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Canadian Department of Communications Regulatory Statement

This digital apparatus does not exceed Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radio-électriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Réglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

FCC Class B Radio Frequency Interference Statement

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1.   Reorient or relocate the receiving antenna.

2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/television technician for help.

Notice 1:

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2:

Shielded interface cables must be used in order to comply with the emission limits.

Notice 3:

This product complies with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating Electromagnetic Compatibility (89/336/EEC). For the evaluation regarding the electromagnetic compatibility, the following standards were applied:

EN50082-1,   IEC 801-2, IEC 801-3, IEC 801-4
EN50081-1,   EN55022

D.N.S.FI. Regulatory Statement

Class 1 laser product

(EN 60825: 1991)

or

Luokan 1 laserlaite

Klass 1 laser apparat

(EN 60825: 1991)

Additional remarks:

VAROITUS - Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turyallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

Varning - Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserkläss 1.

According to EN 60825 sub-clause 6, regarding actions to be taken against dangerous radiation including copies of all warning labels and information about the laser components and radiation data such as wavelength, output power and pulse times.

Safety instructions

1. Follow all warnings and instructions marked on the product.

2. **DANGER:** Invisible laser radiation when open. Avoid direct exposure to beam.

3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Openings in the front panel and the back or bottom are provided for ventilation. To protect it from overheating, these openings must not be blocked or covered. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.

5. A suitable power adapter must be obtained through the authorized dealer or franchisee.

6. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short cut parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

Sicherheit Anweisungen

1. Bitte beachten sie alle Warnungen und Hinweise, mit denen das Produkt versehen ist.

2. ACHTUNG: Bei Öffnung Austritt von unsichtbarem Laserstrahl. Vermeiden Sie direkten Kontakt mit dem Strahl.

3. Vor Reinigung Produkt bitte ausstecken. Verwenden Sie keine flüssigen Reinigungsmittel oder Aerosol-Reiniger. Verwenden Sie ein feuchtes Tuch zur Reinigung.

4. Öffnungen an Vorder-, Rück- und Unterseite dienen der Belüftung. Um Überhitzung zu vermeiden, dürfen, diese Öffnungen nicht blockiert oder bedeckt werden. Dieses Produkt sollte nie in Nähe oder auf einen heissen Register gestellt werden, oder in ein Einbau ,wenn ausreichende Belüftung nicht gewährleistet ist.

5. Ein passendes Netzteil muss vom authorisierten Fachhändler erworben werden.

6. Schieben Sie keinesfalls Gegenstaende jedweder Art durch den Schrank in das Produkt - es besteht Gefahr von Kurzschluss oder Stromschalg. Schütten Sie nie Flüssigkeiten jedweder Art auf das Gerät.

Table of Contents – IEEE 1394 Interface series of products

Notice About Using An External Firewire IEEE1394 CD-Rewriter

Maintain the performance

For best performace from your CDRW, we recommend you to connect only one CD-Rewriter to your computer at a time. There is an extreme reduction in performance when two or more fast IEEE1394 devices (such as CD-Writer, printers and hard drive) are used simultaneously.

☞ **NOTE:** *Please make sure your computer meets the system requirements (or system configurations) shown on the box or on the next page of this manual.*

How to prevent "Buffer Underrun" error

What is a buffer underrun? An uninterrupted data flow to the CD-Recorder drive is needed when using software like *Easy CD Creator*. A buffer underrun occurs when the PC cannot consistently send the required data that is supposed to be written to the CD-Recorder. If a buffer underrun occurs during writing, the CD-R disc will become useless. To understand how to prevent "buffer underrun" error, please refer to "*What can I do to prevent Buffer underrun?"* on page E-11.

Recommended System Configurations

The system requirements listed below are recommended to ensure consistent writing performance.

