

Matrox 4SightXB >>>

Ruggedized PCIe® system for image capture, processing, display and I/O



Key features

embedded Intel® Celeron® M or Core™ 2 Duo CPU

small footprint and rugged construction

accommodates full-height, half-length PCI-Express® boards

native GigE Vision® and IEEE-1394 IIDC support

connect external equipment using Ethernet, IEEE 1394, RS-232/485, USB or general purpose digital I/Os

archive video with integrated mass storage

pre-installed with Microsoft® Windows® XP Professional for Embedded Systems¹

develop applications using standard Microsoft® development tools and Matrox Imaging Library (MIL)

Industrial and medical imaging platform

Matrox 4Sight XB is an industrial and medical imaging platform featuring an Intel® single/multi-core CPU with standard PCIe® expansion slots. Carefully selected embedded components ensure long term availability, making it ideal for OEMs looking to maximize their return on investment. The combination of Matrox 4Sight XB hardware with Matrox Imaging Library (MIL) software ensures interoperability and time to market.

Strong imaging performance

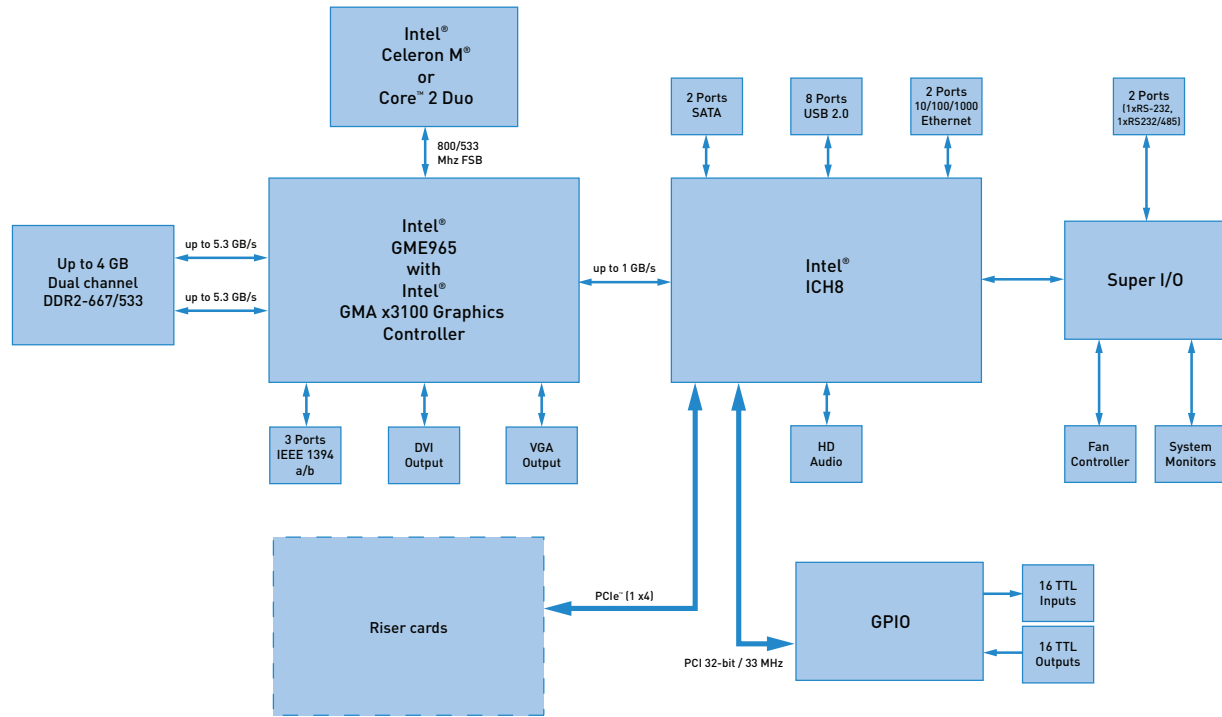
Featuring an Intel® Celeron® M or Intel® Core™ 2 Duo processor, the Matrox 4Sight XB provides enough power to handle mainstream imaging applications. Capable of supplying vast amounts of image data to the system for processing, the x4 PCIe® connectivity provides the bandwidth required to keep pace with today's high resolution and frame rate cameras.

Designed for embedded imaging

The small size of the Matrox 4Sight XB makes it easy for OEMs to incorporate it into their systems. System health monitors including temperature, voltage and fan speed, allow the Matrox 4Sight XB to detect and report errors and failures.

Matrox Imaging not only carefully selected each component in the Matrox 4Sight XB to ensure product availability in excess of five years, but also exercises strict change control to provide consistent supply. Longevity of stable supply lets OEMs achieve maximum return on the original investment without incurring the additional costs associated with the repeated validation of the constantly-changing mainstream commercial platforms.

