Relieve Demands on Critical Host Resources

Preserve Investments in Existing Software

Integrate Multimedia and Data Traffic

Support Bay Networks Multimedia Workgroup Solution

ATM multimedia adapters from Bay Networks provide desktop PCs with a direct, 25 megabit-per-second (Mbps) connection to multimedia networks. Available in both PCI and ISA bus formats, the adapters bring the benefits of full-duplex Asynchronous Transfer Mode (ATM) cell switching to the desktops of power workgroups and elite knowledge workers.

The adapters feature a powerful on-board RISC processor to bring workstation-like multimedia performance to any Windows-based PC. The processor runs the Media Operating Software (MOS), which delivers the quality of service required to support multimedia within existing network environments. Because most video traffic passes directly through the MOS on the adapter without burdening the PC's main processor, the system maintains its high performance and reliability while gaining the advantages of desktop videoconferencing and other multimedia applications.

The adapters and MOS work with the Bay Networks Multimedia Switch to offer the industry's first plug-and-play multimedia workgroup solution. The multimedia workgroup product family utilizes the existing software and cabling, preserving the network infrastructure while delivering the performance benefits of ATM directly to the desktop.

Fully compatible with the entire Bay Networks product family and supported by the Optivity® network management system, the multimedia workgroup solution adds a key feature to the industry's most complete set of switched internetworking products.

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Benefits

Relieve Demands on Critical Host Resources

The ATM multimedia adapters include an on-board RISC processor and sufficient memory to independently process multimedia data without taxing the host computer's resources. The Multivendor Interface Protocol (MVIP) supports direct connections between the adapter and video cards, allowing video traffic to bypass the host PC completely to improve overall performance.

Preserve Investments in Existing Software

The ATM multimedia adapters support the Bay Networks MOS, which provides seamless integration of multimedia with off-the-shelf Windows-based applications. Integrating with most popular network operating systems and working beneath Windows 3.1, Windows '95 and Windows for Workgroups software, the MOS delivers clean, sharp video images while protecting existing investments in software and training.

Integrate Multimedia and Data Traffic

The MOS running on the ATM multimedia adapters supports Bay Networks ATM Forum-compliant LAN Emulation (LANE) services, enabling both video and data traffic to use a single desktop cable. Multimedia switch clients can communicate with standard network resources connected to other Bay Networks devices, providing integration between switched and shared media traffic. Existing NetWare, Windows NT and TCP/IP applications work just as they always have, with no changes required.

Support Bay Networks Multimedia Workgroup Solution

The ATM multimedia adapters work with the Bay Networks Multimedia Switch and MOS to deliver the industry's most complete and affordable multimedia workgroup solution. Working together, the adapters, MOS and switch provide the performance and quality of service required to support multimedia within existing enterprise networks using off-the-shelf Windows-based applications.

Features

The 25 Mbps ATM multimedia adapters reside in high-speed, multimedia-capable PCs, where they provide a direct connection to the Bay Networks Multimedia Switch. The cards offload and accelerate video traffic within the system, while the 25 Mbps connection enables multimedia to be easily integrated into any enterprise environment with no changes to the existing network infrastructure.

The adapters improve network performance by using the ATM protocol, which delivers the proper quality of service levels for bursty LAN traffic, time-sensitive multimedia traffic and constant-stream videoconferencing traffic. The result is crisp, sharp, high-quality video services at the desktop.

The ATM multimedia adapters are available in both PCI and ISA bus formats to meet the needs of most PC users. Both versions offer a single RJ-45 modular receptacle for supporting 25 Mbps ATM connectivity over readily available Category 3 unshielded twisted pair cabling, enabling easy integration with most existing structured cabling plants.

Multimedia Adapter Architecture

The Bay Networks ATM multimedia adapters feature a powerful on-board RISC processor to bring workstation-like performance to any standard Windows-based desktop PC. The processor offers sufficient memory to process multimedia data independent of the PC's system bus, processor or operating system software, relieving demands on the computer to maintain system performance and reliability.

The on-board processor also supports the MOS, the critical "middleware" of the workgroup solution that enables standard Windows-based applications to take advantage of ATM's guaranteed quality of service capabilities. Utilizing the Multivendor Interface Protocol (MVIP) interface, video traffic is routed directly through the MOS without burdening the PC bus, resulting in faster, crisper, more reliable video.

The MOS also supports ATM Forum-compliant LANE services, enabling the PC to handle both video and standard LAN traffic simultaneously over the same wire. With LANE, switch clients can communicate with standard network resources connected to other Bay Networks devices such as the EtherCell™ Ethernet-to-ATM edge device and Centillion™ 100 LAN-to-ATM switches.

Segmentation and Reassembly (SAR) is also performed by the RISC processor, providing the flexibility to precede and follow emerging industry standards.

Multivendor, Multiprotocol Compatibility

The ATM multimedia cards adhere to the ATM Forum's User Network Interface (UNI) Signaling standards to ensure interoperability with other standards-based ATM products. The adapters also include NDIS-3 and ODI-2 drivers to support most TCP/IP and LAN protocols such as Microsoft LAN Manager, Windows for Workgroups and Novell NetWare.

Figure 1 | **ATM Multimedia Network Adapter Architecture**
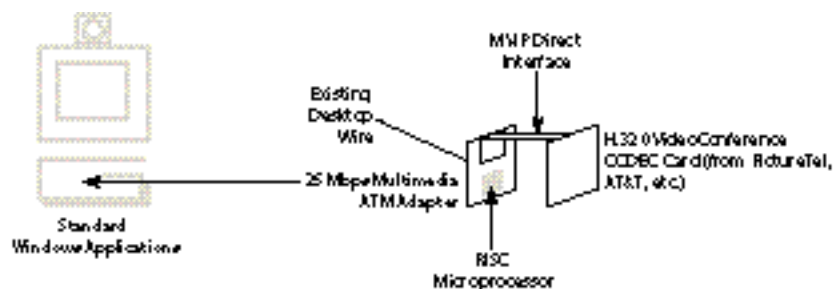
Technical Specifications

Technical specifications for the ATM multimedia adapters appear in Table 1.

Table 1 | **ATM Multimedia Adapter Technical Specifications**

Architecture	On-board RISC processor with 1 MB memory for SAR (AAL5), switching, signaling and LAN Emulation functions
Signaling	ATM Forum standard UNI 3.0/3.1
Physical	ATM Forum standard 25 Mbps ATM Phy
Software	Supports SVCs, PVCs, software-controlled multicasts and broadcasts
VCI Support	Up to 65,000 virtual channel identifiers
Drivers Provided	
Novell NetWare	ODI-2
Microsoft Windows	NDIS-3
Physical Dimensions	(L) 7.5 in. x (W) 4.25 in. single ISA slot
Power Requirements	2.0A @ +5V max.

Ordering Information

Ordering information for the Bay Networks multimedia workgroup solution appears in Table 2.

Table 2 | **Multimedia Workgroup Solution Ordering Information**

Order Number	Description
AK3401001	Model 10625 Multimedia Switch
AK3419001	25 Mbps ATM Multimedia Adapter - PCI Bus
AK3419002	25 Mbps ATM Multimedia Adapter - ISA Bus
AK3401002	4 port 25 Mbps MDA for Multimedia Switch
AK3416001	Media Operating Software (single user license)
AK3416002	Media Operating Software (10 user license)
AK3416003	Media Operating Software (30 user license)
AK3416004	Media Operating Software (100 user license)

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