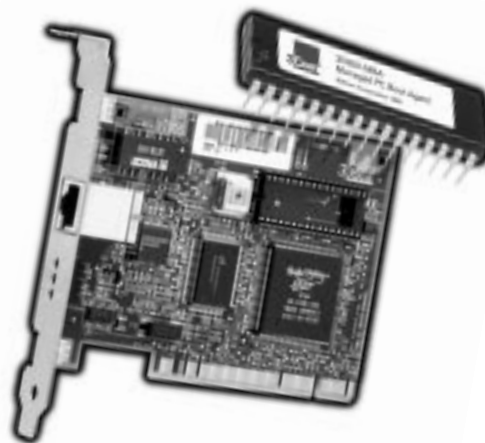




Managed PC Boot Agent

Centralized PC Boot Management for Lower Cost of Ownership

The 3Com Managed PC Boot Agent brings NetPC functionality to all desktop computers, lowering total cost of ownership and improving desktop management.



Key Benefits

Pre-OS. IS can perform a “Pre-OS boot” in which the PC is booted from the network before the operating system is loaded from the local hard drive.

Disaster Recovery. With the proper controls designed into your management application, the Managed PC Boot Agent can permit PCs to boot off the server in a “network safe mode” if local boot-up fails.

Security. To secure data and eliminate unauthorized programs, administrators can use the Managed PC Boot Agent to search hard disks and lock down floppy disks before booting.

Compatibility. The Managed PC Boot Agent is compatible with today's most widely-used operating systems, network management software, and boot protocols.

3Com's Managed PC Boot Agent (MBA) strikes a balance between administrators' need for control and consistency and users' desire for freedom and flexibility.

With the Managed PC Boot Agent added to a 3Com Network Interface Card (NIC), administrators can have PCs perform a Pre-OS boot and accomplish a comprehensive range of management tasks or repairs from a central management station. These tasks include installing and configuring new PCs, performing software upgrades, reconfiguring multiple systems, backing up and restoring hard drives, and scanning for viruses. After these tasks are performed, boot control is returned to the PC's local hard drive.

The Managed PC Boot Agent ensures users improved manageability and reduced administrative costs, without requiring major network infrastructure changes or wholesale upgrades to “thin client” network PC devices.



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Managed PC Boot Agent

Bringing Increased Manageability to All PCs

While desktop PCs empower users, they require considerable management resources with nearly 50 percent of PC ownership costs devoted to administration.

In an effort to reduce these costs, some administrators have turned their attention to NetPCs and Network Computers (NCs), or "thin clients."

While thin clients hold promise for lowering Total Cost of Ownership (TCO) by simplifying general PC maintenance and upgrades, most companies have been reluctant to discard their substantial investment in traditional PCs.

3Com's Managed PC Boot Agent, one in a series of new, enhanced management services being delivered in 3Com NICs, bridges the gap. With the 3Com Managed PC Boot Agent installed in 3Com NICs, PCs can receive all or any part of their boot-up instructions from the network, allowing centralized control to whatever extent the network manager deems appropriate.

The Advantages of Pre-OS Booting

Booting from the network is not a new concept, but now administrators can perform "Pre-OS booting" to boot PCs even without a functional operating system installed. The PC communicates with a boot configuration server, loads an initial operating system off the network with desktop management agents and configuration details or updates, then completely exits the operating system, returning to its own hard drive to boot up normally.

To ensure the desktop is attached to the network and can be remotely managed even if the local operating system cannot be loaded, Managed PC Boot Agent is shipped with the 3Com Pre-OS utility.

Support for Current and Emerging Standards

The Managed PC Boot Agent is designed to comply with emerging standards while also providing compatibility with today's most commonly-used operating systems, network management software, and boot protocols.

Beyond Wired for Management Compliance

By the year 2000, virtually all PCs shipped worldwide will comply with the Wired for Management (WfM) specification for Net PCs. A key element of that specification is the Preboot eXecution Environment (PXE), also known as Network Service Boot. 3Com's Managed PC Boot Agent technology complies with the PXE standard while providing functionality well beyond PXE requirements.

The Managed PC Boot Agent has the unique advantage of enabling existing NetWare, Microsoft, and UNIX Boot Services to support NetPC and Managed PC functionality as defined by the PXE standard without requiring any software modifications.

Integration with Leading Operating Systems, Network Management Systems, and Boot Protocols

The Managed PC Boot Agent supports today's most popular operating systems including Windows 3.x, 9x, NT; UNIX; and Novell NetWare.

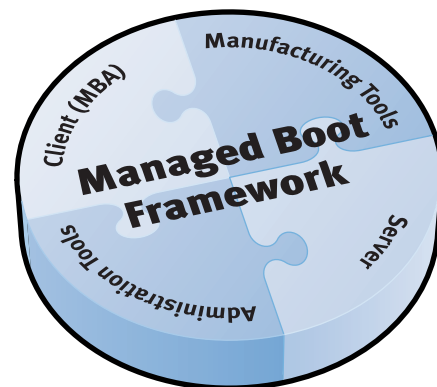
In addition, Managed PC Boot Agent works with network management software from Network Associates, Hewlett Packard, Intel, ON Technology, Tivoli, and McAfee. The Managed PC Boot Agent also supports a full range of industry standard boot protocols including PXE, NCP/IPX, RPL, BootP, and DHCP.

