



LANClient Control Manager 3.0

Compatibility and Configuration Guide for IBM Systems

Updated August 30, 2001

Note: Before using this information and the product it supports, be sure to read the notes and trademark information in the Appendix.

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About the Guide

This document includes information about the hardware and software that IBM® LANClient Control Manager™ (LCCM) supports. You will find tables that detail which IBM systems are supported as LCCM clients. Supported network interface cards (NICs) are listed here as well. LCCM requires certain levels of firmware for both client hardware and network adapter to function properly. Please check the tables for proper BIOS levels.

LCCM is licensed and available at no charge for use on IBM client systems. You must purchase the System Installation Tool Kit to obtain a license to use LCCM on non-IBM client systems.

Although one of the features of LCCM is to distribute software to client computers across a LAN, the terms and conditions of the IBM International Program License Agreement for LCCM do not grant any license to install, copy, or use any application software or operating system software not provided with LCCM. This includes, but is not limited to, Microsoft® Windows® 3.1, Windows 95, Windows 95 OSR2, Windows 98, Windows NT®, Windows 2000 Professional, Windows 2000 Server and Advanced Server, and DOS. Always ensure that you have obtained suitable licenses for any software you intend to use with LCCM.

1.2. How to Find Your Way Around

This guide is organized in numbered chapters and sections. The Table of Contents above lists the different sections and corresponding page numbers. If you are viewing the guide on-line with Acrobat Reader, you can easily navigate the document by clicking the hyperlinked text in the Table of Contents as well as the references to the World Wide Web. You will notice that the cursor changes when you move it above hyperlinked text.

1.3. Further Reference

In addition to this guide, there are various other sources that you can consult on LCCM:

- ▶ Context-sensitive help provided with LCCM. From the main window, select the **Help** menu and click the **Help Index**
- ▶ The LCCM home page is <http://www.pc.ibm.com/us/desktop/lccm/index.html>
- ▶ The User's Guide is available at <http://www.pc.ibm.com/us/desktop/lccm/docs.html>
- ▶ Last minute updates and changes are given in ReadMe files. Please visit <http://www.pc.ibm.com/us/desktop/lccm/download.html>
- ▶ Hints and Tips are given at <http://www.pc.ibm.com/us/desktop/lccm/hints.html>
- ▶ Subscribe to the LCCM Users Forum to discuss problems and solutions with fellow users. Please see <http://www7.pc.ibm.com/~UMS/>
- ▶ Get technical support. Support is available for supported systems (IBM and non-IBM) through e-mail or fee-based telephone support. Telephone support is not available in all countries. For more information about the fee-based telephone support, see <http://www.ibm.com/support> or

<http://service.software.ibm.com/supportline.html>. For more information about e-mail support, please visit
<http://www.pc.ibm.com/us/desktop/lccm/esupport.html>

- ▶ To purchase the System Installation Tool Kit to use LCCM on non-IBM client systems, please visit <http://www.pc.ibm.com/ww/solutions/lcc/sit.html>

2. Supported Computers

The following information is a comprehensive listing of all IBM computers supported as clients by LCCM version 3.0. The BIOS level shown in the matrices indicate the levels that were used in testing. It is recommended that you update your systems to the most recent BIOS level. To get BIOS updates, check the support page for a particular system or visit the Personal Computer File Library at <http://www.pc.ibm.com/us/stdfiles.html>.

2.1. IBM Servers

Computer			Maintenance				Unattended Install	
Model	Type	Tested BIOS Level	BIOS Update	CMOS Update	ASM Config.	RAID Config.	Windows NT 4.0 Server	Windows 2000 Server & Advanced Server
Netfinity® 3000	*8476	NTJT32A	Y	Y	Y	Y	Y	Y ¹
Netfinity 3500	*8644	NNJT35A	Y	Y	Y	Y	Y	Y
Netfinity 3500 M10	*6889	NUJT43A	Y	N	Y	Y	Y	Y
Netfinity 3500 M20 ⁷	*8657	HQJT19A	Y ⁵	N	Y ³	Y	Y	Y
Netfinity 4000R ⁷	*8652	TRJT11A ²	Y	N	Y ⁴	Y	Y	Y
Netfinity 4500R ^{6,7}	*8656	ILJT41A	Y	N	Y ³	Y	Y	Y
Netfinity 5000 ^{6,7}	*8659	MOJT51A	Y	N	Y	Y	Y	Y
Netfinity 5100 ^{6,7}	*8658	ILJT41A	Y	N	Y ³	Y	Y	Y
Netfinity 5500 ^{6,7}	*8660	KIJT78A	Y	N	Y	Y	Y	Y
Netfinity 5500 M10 ^{6,7}	*8661	KIJT78A	Y	N	Y	Y	Y	Y
Netfinity 5500 M20 ^{6,7}	*8662	KQJT24A	Y	N	Y	Y	Y	Y
Netfinity 5600 ^{6,7}	*8664	TPJT58A	Y	N	Y	Y	Y	Y
Netfinity 6000R ^{6,7}	8582	ARJT09A	Y ⁵	N	Y ³	Y	Y	Y
Netfinity 7000 ^{6,7}	*8651	CKJT15A	N	N	Y	Y	Y	N
Netfinity 7000 M10 ^{6,7}	*8680	OSJT37A	Y	N	Y	Y	Y	Y
Netfinity 7100 ^{6,7}	*8666	MWJT29A	Y ⁵	N	Y ³	Y	Y	Y
Netfinity 7600 ^{6,7}	*8665	MWJT29A	Y ⁵	N	Y	Y	Y	Y
Netfinity 8500R ^{6,7}	*8681	MMJT33A	Y	N	Y	Y	Y	Y
@server xSeries 200	*8478	EXJT33A	Y	N	Y	Y	Y	Y
@server xSeries 220 ⁸	*8645	TUJT15A	Y	Y	Y	Y	Y	Y

