Matrox **Concord** »

Family of Gigabit Ethernet NICs and IEEE 1394b adaptors.

Shown with optional low-profile bracket

Key features

> x1 PCIe™ or conventional 32-bit PCI low-profile card

> lifecycle managed and long term availability

> GigE Vision™ or IIDC support through Matrox Imaging Library (MIL)

> pre-licensed for use with MIL GigE Vision™ or IIDC drivers

> pre-configured for optimal GigE Vision™ performance (G-series)

> fingerprint for, and storage of, supplemental MIL run-time license(s)

> programmed using Matrox Imaging Library (MIL) sold separately

> supports 32/64-bit Microsoft® Windows® XP/Vista®/7 through MIL

Digital video interface cards for industrial imaging

Matrox Concord is a family of Gigabit Ethernet network interface cards (NICs) and IEEE 1394b adaptors that are pre-licensed for use with the Matrox Imaging Library (MIL) drivers for the GigE Vision™ and IEEE 1394 IIDC protocols. The Matrox Concord family offers a long and stable life cycle, which eliminates the burden associated with sourcing and qualifying consumer-grade boards.
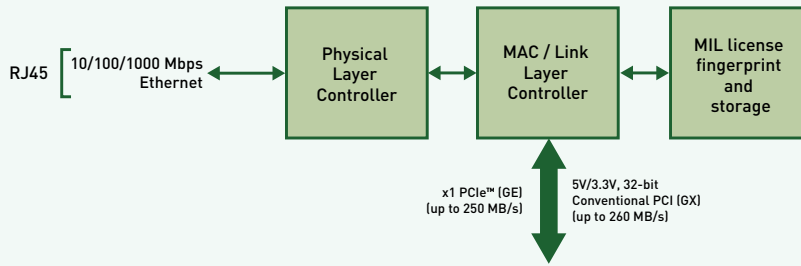
Support for established interface standards
The Matrox Concord G-series are Gigabit Ethernet NICs that provide optimum support for the GigE Vision™ camera interface standard. By way of MIL, these NICs are optimally configured to minimize GigE Vision™ protocol loading on the host through the default enabling of jumbo packets as well as optimal settings for the interrupt throttling rate and number of receive buffers. Unlike generic NICs, using the Matrox Concord G-series with MIL does not require manually adjusting advanced driver properties. Auto medium-dependent interface crossover (MDIX) further simplifies setup by automatically detecting and crossing over signals for peer-to-peer connections thereby eliminating the need for special cables.
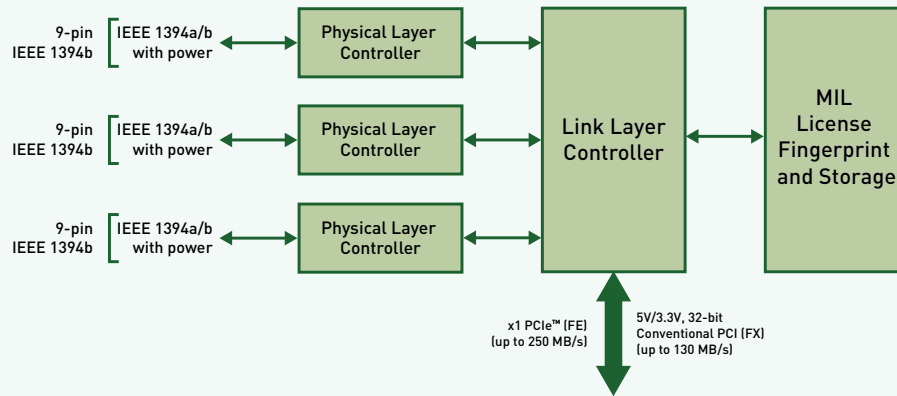
The Matrox Concord F-series are IEEE 1394b adaptors that, through MIL, enable the use of leading IEEE 1394 industrial cameras implementing the standard IIDC protocol. These adaptors, by way of MIL, support up to the S400 and S800[1] modes of IEEE 1394a and 1394b respectively, ensuring maximum camera performance and minimal transfer latency. In addition, the use of bilingual copper connectivity permits for cost-effective cabling.