Where to Find 3Com Managed PC Boot Agent

3Com's Managed PC Boot Agent is available in the following formats:

- In a chip that can be plugged into the Boot ROM socket on 3Com NICs.
- As a flash upgrade for existing 3Com TriROM chip users.
- Embedded in the system BIOS of select PC motherboards.

Due to its support for open standards, 3Com also is making the Managed PC Boot Agent available for chipsets from other chip manufacturers including AMD, Digital, Intel, SMC, and Texas Instruments.



The 3Com Managed Boot Framework

The Managed PC Boot Agent is a core component of 3Com's Managed Boot Framework, an integrated approach to delivering network management tools to clients and servers while also meeting the needs of network administrators and reducing PC manufacturing costs.

Client Tools

As described above, the Managed PC Boot Agent component of the Managed PC Boot Framework enables an administrator to perform a Pre-OS boot and accomplish a comprehensive range of management tasks or repairs from a central management station.

Server Tools

On the server side, 3Com's Managed Boot Framework offers BOOTP and TFTP Services for Windows NT and Windows 9x as well as BINL Service for Windows NT.

Administration Tools

The Managed PC Boot Agent includes utilities that enable network administrators to create, edit, and view Pre-OS and network boot image files. The utilities also include 3Com Pre-OS, software that ensures the desktop is attached to the network and can be remotely managed even if the local operating system cannot be loaded.

A Software Developers Toolkit is available that enables OEMs to provide additional functionality through APIs into Managed PC Boot Agent firmware.

Manufacturing Solutions

The Managed Boot Framework reduces the cost of PC ownership by allowing burn-in diagnostics, OS installation, and hard drive formatting to be downloaded from a server, eliminating the cost of creating and distributing customized floppy disks.

3Com's Managed PC Solutions

The Managed PC Boot Agent is one component of a comprehensive set of Managed PC solutions that are available on selected 3Com NICs. These solutions include:

Remote Wake Up.

This capability allows managers to power up PCs remotely to add new applications, update operating systems, and conduct inventory checks.

DMI 2.0.

Desktop Management Interface (DMI) 2.0 enables Managed PCs and Net PCs to report details about themselves and their peripherals across the network to a DMI 2.0 management application. The manager then can use this information to assist in client and server systems management, configuration and planning. 3Com offers a wide range of NICs with agents that comply with Desktop Management Task Force (DMTF) DMI 2.0 specification.

Features	Benefits
<i>Capabilities</i>	
Lets network administrators install and configure new PCs, perform software upgrades, and reconfigure multiple systems	Lower total cost of ownership
Scans for and eliminates viruses, games, or problematic internet downloads	Remote security
PCs can be booted off the server if local boot-up fails .The PC automatically can be restored to an operational state with no user intervention, even if drive reformatting and partitioning is required	Disaster recovery
Allows remote network client management without a desktop management suite	Lower total cost of ownership
Enables existing NetWare, Microsoft, and UNIX Boot Services to support NetPC and Managed PC functionality	PXE capabilities for legacy systems
Software APIs available to OEMs	Customized firmware development for added functionality
Pre-OS configuration options include Local Boot Enable/Disable and Floppy Disk Enable/Disable	Flexible end user options
<i>Compatibility and Reliability</i>	
Compatible with Windows 3.x, 9x, NT with FAT 16; DOS; UNIX; and Novell NetWare	Support for popular operating systems
Supports network management software from key vendors including Network Associates, Hewlett Packard, Intel, ON Technology, Tivoli, and McAfee	Support for widely used network management software
Compatible with industry- standard boot protocols, including PXE, NCP/IPX, RPL, BOOTP, and DHCP; supports BBS (BIOS Boot Specification) and non-BBS compliant PCs	Boot protocol independent
Enables existing NetWare, Microsoft, and UNIX) Boot Services to support Net PC and Managed PC functionality	Provides legacy systems with WfM capabilities
Compatible with AMD, Digital, Intel, SMC, Texas Instruments, and other chipsets	Promotes Managed PC Boot Agent as an industry standard
PNP (Plug and Play) and non-PNP LAN adapters	Support for legacy systems
Lifetime warranty	Unsurpassed 3Com reliability



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Specifications

Protocols supported

NetWare Core Protocol
(NCP/IPX)
Remote Program Load (RPL)
TCP/IP BootP, DHCP and PXE
(Preboot eXecution Environment)
for WfM compliant booting

Network and Operating Systems supported

DOS
Windows 3.X, 95
Windows NT 3.X, 4.X
Novell NetWare
UNIX

Other included items

Utility and flash update software

Pre-OS configuration options

Local Boot Enable/Disable
Floppy Disk Enable/Disable
Prompt Time 2, 3, 5, 8 seconds
MBA Configuration Menu
Enable/Disable
Default Image Name for NetWare
BootWare MSD Enable/Disable
(Limited to specific environments)
Scan Bootconf.sys file
Enable/Disable

Hardware Requirements

3Com EtherLink XL PCI NIC
3C900
3Com Fast EtherLink XL PCI TX
NIC 3C905B
3Com Fast EtherLink XL PCI T4
NIC 3C905

Ordering Information

For EtherLink XL PCI NIC 3C900,
3Com Fast EtherLink XL PCI TX
NIC 3C905B, and Fast EtherLink
XL PCI T4 NIC 3C905

OEM part numbers

single chip	3C90X-MBA
100 pack	3C90X-MBA-100PK

Channel part numbers

single chip	3C90X-MBA-C
20 pack	3C90X-MBA-C-20PK
100 pack	3C90X-MBA-C-100PK

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