- Operating system: Windows® 98SE or higher (Windows 2000/ME)
- RAM: 32 MB or larger.
- CPU: Pentium 166 MHz or above
- Hard Drive: Minimum 50 MB of free space for installing software. 750 MB free Hard Drive is needed when duplicating a CD through Hard Drive (10 MB free space for each minute of recorded music).
- An available IEEE 1394 port

Product Description

Front View
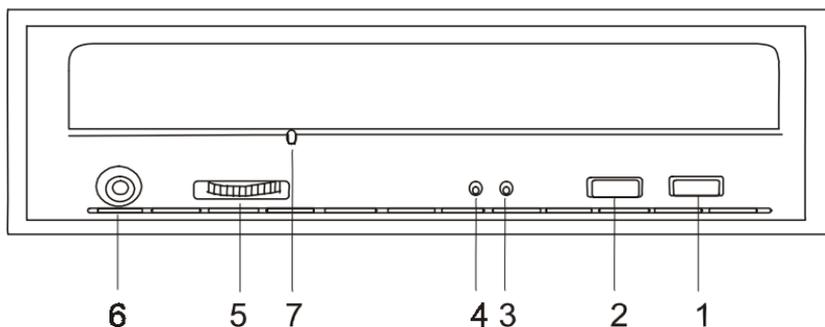
1. Open/Close button:	Opens and closes for disc loading and removal.
2. Play/Skip button:	Plays audio CD and skips one track forward if pressed again..
3. Disc In indicator:	Lights up when data is being read from the disc; flashes during seek operation. Please refer to the chart below for detailed status description.
4. Writing indicator:	Lights up while data is being written to or erased from the disc. Please refer to the chart below for detailed status descriptions.
5. Volume controller:	Adjusts headphone volume level.
6. Headphones jack:	A connection to headphones or self-amplified speakers.
7. Emergency eject:	Insert a straightened paper clip to manually eject the tray.

Indicators status

INDICATORS		
WRITING	**DISC IN**	**STATUS DESCRIPTION**
Off	Off	Drive ready and no disc loaded.
Off	Blinking Green	Power on or reading.
Off	Steady Green	Disc loaded and ready to be accessed.
Blinking Red	Blinking Green	Test before writing.
Steady Red	Blinking Green	Writing.

Rear View
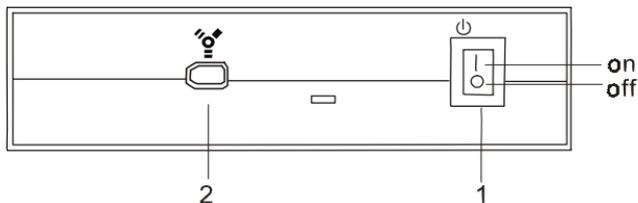
1. **Power switch:** Turns the CD-Rewriter on and off.
2. **1394 Interface connector:** Connects the CD-RW drive to the 1394 cable.

Left View
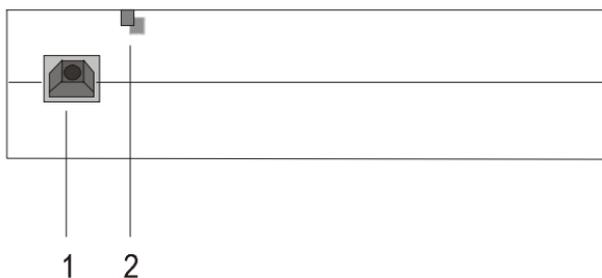
1. **Power supply connector:** Connects the CD-RW drive to the AC adapter.
2. **Power LED:** Indicates the power supply status.

Installation

Hardware Installation

Before you start…
Check if there is at least one 1394 port available on your computer. And Check if the power plug is suitable for the power outlet in your office or at your home.

Installation procedure

1. Turn on your computer and make sure the system platform is Windows 2000/ ME. For Windows 98SE users, please refer to **Note 2** first.