Computer			Maintenance				Unattended Install	
Model	Type	Tested BIOS Level	BIOS Update	CMOS Update	ASM Config.	RAID Config.	Windows NT 4.0 Server	Windows 2000 Server & Advanced Server
@server xSeries 232	*8668	QAJT13A	Y	N	Y	Y	Y	Y
@server xSeries 230 ^{6,7}	*8658	ILJT41A	Y	N	Y ³	Y	Y	Y
@server xSeries 240 ^{6,7}	*8664	TPJT58A	Y	N	Y	Y	Y	Y
@server xSeries 250 ^{6,7}	*8665	MWJT29A	Y ⁵	N	Y	Y	Y	Y
@server xSeries 300	8672	ABJT17A	Y	N	Y	Y	Y	Y
@server xSeries 330 ⁷	*8654	TTJT23A	Y	N	Y	Y	Y	Y
@server xSeries 330	*8674	EMJT04A	Y	N	Y	Y	Y	Y
@server xSeries 340 ^{6,7}	*8656	ILJT41A	Y	N	Y ³	Y	Y	Y
@server xSeries 342	*8669	QAJT13A	Y	N	Y	Y	Y	Y
@server xSeries 350 ^{6,7}	*8682	ARJT21A	Y	N	Y	Y	Y	Y
@server xSeries 370 ^{6,7}	*8681	MMJT33A	Y	N	Y	Y	Y	Y

Notes:

Y = Yes, passed

N = No, failed

* = Models tested in the LCCM lab

1. Wake on LAN® becomes disabled after normal operating system shut down on this system.
2. If the system has the AMI BIOS, then you must update the BIOS manually to this BIOS level or later prior to managing with LCCM.
3. You must create an LCA file in order to install the SCSI drivers.
4. Supported with Adaptec SCSI Adapter only. You must create an LCA file in order to install the SCSI drivers.
5. Intermittent problem with server hanging while flashing BIOS. If this happens, you will have to recover the BIOS using a BIOS Flash diskette. The recovery process will involve moving a jumper or setting a switch, updating the BIOS with the diskette, and then moving the jumper or switch back to its original setting. Please consult your server documentation (e.g., Hardware Information) for recovery details.
6. Supported only if you install a supported PCI network adapter.
7. Does not support Wake on LAN.
8. Supports Wake on LAN only if you install a supported PCI network adapter.
9. The BIOS update functionality using LCCM does not work for BIOS level ABJT16A, the level with which some of these models shipped. Please use the indicated BIOS level or later.

2.2. Desktop Computers

Computer			Maintenance				Unattended Install					Clone Install	
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Password Update	Asset ID Support	Windows NT 4.0 WorkStation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
*6867	IntelliStation EPro	NWJT53A	Y	Y	Y	N/A	Y ³	Y ³	N	N	N	N	N
*6893	IntelliStation EPro	NVJT57A	Y	Y	Y	Y	Y	Y	N	N	N	N	N
*6836 *6846	IntelliStation EPro	EXJT33A	Y	N	N	N/A	Y	Y	N	N	N	N	N
*6868	IntelliStation MPro	PLJT42A	Y	Y	Y	N/A	Y	Y	N	N	N	N	N
*6898	IntelliStation MPro	NGJT41A	Y	Y	Y	N/A	Y	Y ⁸	N	N	N	N	N
*6849	IntelliStation MPro	PGJT19A	N ⁷	N ⁷	N/A	N/A	Y	Y	N	N	N	N	N
*6850	IntelliStation MPro	DAJT14A	Y	N	N	N/A	Y	Y	N/S	N	N	N	N
*6851	IntelliStation RPro	ENJT04A	Y	N	N	N/A	Y ^{10, 11}	Y ¹¹	N/S	N	N	N	N
*6865	IntelliStation ZPro	NYJT33A	Y	Y	Y	Y	Y	Y	N	N	N	N	N
*6866	IntelliStation ZPro	PFJT45A	Y	Y	Y	Y	Y	Y ⁴	N	N	N	N	N
*6899	IntelliStation ZPro	NKJT22A	Y	Y	Y	N/A	Y	N	N	N	N	N	N
6344 6345	PC 300 ⁶	PUJT19A	Y	Y	Y	N/A	Y	N	N	Y	Y	N	Y
*6562 6592	PC 300PL	NMJT25A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y