MATROX IMAGING

Matrox Concord GE/GX

RJ45 — 10/100/1000 Mbps Ethernet → Physical Layer Controller ↔ MAC / Link Layer Controller ↔ MIL license fingerprint and storage

x1 PCIe™ (GE) (up to 250 MB/s)
5V/3.3V, 32-bit Conventional PCI (GX) (up to 260 MB/s)

Matrox Concord FE/FX

9-pin IEEE 1394b — IEEE 1394a/b with power ↔ Physical Layer Controller ↔

9-pin IEEE 1394b — IEEE 1394a/b with power ↔ Physical Layer Controller ↔ Link Layer Controller ↔ MIL License Fingerprint and Storage

9-pin IEEE 1394b — IEEE 1394a/b with power ↔ Physical Layer Controller ↔

x1 PCIe™ (FE) (up to 250 MB/s)
5V/3.3V, 32-bit Conventional PCI (FX) (up to 130 MB/s)

Field-proven application development software

Matrox Concord 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.

Managed lifecycle

Matrox Concord boards are manufactured with strict change control to ensure a consistent supply through a long life cycle. Longevity of stable supply lets OEMs achieve maximum return on the original investment without incurring the additional costs associated with qualifying new boards.

Specifications

Matrox Concord GE/GX
Hardware
- x1 PCIe™ (GE) or 32-bit, 66 MHz conventional PCI (GX) universal (3.3V/5V) host bus interface
- Intel® Gigabit Ethernet PHY/MAC/Link controller
- single port
- handles 10/100/1000 Mbps connections
- supports Jumbo frames/packets up to 9014 bytes
- selectable interrupt moderation rate
- resizeable receive buffers/descriptors
- supports auto MDIX (signal crossover)
- standard RJ45 connector

Power consumption and Dimensions
- GE: 3.3V @ 0.44 A (1.45 W) typical
- GX: 5V @ 0.4 A (2 W) typical
- PCI low-profile, sub-half-length
- GE: 7.4 cm L x 6.9 cm H x 1.6 cm W (2.9" x 2.7" x 0.62") from bottom edge of goldfinger to top edge of board and without bracket
- GX: 11.9 cm L x 6.4 cm H x 1.6 cm W (4.7" x 2.5" x 0.62") from bottom edge of goldfinger to top edge of board and without bracket

Matrox Concord FE/FX
Hardware
- x1 PCIe™ (FE) or 32-bit, 33 MHz conventional PCI (FX) universal (3.3V/5V) host bus interface
- Texas Instruments physical/link layer controller
- OHCI compliant
- three (3) bilingual IEEE 1394a/b ports
- 9-pin connector for copper cabling
- provides power (up to 12 W per port)

Power consumption and Dimensions
- FE: 3.3V @ 0.33 A (1.1 W) typical
- FX: 5V @ 0.2 A (1 W) typical
- PCI low-profile², half-length
- FE: 8.6 cm L x 6.9 cm H x 1.6 cm W (3.4" x 2.7" x 0.62") from bottom edge of goldfinger to top edge of board and without bracket
- FX: 11.9 cm L x 6.4 cm H x 1.6 cm W (4.7" x 2.5" x 0.62") from bottom edge of goldfinger to top edge of board and without bracket

Environmental information
- operating temperature: 0°C to 55° C (32° F to 131° F)
- relative humidity: up to 95% (non-condensing)

Certifications
- FCC part 15 class A
- CE class A
- RoHS-compliant

Software Drivers
- Matrox Imaging Library (MIL) drivers for 32/64-bit Microsoft® Windows® XP/Vista®/7

Ordering Information

Hardware

Part number	Description
CON 1G E*	Single-port x1 PCIe™ Gigabit Ethernet network interface card (NIC) pre-licensed for MIL Interface package (GigE Vision™ driver). Acts as a fingerprint for, and handles storage of, supplemental MIL license(s).
CON 1G X*	Single-port 32-bit conventional PCI Gigabit Ethernet network interface card (NIC) pre-licensed for MIL Interface package (GigE Vision™ driver). Acts as a fingerprint for, and handles storage of, supplemental MIL license(s).
CON 3F E*	Triple-port x1 PCIe™ IEEE 1394 adaptor card pre-licensed for MIL Interface package (IEEE 1394 IIDC driver). Acts as a fingerprint for, and handles storage of, supplemental MIL license(s).
CON 3F X*	Triple-port 32-bit conventional PCI IEEE 1394 adaptor card pre-licensed for MIL Interface package (IEEE 1394 driver). Acts as a fingerprint for, and handles storage of, supplemental MIL license(s).

Software

Refer to MIL datasheet.

Notes:

1. S800 mode is supported under 32-bit Windows® XP, with a partial roll back to SP1 if using SP2 and 64-bit Windows® XP. S800 mode is not supported under 32/64-bit Windows® Vista®.
2. Contact local representative or Matrox Imaging Sales for availability of optional low-profile I/O bracket.