2. Connect the AC transformer to the CD-Rewriter and the power outlet.

Power outlet
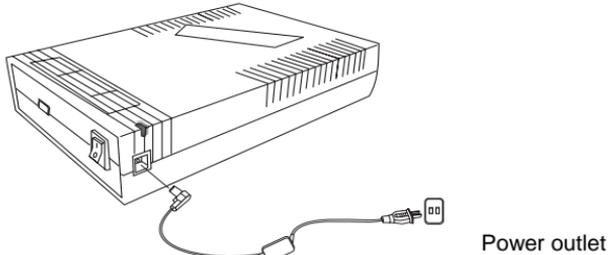
3. Turn on the power. The power indicator should be ON at this time.

Off On

Power indicator
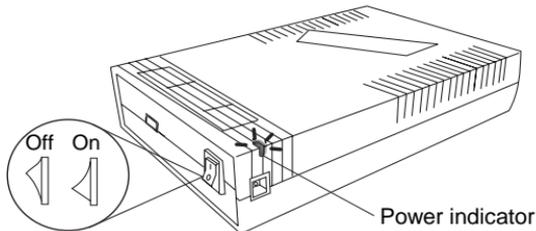
4. Connect the CD-Rewriter to the IEEE 1394 slot of the PC or notebook with a proper

IEEE 1394 6-pin or 4-pin cable.

Step 1

Step 2
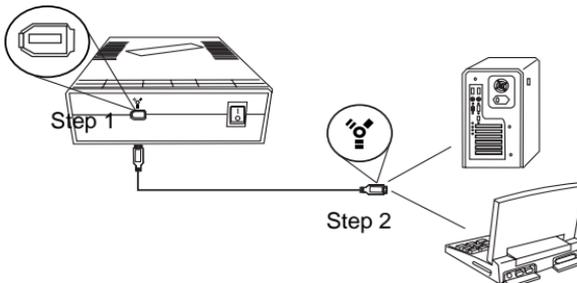
5. Once you have finished the steps above, the system will automatically detect the presence of the CD-Rewriter. Please follow the driver installation instructions shown on the screen. The computer system will automatically recognize the CD-Rewriter without rebooting. (Please go on installing the bundled buring software attached within the package. Writing process can be performed only after the completion of the software installation. For more information on software/ hardware installations and usage, please refer to the product Instruction Manual as well as the User Manual enclosed in the bundled CD-ROM disk.)

6. If you want to remove the CD-RW, please perfom the following steps.
   a. Right-click on the green arrow icon in the tool bar.
   b. Click on "unplug or eject hardware" and then click "stop" in the new window that appears.
   c. Select the device you want to remove, then click on " OK".
   d. The successful removal message appears, cilck on "OK".
   e. Uninstall the products in the reverse order of steps 4~2.

   N o t e 1 : Once you have completed the installation of the IEEE1394 start-up driver in above Step 5, the computer will recognize the CD-Rewriter every time you connect the 1394 cable to it with above Steps 1~4. User can start operating directly.

   N o t e 2 : If you are using Windows 98 SE system, please follow below steps to install Microsoft driver before install our product!

   1. Sign onto the Internet and go to Windows 98 support website: www.microsoft.com/windows98.
   2. Locate the ' Search' function, enter "1394", then click "Search" button on web site.
   3. Identify "Windows 98 second editon 1394 storage supplement" from one of the search result items and click on it.
   4. Follow the instruction on web site and download the files.
   5. After downloading has finished, please open the local drive directory where you put the files, find out the files then double-click on it.
   6. Follow the instruction shown to complete the installation of the driver.

CD writing software installation

Before you start…

Please understand that CD recording is a non-interruptible process. Therefore, a stable recording environment is a must -- It is best if you have a HDD only for CD recording purpose -- In other word, in this HDD, only Windows 98SE or higher and the necessary software are installed, nothing else. Then the recording process will be smooth. However if an extra HDD is not available, you might need to carry out the following steps to optimize your Windows CD recording process.

