging**

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