Computer			Maintenance				Unattended Install					Clone Install	
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	Windows NT 4.0 WorkStation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
*6563 *6564 6573 *6574	PC 300GL	PJJT38A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y
*6565	PC 300PL	PMJT25A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
*6584 *6594	PC 300PL	NWJT53A	Y	Y	Y	Y	Y	Y	Y ¹²	Y	Y	Y	Y
*6588	PC 300XL	NEJT17A	Y	Y	Y	N/A	Y	Y	Y	Y ¹	Y ¹	Y	Y
*6862 6892	PC 300PL	NVJT57A	Y	Y	Y	Y	Y	Y	Y ¹²	Y	Y	Y	Y
*6268 *6278 *6288	PC 300GL	NXJT37A	Y	Y	Y	N/A	Y	Y	Y ¹²	Y	Y	Y	Y
6272 *6282	PC 300GL ³	NDJT36A	Y	Y	Y	N/A	Y	Y	Y ¹⁴	Y	Y	Y	Y
*6275 6285	PC 300GL	PDJT31A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y
6287 *6277	PC 300GL	NHJT42A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y
*6561 6591	PC 300GL	NZJT42A	Y	Y	Y	N/A	Y	Y	Y ¹⁴	Y	Y	Y	Y
*6577 6587	PC 330 PC 350	LVJT37A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y
*6589	PC 365	LUJT37A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y
*6877	PC 730	LQKT46A	N/A	N/A	N/A	N/A	Y	Y ²	Y	Y	Y	Y	Y
6887	PC 750	LQKT46A	N/A	N/A	N/A	N/A	Y	Y ²	Y	Y	Y	Y	Y
*6269	NetVista™ A20 ⁶	PTJT10A	Y	Y	Y	N/A	N	N	N	Y	Y	N	Y
6266 *6270 *6344	NetVista A20 ⁶	PUJT10A	Y	Y	Y	N/A	N	Y	N	N	N	N	N
6276	NetVista A20i ⁶	PUJT10A	Y	Y	Y	N/A	N	Y	N	N	N	N	N

Computer			Maintenance				Unattended Install					Clone Install	
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	Windows NT 4.0 WorkStation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
*6341 6336 6337 6339 6342 6346 6347 6348	NetVista A21	21JT09A	Y	Y	Y	N/A	Y	Y	N/S	N	Y	N	Y ⁹
2254 2256 *2257	NetVista A21i	21JT09A	Y	Y	Y	N/A	Y	Y	N/S	N	Y	N	Y ⁹
*2271 *2276 6058 *6568 6578 *6648 6830 *6831 6840 *6881	NetVista A40	PIJT33A	Y	Y	Y	N/A	Y	Y	N	Y	Y	Y	Y
6842	NetVista A40 ₁₅	KJKT05A	N/T	N/T	N/T	N/T	Y	Y	Y	Y	Y	Y	Y
6059 *6569 *6579 6649 *6841	NetVista A40p	PIJT33A	Y	Y	Y	N/A	Y	Y	N	Y	Y	Y	Y
*6837 *6847	NetVista A40p	WOJT14A	Y	Y	Y	N/A	Y	Y	N	Y	Y	Y	Y
*6838	NetVista A60	PGJT08A	N ⁷	N ⁷	N/A	N/A	Y	Y	N	N	N	N	N
*6832 *6833	NetVista A60	P9JT21A	Y	Y	N/A	N/A	Y	Y	N/S	N	Y	N	Y ⁹
*6848	NetVista A60i	PGJT19A	N ⁷	N ⁷	N/A	N/A	Y	Y	N	N	N	N	N
*6644 6645	NetVista S40	LFJT19A ¹³	Y	Y	Y	N/A	N	Y ¹³	N	N	N	N	N

Computer			Maintenance				Unattended Install					Clone Install	
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	Windows NT 4.0 WorkStation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
*6646	NetVista S40p	LFJT19A ¹³	Y	Y	Y	N/A	N	Y ¹³	N	N	N	N	N
*6643	NetVista X40	PRJT57B	Y ⁵	N	N	N/A	N	Y	N	Y	Y	N	Y

Notes:

Y = Yes, passed

N = No, failed

N/A = Not Applicable

N/T = Not Tested

N/S = Not Supported by LCCM

* = Models tested in the LCCM lab

1. Not supported with PCI token ring cards.
2. Very slow install with LCCM.
3. Not supported with on-board Ethernet. You must install a supported network adapter.
4. Wake on LAN becomes disabled after normal operating system shut down on this system.
5. When the BIOS is flashed, the boot sequence resets to the default settings. You will need to go into the system's setup and change the boot sequence so that "Network" is the First Startup Device.
6. To use the on-board 10/100 Ethernet adapter from Accton with LCCM, you must purchase and install a suitable boot ROM in the adapter. Alternatively, you could install another network adapter that LCCM supports.
7. Starting with BIOS PGJT21A, it is possible to update the BIOS or CMOS on this computer with LCCM. Please read the comments in the LCCMREAD.TXT file on the BIOS diskette for more information.
8. The Cirrus GD 5440 VGA video driver will not install successfully. Please use another video driver.
9. The Clone Install works for Windows 98 Second Edition only.
10. The Unattended Install does not work for Windows NT 4.0 Workstation, Service Pack 6.
11. To install the Matrox Millennium II Video Adapter, follow these steps:
 - a) Connect the monitor to video port 1
 - b) Create the unattended install software profile
 - c) Assign the client computer and process the profile. The screen will go black during the installation process. This is expected behavior.
 - d) Wait until the box is checked on the Progress and Errors screen of your LCCM console. Now the installation has completed.
 - e) Switch the monitor to video port 4 and reboot the computer. Logon to your system.
 - f) Install the Matrox MGA G200 AGP video driver and reboot the system.
 - g) Switch the monitor back to video port 1.

12. The Unattended Install works for Windows 95 OSR2 only.
13. The Unattended Install of Windows 2000 Professional works with BIOS level LFJT19A. It fails with LFJT22A, LFJT23A, and LFJT24A.
14. The Unattended Install of Windows 95 OSR2 needs user intervention to complete. During install, a dialog box will appear asking whether you want to reboot. Please click **Yes**. Installation will continue and complete correctly.
15. Before you scan this machine into LCCM, you must first add its network adapter as an entry to the `\LCCM\NETWORK.LST` file. To do so, follow these steps (the first two steps are optional):
 - a) Create a bootable DOS diskette and copy `\LCCM\UTILITIES\IDVIEW.EXE` onto that diskette.
 - b) Boot DOS from that diskette on this machine and run IDVIEW. The output will contain a line that identifies your network adapter. For this machine the value should be "80862449101401EC".
 - c) With a text editor, add a new line to `\LCCM\NETWORK.LST`. Copy the line whose field 2 (unique record number) contains "36" and past it to the end of the file, change field 2 in the new line to "62", and replace field 7 in the new line with "80862449101401EC".
 - d) Close `\LCCM\NETWORK.LST` and restart LCCM.

2.3. ThinkPad Computers

Computer				Maintenance				Unattended Install ⁹					Clone Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	Windows NT 4.0 Workstation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
9548 9549	A	ThinkPad 770	IDET20W	Y	Y	N	N/A	Y	Y	Y	Y	Y	Y	Y
9548 9549	A	ThinkPad 770ED	IDET34W	Y	Y	N	N/A	Y	Y	Y	Y	Y	Y	Y
9544 9549	A	ThinkPad 770X	IJET35WW	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
9544 9549	A	ThinkPad 770Z	IOET22WW	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
2645 2646	A	ThinkPad 600	IBET37WW	Y	Y	N	N/A	Y	N	Y	Y	Y	Y	Y
2645 2646	A	ThinkPad 600E	IHET38WW	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y
2645 2646	A	ThinkPad 600E	INET29WW	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y
2645 2646	A	ThinkPad 600X	ITET44WW	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y
2643 2644	B	ThinkPad 570	IMET54WW	Y ¹	Y	N	Y	Y	N	Y	Y	Y	Y	Y
2643 2644	B	ThinkPad 570E	IUET17WW	Y ¹	Y	N	Y	Y	N	N	Y	Y	Y	Y
2640 2641	B	ThinkPad 560Z	IEET27WW	Y	Y	N	N/A	Y	N	Y	Y	Y	Y	Y
2624 2626	B	ThinkPad 390	V1.0 R01-C3	Y ¹	N	N	N/A	Y	N	Y	Y	Y	Y	Y
2624 2626	B	ThinkPad 390E	R01-A7	Y ¹	Y	N	Y	Y	N	Y	Y	Y	Y	Y

Computer				Maintenance				Unattended Install ⁹					Clone Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	Windows NT 4.0 Workstation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
2624 2626	C	ThinkPad 390X	ISB053WW	Y ¹	Y	N	Y	Y	N	Y	Y	Y	Y	Y
2635 2636	B	ThinkPad 380Z	IGET30WW	Y	Y	N	N/A	Y	N	Y	Y	Y	Y	Y
2609	C	ThinkPad 240Z	11ET09WW	Y ¹	Y	N	Y	Y	Y	N/S	Y	Y	Y	Y
2629	C	ThinkPad A20p	IVET55WW	Y ¹	Y	N	Y	Y	Y	N/S	Y	Y	Y	Y
	D	ThinkPad A20p	IVET55WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ⁵	Y ³	Y	Y
2628 2633	C	ThinkPad A20m	IWET48WW	Y ¹	Y	N	Y	Y	Y	N/S	Y	Y	Y	Y
	D	ThinkPad A20m	IWET48WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ⁵	Y ³	Y	Y
2628	C	ThinkPad A21e	KUET22WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
2655	C	ThinkPad A22e	10ET20WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	C	ThinkPad A22e	1BET12WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
2628 2633	C	ThinkPad A21m	KXET20WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad A21m	KXET20WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5}	Y ³	Y	Y
2629	C	ThinkPad A21p	KYET21WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad A21p	KYET21WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5}	Y ³	Y	Y