1. Close all resident programs including Anti-Virus, Screen Saver, System Agent, Power Management, etc. Turn off Auto Insert Notification. Further, maximizing and minimizing windows are not recommended either. If not, any operation of these applications will intrude the CD recording process and damage your disk.
2. Defragment your HDD before any CD recording. This is particularly important when you write files to CD from HDD. Defragmentation of HDD reallocates all the files so that these relevant files are placed in nearby clusters. This saves time when Easy CD Creator is trying to search for the files you want to record on CD.
3. It is not advisable that you have too many devices internally connected to the system. Heavy load carried by the system power supply may result in unstable power delivery to each of the internal devices thus causes system unsteadiness.

Installing CD writing software
1. Load the software CD in CD-ROM or your CD-ReWriter.
2. Follow the instructions shown on screen and proceed to installation.
3. Some program may require your system to be rebooted after installation. Follow the program's request to reboot your PC accordingly.

Operation Instructions

How to load a CD disc

- Press the eject button on the CD-ReWriter front panel and the tray will eject automatically.
- Put the CD disc in the tray with the labeled side up.
- Press the eject button or slightly push on the front of the tray to close the tray.

  When a CD disc is loaded, you should be able to read files properly on the disc within a program.

How to remove a CD disc

- Press the eject button on the CD-ReWriter front panel.
- Remove CD disc from the tray.
- Press the eject button or slightly push on the front of the tray to close the tray.

Maintenance

Typically, the CD-ReWriter needs no maintenance or cleaning. Most problems will be prevented if you keep CD discs clean. Use a lens-cleaning cloth to slightly wipe away dusts on disc surface and to avoid scratching it.

Emergency Eject

If the tray does not eject automatically, you may manually pull out the tray. Follow these steps:

- Switch off the power.
- Insert a straightened paper clip into the emergency hole (please refer to the illustration in Front View). The tray will be partially ejected.
- Gently pull out the tray.

Frequently Asked Question (FAQ)

The following FAQ's are the most common problems you may find during installation or regular use. Please review these FAQ's to have your problem solved. In case you do not find any items that answer your problem, please contact your dealer or technical support.

Q: The CD-ReWriter doesn't show up in My Computer or Explorer.
The following steps will assist you to get your drive to work as a CD-ROM:
- If you cannot find CD-ReWriter in Explorer, restart your computer, or shut it down and then turn it on again.
- Make sure the computer is plugged in and that each device has power. To check If the CD-ReWriter receiving power properly, you can check the power indicator or test it by pressing eject button to see if the tray opens and closes.
- Disconnect and then reconnect the CD-Rewriter's power cable. This might fix a faulty connection.
- Disconnect and then reconnect the 1394 cable.

Q: Not sure which drive letter was assigned to the CD-ReWriter.
The CD-ReWriter will have an icon, just like a CD-ROM drive. You can easily see which icon is CD-ReWriter by double-clicking "My Computer" icon, then right-click CD drive's icon, and selecting Eject. The tray of selected drive will open.

Q: The CD-ReWriter has problem in reading CD disc.
There are several ways to solve this problem as follows:
- The CD disc in the tray may be loaded upside-down, or a little off-center. Try re-loading the CD disc with its label side up.
- After loading a CD disc, it will take a moment to let the CD-ReWriter read the disc information. When the indicator on the front panel stops flashing and stays green, it is ready for access.
- If the disc you just loaded is a blank CD disc, try it later after copying some information to the CD.

Q: Error message when double-clicking on the CD-ReWriter icon.
- There is no CD in the CD-ReWriter, load a CD disc and try again.
- After loading a CD disc, you need to wait for a short moment to let the CD-ReWriter read the disc information and ready for further access. The CD-ReWriter is ready when the light stops flashing and stays green.
- The CD disc in the tray may be loaded upside-down, or a little off-center. Try re-loading the CD disc with its label side up.
- If the disc you just loaded is a blank CD disc, try it later after copying some information to the CD.