Matrox 4Sight XB



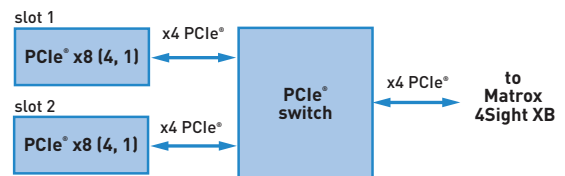
Industrial strength

The Matrox 4Sight XB housing is made of 1.2mm thick, cold rolled steel, which can withstand routine abuse. The chassis design and fan ensure adequate cooling by channeling airflow throughout the Matrox 4Sight XB, allowing the highest levels of computing performance throughout the entire standard temperature range. Moreover, adaptive fan control minimizes power requirements and noise.

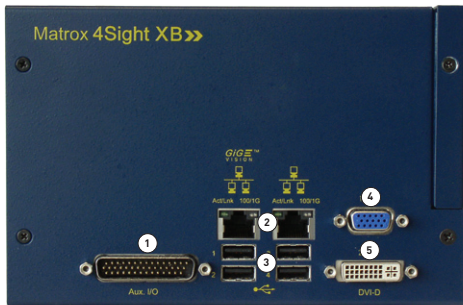
Extensive connectivity

Communicating results outside the box is an integral part of any imaging system, so connecting to modern and legacy equipment in the field requires the right interfaces. With Gigabit Ethernet, IEEE 1394a/b, RS-232/485, USB 2.0 and digital I/Os, the Matrox 4Sight XB can directly interact with critical process automation devices. Capable of hosting up to two standard full-height, half-length PCIe® cards. Dual head display capability on the Matrox 4Sight XB allows the creation of a rich human-machine interfaces (HMIs) whereby the finest details are clearly communicated to the operator.

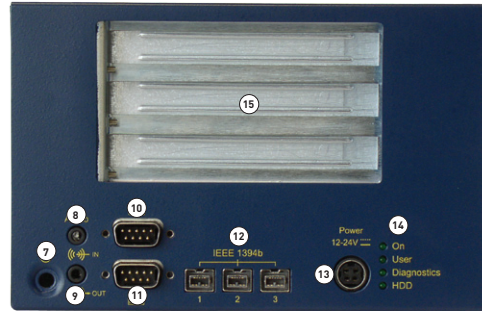
Matrox 4Sight XB Riser Card



Matrox 4Sight XB front and back



1. Auxiliary I/Os
2. 10/100/1000 Mbit Ethernet
3. USB 2.0 ports
4. Analog VGA output
5. Digital VGA (DVI-D) output



7. Power switch
8. Audio Input
9. Audio Output
10. Serial Port 1
11. Serial Port 2
12. IEEE 1394b Ports
13. Power Input
14. Status LEDs
15. PCI/PCI-X/PCIe slots

All encompassing video capture and more

There have never been so many ways of transmitting video: analog, digital, Camera Link®, Gigabit Ethernet, IEEE 1394, SDI and USB. The Matrox 4Sight XB supports them all, either directly or through add-on Matrox frame grabber modules.

See the full line of Matrox frame grabbers at www.matrox.com/imaging

IEEE 1394, USB and GigE Vision™ interfaces

IEEE 1394a/b, hi-speed USB and GigE Vision™ have made a major impact on the imaging industry. Matrox 4Sight XB embraces these technologies by providing integral support for these interfaces with every system. Software applications acquire images over these interfaces using the IEEE 1394 IIDC and GigE Vision™ support provided in the Matrox Imaging Library (MIL) or through third-party application programming interfaces (APIs), which comfortably coexist with the rest of MIL.

Software Environment

Microsoft® Windows® XP Professional for Embedded Systems

Matrox 4Sight XB is pre-loaded with Windows® XP Professional for Embedded Systems, which provides the same user interface, reliability, performance, security, networking and remote management capabilities as Windows® XP Professional but with long term availability and support. Microsoft® Windows® XP Professional for Embedded Systems easily accommodates standard Windows® XP device drivers for third-party hardware. Matrox 4Sight XB can also run Windows® XP Professional and Windows® Vista (32-bit and 64-bit).

Field-proven application development software

Matrox 4Sight XB 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

Motherboard

- EBX form factor (8" x 5¾" or 20.32 cm x 14.61 cm)
- Intel® GME 965 chipset
- Intel® x3100 GPU
 - up to 256 MB of shared memory
- two (2) 200-pin DDR2-667/533 SO-DIMM slot (dual channel)
- dual-head graphics support
 - one (1) DVI display output
 - DVI-D 1.0 compliant
 - Up to 1600 x 1200 @ 60 Hz
 - one (1) RGB (VGA) display output
 - Up to 2048 x 1536 @ 60 Hz
- three (3) bilingual (9/4-pin) IEEE-1394b ports
- two (2) Gigabit Ethernet ports (10/100/1000)
- eight (8) USB 2.0 ports
 - four (4) external
 - four (4) internal
- two (2) SATA 2.0 ports
- two (2) serial ports
 - one (1) RS-232
 - one (1) RS-232/RS-485
- one (1) 20-bit stereo audio input and 24-bit output
- thirty-two (32) auxiliary I/O's
 - TTL compatible
 - sixteen (16) inputs
 - up to 9 V tolerant
 - sixteen (16) outputs (open collector)
 - 100mA max. @ 5 to 24VDC
 - compatible with OPTO 22 Snap I/O and G4 series
- riser card expansion
 - one (1) PCIe® x4 connection

CPU options

- Intel® Celeron® 550
 - 2.0 GHz
 - 533 MHz front side bus
 - 1 MB L2 cache
- Intel® Core® 2 Duo (T7500)
 - 2.2 GHz
 - 800 MHz front side bus
 - 4 MB L2 cache

Memory options

- 1 GB Dual-channel DDR2-667
- 2 GB Dual-channel DDR2-667
- 4 GB Dual-channel DDR2-667

Hard disk

- 250 GB SATA disk drive

Specifications (Cont.)