Computer				Maintenance				Unattended Install ⁹					Clone Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Password Update	Asset ID Support	Windows NT 4.0 Workstation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
2628 2633	C	ThinkPad A22m	KXET60WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad A22m	KXET60WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5,7}	Y ^{3,7}	Y	Y
2628	C	ThinkPad A22m	13ET11WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad A22m	13ET11WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5,7}	Y ^{3,7}	Y	Y
2629	C	ThinkPad A22p	KYET59WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad A22p	KYET59WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5,7}	Y ^{3,7}	Y	Y
2647 2648 2649	C	ThinkPad T20	IYET37WW	Y ¹	Y	N	Y	Y	Y	N/S	Y	Y	Y	Y
	D	ThinkPad T20	IYET37WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ⁵	Y ³	Y	Y
2647 2648	C	ThinkPad T21	KZET16WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad T21	KZET16WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5}	Y ³	Y	Y
2647 2648	C	ThinkPad T22	16ET14WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad T22	16ET14WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5}	Y ³	Y	Y
2647 2648	C	ThinkPad T23	1AET37WW	Y ^{1,10}	Y	N	Y	Y	Y	N/S	Y ⁷	Y	Y	Y
	D	ThinkPad T23	1AET37WW	Y ^{1,10}	Y	N	Y	Y ²	Y	N/S	Y ^{4,7}	Y ⁷	Y	Y

Computer				Maintenance				Unattended Install ⁹					Clone Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	Windows NT 4.0 Workstation (SP4-SP6a)	Windows 2000 Professional	Windows 95 & 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
2660 2661 2662	C	ThinkPad X20	IZET56WW	Y ¹	Y	N	Y	Y	Y	N/S	Y	Y	Y	Y
	D	ThinkPad X20	IZET56WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ⁵	Y ³	Y	Y
2660 2662	C	ThinkPad X21	IZET86WW	Y ¹	Y	N	Y	Y	Y	N/S	Y ⁴	Y	Y	Y
	D	ThinkPad X21	IZET86WW	Y ¹	Y	N	Y	Y ²	Y	N/S	Y ^{4,5}	Y ³	Y	Y
2675	C	ThinkPad TransNote	KVET22WW	Y ¹	Y	N	Y	N/A	Y	N/A	N/A	Y ⁶	N/A	Y ⁸
2639	C	ThinkPad s30	18ET44WW	Y ¹	N	N	Y	N/A	Y	N/A	N/A	N/A	N/A	N/A

Docking Stations:

- A. SelectaDock III - PC Card Enabler with advanced Etherjet, supports PXE 1.0 LSA 0.99n
- B. Port Replicator with Advanced Etherjet, supports PXE 1.0 LSA 0.99n
- C. None (built-in NIC)
- D. ThinkPad Dock

Notes:

Y = Yes, passed

N = No, failed

N/A = Not Applicable

N/S = Not Supported by LCCM

1. System must be powered off after Flash over LAN.
2. Copy the file HAL.DLL from Windows NT 4.0 Service Pack 6 or higher to the \LCCM\CLNTFILE\NT4WKS\ENG directory before performing the unattended installation of Windows NT 4.0 with PCI network adapters.
3. Advanced Power Management only. Unattended installation of Windows 98 SE with the IBM ThinkPad Dock will result in this message: "This wizard searches for new drivers for Generic USB Hub. A device driver is a software program that makes a hardware device work." The following workaround is for Windows 98 SE:

Remove the following lines from the file "piixusb.inf"


```
%PCI\VEN_8086&DEV_7112.DeviceDesc%=UniversalHCD.Dev, PCI\VEN_8086&DEV_7112 <- [Intel.Section] section
PCI\VEN_8086&DEV_7112.DeviceDesc="Intel(r) 82371AB/EB/MB PCI to USB Universal Host Controller" <- [Strings] section
```

4. To install Windows 98 with APM mode on this ThinkPad, follow these steps:

- a) Download the "Supplement Files for Windows 98" package from this web site:

http://www.pc.ibm.com/qtechinfo/MIGR-4K4PWX.html?lang=en_US&page=brand&brand=IBM+ThinkPad&family=IBM+ThinkPad%7CThinkPad+A21e&machineType=IBM+ThinkPad%7CThinkPad+A21e%7C2628&doctype=Downloadable+files&subtype=Windows+98&up=

- b) Unpack the downloaded package on your hard drive.