Q: What are possible causes of buffer underrun
Hard Disk
- Extremely fragmented hard drive.
- Not enough space in temporary directory.
- Hard disk compression may cause buffer underruns. We do not recommend writing from a compressed hard disk or disk partition.
- "Dumb" thermal re-calibration (only on very old hard drives).

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Other Hardware
- Spin-down of CD-ROM drives you're copying data or audio from.
- Slow source devices.
- Source devices that transfer data in bursts.
- Incorrect recorder controller settings.
- Inability of the devices to sync properly.
- Overall system configuration.
- Computer is unable to allow data transfer fast enough.
- Setting hard drive's read ahead optimization to "none" may cure buffer underruns in some cases. (Go to "Start menu" -> "Settings" -> "Control Panel" -> "System" -> "Performance" -> "Advanced Settings/File System" -> "Hard Disk" and set "Read-ahead optimization" to "None.")

Networks
Recording across the network (a network may be too slow to maintain adequate throughput speed).

Files to Be Recorded
- Recording many small files.
- Damaged source files (data loss).
- Trying to record files in use by the system or other applications.

Other
- Copying from a CD that is scratched, dirty, or damaged.
- Recorder malfunction

Q: What can I do to prevent Buffer underrun?
You can try the following procedures to prevent buffer underrun:
- Use a faster hard drive and defragment your hard drive at least once a week.
- Do not record across a network. Copy the desired files to your local hard drive.
- If your source hard disk is more than five years old, make sure it does smart thermal re-calibration.
- It may be necessary to write audio at slower speeds than those you can achieve for data, since writing CD-DA audio requires streaming more bits per second to the recorder.
- Record in lower speed – it takes longer time to empty the buffer when recording at lower speed.
- Keep the CDs, the recorder, and your source CD-ROM drive free of dust.
- Close all other application programs.
- Disable the screen saver and anti-virus programs. (Go to "Start Menu" -> "Setting" -> "Control Panel" -> "Monitor" -> "Screen Saver".)
- PC power management makes PC slower and thus it may result in buffer underrun. Disable the power management or delay the power saving time. (Go to "Start Menu" -> "Setting" -> "Control Panel" -> "Power Management")
- Keep your CD-R/CD-RW cool. Sometimes the drive fails when they overheat.
- Your system must meet the minimum configuration of your CD-recording Mastering software.
- Do not try to copy empty directories, zero byte files, or files that may be in use by the system at the time of recording.
- If your data includes more than 10,000 very small files, create a disc image first, or record at a slower speed.
- The temporary directory should always have space free at least twice the size of the largest file you are recording.

♦   Try a different brand of recordable disc.

Q: Cannot directly copy from one CD to another.
*   Some CD-ROM disc will not allow direct copying to the CD-ReWriter or are not capable of digital audio extraction.
*   You need to have a supported CD-ROM drive to use as your source.
*   Some CD discs may have copy protections or other features that do not allow a CD-to-CD copy.

Q: Poor audio quality.
*   Make sure the audio cable is connected completely between the sound card and CD-ReWriter or CD-ROM.
*   Make sure that you do not have any sound-muting feature turned on by way of the monitor or software.
*   Try listening to the wave files (.WAV) on your hard drive to see if they sounded poor before you copy them to CD.

Q: Unable to see a second session reading from a CD-ROM drive.
*   Eject the CD and re-load it.
*   Refresh the screen. Select the My Computer icon in Windows Explorer and press F5.
*   Make sure if your CD-ROM drive reads CD-RW discs. CD-RW discs can only be used in CD-ReWriter or newer MultiRead CD-ROM.
*   For Windows 3.x users: If some other programs create the CD disc, please verify you are using version 2.23 of the MSCDEX.EXE file. First, restart your PC and when you see "Starting MS-DOS…", appear on your monitor, press F8. Each line in your CONFIG.SYS and AUTOEXEC.BAT files will load one at a time. Press "Y" until you see a line containing "MSCDEX.EXE", then press "Y" and you will see the version number displayed on monitor. The number shall be 2.23 or greater. In case you cannot find this file, you can download it from Microsoft's FTP site: ftp://ftp.microsoft.com/Softlib/MSFILES/MSCD223.EXE. This file is a self-extracted ZIP file, please run it to retrieve MSCDEX.EXE file.
*   See if the CD-ReWriter or other CD-ROM drives can read the CD disc properly. If so, then the problem is probably with the CD-ROM drive. Contact the manufacturer of the drive for updated drivers or patch files.

