



# V/Ethernet 3207 Hawk

High-performance VMEbus  
Ethernet Communications  
Controller

The Interphase Corporation V/Ethernet 3207 Hawk is a VMEbus Ethernet local area network controller, providing cost-effective node control for Ethernet and other IEEE 802.3 compatible networks. The V/Ethernet 3207 Hawk is a new option for LAN control where price sensitivity is critical and some host CPU processing power is available for upper ISO layer network control.

The V/Ethernet 3207 Hawk is a member of the family of Interphase products for the VMEbus and represents a commitment to design excellence and absolute superiority in:

- Price/Performance
- Ease of integration
- Design assistance and support
- Reliability

It is but one modular element in the Interphase comprehensive systems approach to high-performance VMEbus product development.

## NEW SOLUTIONS

Until now, Ethernet solutions for the VMEbus have been both too much and too little. By trying to do too much upper-level protocol control on-board, they have driven the cost up too high for most nodes in a system. On the other hand, they have not provided enough horsepower to truly satisfy the needs of a very high activity node, such as in a File Server. Many applications have actually disabled on-board functionality and moved network processing to their very high-performance host CPU.

The V/Ethernet 3207 Hawk provides low-cost support for ISO layers 1 (physical) and 2 (link) of IEEE 802.3. It directly connects to transceivers for Ethernet, Cheapernet, and other conforming networks. Upper ISO layers are referred to software running on the host CPU.

By use of an intelligent LANCE (Am 7990) chip which automatically handles CSMA/CD network access, collision recovery, buffer management, error reporting, and frame handling at the link level, the host is effectively buffered from time critical process handling and unnecessary interrupts. The host is interrupted to notify it of successful receive or transmit operations and certain error conditions.

## BIG BUFFER

The V/Ethernet 3207 Hawk features a 256 Kbyte dual ported VMEbus accessible RAM buffer. It is a fast access VMEbus slave and is configured as two buffer rings, one for transmit and one for receive. The number of buffers in each ring is software configurable from 2 to 128 buffers.

To send an Ethernet frame, or a sequence of frames, the host simply puts it into the next available buffer in the transmit buffer ring. Received frames are automatically put into the next available buffer in the receive buffer ring by the LANCE and handled by the host when convenient. The large number of available buffers insures that the V/Ethernet 3207 Hawk can always receive an incoming frame even though the host may be busy, and that the host can always queue up a frame to be sent without considering current network activity.

## FLEXIBLE

The V/Ethernet 3207 Hawk supports 16- or 32-bit data accesses and 24- or 32-bit addressing on the VMEbus with a selectable base address. Access to the multiport RAM has been optimized to insure very fast VMEbus access as seen by the host CPU.

Since the upper ISO layers are in host software, the system designer has extreme flexibility in selecting how streamlined or general purpose the implementation should be. This is particularly attractive given the rapid progress towards higher and higher performance CPUs, not to mention the continued evolution of networking facilities such as TCP/IP, NFS, RFS, MAP/TOP and others. Although Interphase provides a suggested sample driver, control of *your* product is in *your* hands, allowing rational decisions based on *your* processing power, *your* system criteria, and *your* tradeoff between network generality and performance.

## EASY TO DESIGN IN

Interphase provides two powerful resources with the V/Ethernet 3207 Hawk or any other Interphase family product. Unique to Interphase and available to you are the services of:

- The Design Assistance Group
- The Applications Engineering Group

Depending on your specific design and application requirements, one or both of these Interphase teams can be made available to solve special problems, assist with actual project decisions, or help build a system outright. There is always a team member prepared to assist as needed at each step of your project. Sample software drivers can be provided.

## SUMMARY OF FEATURES

- Supports IEEE 802.3 Ethernet or Thin Ethernet Transceivers
- Automatic Network Access without Time Critical Host Intervention
- 256 KB Dual Ported VMEbus Accessible Fast RAM
- Configurable Transmit Buffer Ring for Automatic Send Queuing
- Configurable Receive Buffer Ring for Automatic Receipt of Multiple Frames
- 16- and 32-bit Data Transfers
- 24- and 32-bit Data Addressing
- Software Programmable Interrupt Levels (1-7)
- UNIX® Driver Support
- Allows Host Flexibility in Network Performance/Generality Decisions
- Single Double-height VMEbus Board
- Software Drivers on a Variety of Media
- Outstanding Price/Performance Ratio

## THE NEXT STEP

Interphase is ready to help you get that project up and running...NOW. All you need do is tell us you want an Evaluation Reference Guide for the V/Ethernet 3207 Hawk, or even better, that you want to receive the V/Ethernet 3207 Hawk as part of our First Time User Program.

The Evaluation Reference Guide contains detailed specifications and other important operational information for hands on evaluation of the V/Ethernet 3207 Hawk and puts you in contact with our Design Assistance Group.

Call us today or complete the enclosed card to take the next step. There is no obligation... except to yourself to check out the price/performance value of the V/Ethernet 3207 Hawk from Interphase Corporation.

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