- c) Copy the file "Machine.inf" from the downloaded files to the \LCCM\CLNTFILE\W98\ENG directory before performing the unattended installation of Windows 98.

5. Unattended installation of Windows 98 with the IBM ThinkPad Dock will result in this message: "This wizard searches for new drivers for Generic USB Hub. A device driver is a software program that makes a hardware device work." To avoid this problem, follow these steps:

- a) Create a Windows 98 profile in LCCM.

- b) Use the EXTRACT command to copy the file "usb.inf" from the file "precopy2.cab". Both "extract.exe" and "precopy2.cab" are located in the Windows 98 image directory, \LCCM\CLNTFILE\W98\ENG\.

At the command line type:

```
extract precopy2.cab usb.inf /L c:\temp
```

- c) Change the name of the file "usb.inf" to a new file name (for example, "templ.inf").

- d) Add the following lines to each of these sections in the file "templ.inf":

```
[GenericHub.Section]
%USB\VID_03EB&PID_3312.DeviceDesc%=StandardHub.Dev,USB\VID_03EB&PID_3312

[Strings]
%USB\VID_03EB&PID_3312.DeviceDesc%="Generic USB Hub"
```

- e) Copy the file "templ.inf" into the Windows 98 image directory \LCCM\CLNTFILE\W98\ENG\

- f) Modify the file "custom.inf" in the Windows 98 directory to include the new file "templ.inf" by adding the following information to "custom.inf":

```
[PreCopyFiles]
templ.inf

[InfCopyFiles]
templ.inf
```

6. Copy the file ACPI.SYS from the software selection CD to \LCCM\CLNTFILE\W98ED2\ENG directory before installing Windows 98 SE

7. When performing the unattended installation of Windows 98/98SE with PCI adapter/ThinkPad Dock, CMD IDE Controller Driver is needed. To install CMD IDE Controller Driver with Windows 98/98SE, follow these steps:

- a) Customize the Inf file by using the infirst.exe.
 - b) Copy the customized Inf file and driver files to LCCM server (\lccm\clntfile\)
 - c) Add following line into [version] section
Layoutfile = layout.inf, layout1.inf, layout2.inf
 - d) Delete the entire [Source Disks Files] and [Source Disks Names] sections.
8. The Clone Install works for Windows 98 Second Edition only.
 9. For all ThinkPad systems, in order to do an Unattended Install, you must disable the Power On password option.
 10. You can use the following procedure to update the Embedded Controller firmware. This procedure does not require that you update the ThinkPad's BIOS firmware (i.e., Embedded Controller firmware and BIOS firmware are independent of each other):
 - a) Import an Embedded Controller diskette into LCCM in the same way that you import a BIOS diskette (via the 'Tools', 'Import BIOS files', and 'Read BIOS flash diskette' menus; for more details, see the user's guide). This results in the creation of a directory, for example \lccm\clntfile\bios\1AHT15WW.
 - b) Create a new maintenance batch file, for example, \lccm\clntfile\bios\1AHT15WW\ecupdate.mns, that contains the following lines:


```
xcopy %lccmpath%\BIOS\1AHT15WW %RAMDSK% /s /e /v
copy %lccmpath%\sleep.exe %RAMDSK%
copy %lccmpath%\error.bat %RAMDSK%
%RAMDSK%
%RAMDSK%\sleep 5
%RAMDSK%\ecflash2.exe /u
%RAMDSK%\error.bat
```

Note that the first line contains the specific Embedded Controller flash level that you imported in step a (1AHT15WW in the example).
 - c) Assign the ThinkPad client to a Software Profile, if the client is not already assigned a profile.
 - d) Open the ThinkPad client's Individual Client Details notebook.
 - e) On the "Software" page, uncheck the "Mark Client for reload" check box.
 - f) On the "Maintenance" page, select the maintenance batch file that you created in step b (\lccm\clntfile\bios\1AHT15WW\ecupdate.mns in the example) by using the "Browse" button.
 - g) On the "Maintenance" page, select the "Run Maintenance File" check box.
 - h) Start the Embedded Controller update process by pressing the "Process" button.

2.4. IBM Point of Sale Computers

Computer		Maintenance				Unattended Install						Clone Install	
Name and Model Number	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	Windows NT 4.0 Workstation (SP4-SP6a)	Windows 2000 Professional	Windows 95	Windows 95 OSR2	Windows 98	Windows 98 SE	Windows 95 & 95 OSR2	Windows 98 & 98 SE
SurePOS 4694, model 206 ² SurePOS 4694, model 246 ²	E13	Y	N	N/A	N/A	Y	Y	N	Y	Y	Y	N	Y
SurePOS 4694, model 245 ²		Y	N/T	N/A	N/T	N/T	N/T	N/T	N/T	N/T	N/T	N/T	N/T
*SurePOS 520, model 4840-521 SurePOS 540, model 4840-541 SurePOS 560, model 4840-561	X3KT140	Y	N	N/A	N/A	Y	Y	N	N	Y	Y	N	Y
SurePOS 730, model 4800-102 *SurePOS 730, model 4800-142	R1KT131	N	N	N/A	N/A	Y	Y	N	N	Y	Y	N	Y
*SurePOS 750, model 4800-202 SurePOS 750, model 4800-242	ROKT152	N	N	N/A	N/A	Y	Y	N	N	Y	Y	N	Y

Notes:

Y = Yes, passed

N = No, failed

N/A = Not Applicable

N/T = Not Tested

* Models tested in the LCCM lab

1. To update the BIOS, follow these steps:

2. Wake on LAN is an optional feature. If you do not have this installed, you will have to power on this machine manually before performing an LCCM operation on it.