Q: Unable to see the CD label or all files on the CD within Windows Explorer.
Refresh the screen. Select My Computer icon in Windows Explorer and press F5.

Q: Applications cannot locate the CD in CD-ReWriter.
Some programs only locate the first logical drive letter assigned to a CD-ROM or a CD-ReWriter drive. For example, if your CD-ROM drive is assigned drive D: and CD-ReWriter is assigned drive E:, the program locates drive D: only and will not locate drive E:. Thus you need to reassign drive letters to both your CD-ROM and CD-ReWriter drives in case you want to run the program in CD-ReWriter.
*   Windows: right-click My Computer icon. Click Properties item, open Device Manager and double-click CD-ROM drive, then click Setting tab. Under Reserved drive letters, select the drive letter *after* the existing letter (for both start and end drive letter) and click OK. Then double-click CD-ReWriter icon, then click Setting tab. Under Reserved drive letters, select the drive letter *before* current one and

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click OK.

Q: Can I use hard drive compression software?
It is not recommended to use hard drive compression software when CD-ReWriter is installed. CD-R and CD-RW writing program may check free space to estimate needed space. However, due to the hard drive compression software's compression ratio may vary from time to time. The actual free space available may not be enough for disc copying.

Q: To maintain optimal writing performance
Regularly run disc de-fragmentation and scan-disk programs on your hard drive (please refer to your Windows manual for detailed information). Doing this improves the access time to the hard drive, and thus ensures writing in higher performance.

Finally, a word to all CD-ReWriter owners. The above are only GENERAL rules and are not necessarily applied to any combination of CD-ROM drives, HDD and motherboards. A few trials on different configurations before recording are recommended. Also, try out different CD-R media before you proceed to make volumes duplication as you may figure out which brand of CD-R media originates smoother recording and easier access. As long as you find the best CD recording way, stick to it. Have a nice recording time.

Technical Supports

In case your troubleshooting efforts do not work in solving problem, contact customer support. Please have the following information ready before you call or email us. For help finding this information, please refer to the description below the following table. Write down any error messages you received, which is also helpful in solving your problems.

Information	In your computer
CD-ReWriter firmware version	
Drive serial number	
Computer or motherboard brand/model	
CPU type and speed	
RAM size	
BIOS, if any	
IDE – Primary/Master	
IDE – Primary/Slave	
IDE – Secondary/Master	
IDE – Secondary/Slave	
VGA card type, if any.	
Sound Card	
Operating System and version	

How to find this information

CD-ReWriter firmware version
In Windows 98SE or higher: Right-click My Computer icon, then select Properties, click Device Manager tab. Double-click CD-ROM item and double-click **ATAPI CD-R/RW**. Select Properties and click Setting tab. Firmware version is displayed within Setting tab.
Example: Firmware revision: A.AW

CD-ReWriter serial number
Serial number is printed on a label affixed on bottom of the CD-ReWriter.

Computer or motherboard brand/model
The computer brand and model appear on the front of your computer system. Or you may find it in the manuals come with your system. The motherboard brand and model can be found when you remove the housing or casing, or on the packing box.
Example: XYZ TX586-3.

CPU type and speed
This information typically can be found in your computer's manual or in boot-up screen.
Example: Pentium MMX 166, or AMD K6-200.

Operating system and RAM size
In Windows 98SE or higher: Right-click My Computer icon. Then select General tab and both operating system version and RAM size are shown there.
Example: 4.10.1998, 64.0 MB RAM.