Chassis

- material
 - 1.2 mm (0.048") cold rolled steel
- cooling
 - integrated 42 CFM fan
- dimensions
 - length: 20.828 cm (8.200")
 - width: 18.415 cm (7.250")
 - height: 12.034 cm (4.738")
- mounting
 - four (4) x #6-32 UNC x 0.125" (3.2 mm) deep
- expansion
 - up to three (3) conventional PCI, PCI-X® or PCI-Express® full-height, half-length cards

PCIe® riser card

- two (2) x8 PCIe® mechanical (x4 or x1 electrical) slots

Power

- latching power connector
- 12 to 24 V_{DC} input
- 65- 120 Watts

Power supply

- latching connection
- 100-240 V_{AC} input
- 12 V_{DC} @ 8.3A (100W)

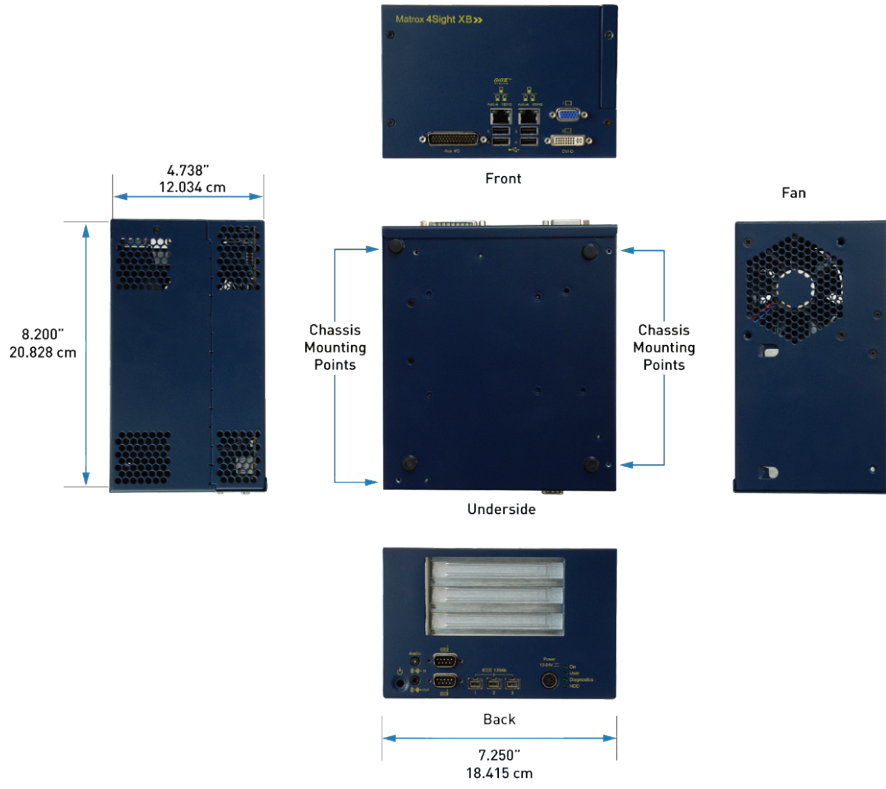
Environmental information

- 10° C (50° F) to 50° C (122° F) operating temperature
- -40° C (-40° F) to 85° C (185° F) storage temperature
- up to 90% (non-condensing) relative humidity

Certifications

- FCC part 15 class A
- CE class A
- RoHS-compliant
- EN55022:2006 class A
- EN61000-3-2:2006 class D
- EN61000-3-3:1995/A2:2005
- EN55024:1998/A2:2003
- EN60721 3M5 operating (industrial vibration) pending

Matrox 4Sight XB chassis



Ordering Information

Hardware (Ordered separately)

4X a a y HD1 Y B Z e *

Power Cord

A = North American
E = European
U = UK

Expansion modules

BZ = Brick form factor and PCIe® riser card

Operating System

Y = Microsoft® Windows® Professional for Embedded Systems

Hard Disk

HD1 = 250 GB

Memory

1 = 1 GB, Dual-channel DDR2-667
2 = 2 GB, Dual-channel DDR2-667
4 = 4 GB, Dual-channel DDR2-667

Processor

20C = 2.0 GHz Celeron® 550 (533 MHz FSB, 1 MB L2)
22D = 2.2 GHz Core™ 2 Duo - T7500 (800 MHz FSB, 4MB L2)

Software

Refer to MIL datasheet.

Notes: 1. Subject to Microsoft Software License Terms that must be accepted prior to use.