3. Supported Network Adapters

LCCM will automatically scan, configure, and recognize supported network cards. The following information is a comprehensive listing of all network cards supported by LCCM 3.0. If you are using unsupported cards, you must make the necessary entries into NETWORK.LST, add driver files to LCCM's default directory, and create or modify some LCCM control files. For more information, see the User's Guide.

Use the following links for flash updates and other networking information:

- ▶ [IBM Auto Wake ISA Token-Ring Adapter flash](#). This is required for IntelliStation M Pro -- 6898
- ▶ [IBM PCI Wake On LAN Token-Ring Adapter flash](#). This is required to support a DHCP boot environment
- ▶ For IBM adapters, please refer to either the IBM Networking Hardware Division web page at <http://www.networking.ibm.com/support/>
- ▶ For Intel adapters, please visit <http://www.intel.com>

IMPORTANT: For IBM 2210 Nways Multiprotocol Router and Multiprotocol Routing Services (MRS V2.2), a flash update is required for LCCM 2.5.1. Use flash level EPTF04 or higher. Please visit <http://www.networking.ibm.com/support/code.nsf/2210oper?OpenView>

3.1. IBM Ethernet Adapters

Part Number	FRU Number	Adapter Title	Remoteboot Protocol		WOL
			PXE 2.0	PXE 1.0	
34L4601 (3DES US), 34L4610	34L4609	IBM Netfinity 10/100 Ethernet Security Adapter	Y	N	N
34L4701 (DES non-US), 34L4710	34L4709	IBM Netfinity 10/100 Ethernet Security Adapter	Y	N	N
34L1501, 34L1510	34L1509	IBM Netfinity 10/100 Ethernet Adapter	Y	N	N
34L0901, 34L0910	30L7583	IBM Netfinity 10/100 Ethernet Adapter	Y	N	N
34L4401 (3DES US), 34L4410	34L4409	IBM 10/100 EtherJet Secure Management Adapter	Y	N	Y
34L4501 (DES non-US), 34L4510	34L4509	IBM 10/100 EtherJet Secure Management Adapter	Y	N	Y
34L1101, 34L1110	34L1109	IBM 10/100 EtherJet PCI Adapter with Alert on LAN 2	Y	N	Y
34L1201, 34L1210	34L1209	IBM 10/100 EtherJet PCI Management Adapter	Y	Y	Y
34L0201, 34L0210	30L5929	IBM 10/100 EtherJet PCI Adapter with Wake on LAN ¹	Y	Y	Y
08L2565, 08L2567	08L2566	IBM 10/100 EtherJet PCI Adapter with Wake on LAN ¹	Y	Y	Y
85H9921, 85H9930	85H9928	IBM 10/100 EtherJet PCI Adapter with Wake on LAN ¹	Y	Y	Y
06P3601	06P3609	IBM 10/100 Ethernet Server Adapter	Y	Y	Y

Part Number	FRU Number	Adapter Title	Remoteboot Protocol		WOL
			PXE 2.0	PXE 1.0	
09N9901	09N9901	10/100 EtherLink Server Adapter by 3Com ²	Y	N	N
09N3609	09N3609	10/100 EtherLink PCI Management Adapter by 3Com ²	Y	N	N

Notes:

Y = Yes, passed

N = No, failed

1. Should you want to utilize the IBM 10/100 EtherJet PCI Adapter with Wake on LAN in Docking Stations, then you must re-flash the adapter with the latest ETPFLSH2.EXE V3.10 boot disk. This updated microcode can be obtained from the World Wide Web at <http://www.networking.ibm.com/support> and is located under 'IBM 10/100 Etherjet PCI Management Adapter'. We recommend that you update your ThinkPad systems to the latest BIOS level with microcode obtained from the ETPFLSH2.EXE V3.10 page.
2. Intermittent slow performance with this adapter

3.2. IBM Mini PCI Adapters

Part Number	FRU Number	Adapter Title	PXE	Boot Agent	WOL
Ships with system	N/A	Special miniPCI Ethernet for TP 390X	PXE 2.0 build 071	Intel Boot Agent V2.6 (build 004)	Y
10L1407	10L1423	IBM 10/100 EtherJet miniPCI adapter	PXE 2.0 build 083	Intel Boot Agent V4.0.17	Y
08K3124	08K3125	IBM 10/100 EtherJet miniPCI adapter with 56K modem (Intel current card)	PXE 2.0 build 083	Intel Boot Agent V4.0.17	Y
09N9774	00N8117	IBM 10/100 EtherJet miniPCI adapter with 56K modem by 3Com	PXE V2.41	Managed PC Boot Agent V4.31	Y
Ships with system	08K3303	MiniPCI Combo Card for TP 240Z	PXE 2.0 build 078	Intel Boot Agent V3.0.03	Y
06P3801	06P3809	Intel PRO/100 SP Mobile Combo adapter	PXE 2.0 build 083	Intel Boot Agent V4.0.17	Y
26P8039	26P8069	Ethernet Daughter Card	PXE 2.1 build 083	Intel Boot Agent V4.0.18	Y
Ships with system	26P8100	IEEE 1394/LAN Combo Card	PXE 2.0 build 078	Intel Boot Agent V3.0.03	Y

Notes:

Y = Yes, passed

N = No, failed

3.3. Intel Ethernet Adapters

Part Number	FRU Number	Adapter Title	Remoteboot Protocol		WOL
			PXE 2.0	PXE 1.0	
22P4501	22P4509	Intel PRO/100S Desktop Adapter	Y	Y	Y
22P4701	22P4709	Intel PRO/100S Low Profile Desktop Adapter	Y	Y	Y
19K5543		Intel PRO/100 VE Desktop Connection	Y	N	Y
19K5282		Intel PRO/100 VE Desktop Connection (riser)	Y	N	Y
PILA8460B		Intel PRO/100+ PCI Management Adapter	Y	N	Y

Notes:

Y = Yes, passed

N = No, failed

3.4. IBM Token Ring Adapters

Part Number	FRU Number	Adapter Title	Remoteboot Protocol		WOL
			PXE 1.0	PXE 2.0	
34L0501, 34L0510	30L5980	IBM High-Speed 100/16/4 Token-Ring PCI Adapter	Y	Y	Y
34L0701, 34L0710, 31L3266 Jap	30L6817	IBM 16/4 Token-Ring PCI Adapter 2 with Wake on LAN	Y	Y	Y
34L0601, 34L0610	30L6829	IBM 16/4 Token-Ring PCI Adapter 2	Y	Y	N
86H1880, 86H1886, 86H1887, 08L3340, 08L3294	08L3335	IBM PCI Wake on LAN Token-Ring Adapter	Y	Y	Y
41H8900, 75H9800, 75H9802, 85H3410, 86H1897, 85H3409, 85H3412, 85H3414, 75H9806	41H8874	IBM PCI Token-Ring Adapter	N	N	N
55H6760, 55H6815, 55H6807, 55H6783, 55H6818, 55H6824, 55H6828	55H6810	IBM Auto Wake Token Ring ISA Adapter ¹	N	N	Y
34L5001, 34L5010	34L5009	IBM 16/4 Token-Ring PCI Management Adapter	Y	Y	Y
34L5201, 34L5210	34L5209	IBM High-Speed 100/16/4 Token-Ring PCI Management Adapter	Y	Y	Y
07P2701, 07P2710	07P2709	IBM 16/4 Token-Ring Low Profile PCI Management Adapter	Y	Y	Y

Notes:

Y = Yes, passed

N = No, failed

1. If you are using an ISA network adapter card and you are going to use Windows 95, Windows 95 OSR2 or Windows 98 with LCCM you must set the BIOS for Plug 'n' Play. To access the Configuration/Setup Utility program (BIOS settings) on many IBM computers, press **F1** while the computer is starting up. From **Advanced Setup** select **Plug and Play control** and enable **Plug and Play OS**. It is recommended that you install supported PCI network adapter cards in the uppermost available expansion slot and ISA network adapter cards in the lowermost available expansion slot.

4. IBM RAID Adapters

Part Number	FRU Number	Adapter Title
37L6889	37L6892	ServeRAID – 4H
37L6080	37L7258	ServeRAID – 4M
37L6091	09N9540	ServeRAID – 4L
06P5740	06P5741	ServeRaid- 4Mx
06P5736	06P5737	ServeRaid- 4Lx

5. SCSI Adapters

LCCM 3.0 does not support SCSI adapters in Windows 95. In most other cases, LCCM 3.0 automatically supports SCSI cards. Specifically, on Windows 98, Windows 98 Second Edition, and Windows 2000 LCCM supports the cards compatible with the Operating System. For Windows NT 4.0, LCCM supports the following cards:

- ▶ Adaptec AHA290x/291x/294x/394x/4944/AIC78xx PCI SCSI Controller
- ▶ Adaptec AHA-294xU2/295xU2/395xU2/AIC-789x PCI SCSI Controller
- ▶ Adaptec AIC-7892, AIC-7899, AHA-3960D Ultra160/m

You can add support for additional SCSI adapters in Windows NT 4.0 by modifying `SCSI.LST`. For more information, see the User's Guide.

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