

# i-RAM (GC-RAMDISK)

## User's Manual

Rev. 102

12MD-RAMDISK-102R

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# DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)



**Responsible Party Name: G.B.T. INC. (U.S.A.)**

**Address: 17358 Railroad Street  
City of Industry, CA 91748**

**Phone/Fax No: (818) 854-9338/ (818) 854-9339**

hereby declares that the product

**Product Name: RAMDISK**

**Model Number: GC-RAMDISK**

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109  
(a), Class B Digital Device

## **Supplementary Information:**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful and (2) this device must accept any interference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: *Eric Lu*

Date: July 29, 2005

Thank you for selecting GIGABYTE's latest i-RAM product. This user's manual gives information about i-RAM features and specifications, and will lead you through the installation of i-RAM in your system. Read this guide and related precautions before installing i-RAM.

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## 1. Product Features

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- Fastest System Boot-Up speed--Fully SATA1.0a compliant; i-RAM can be used as a boot device.
- Fastest Solid State Disk--Dedicated DDR design, Supports DDR 266/333/400 memory modules.
- Fastest Data Access--Ideally design for applications that require massive storage data access, like Audio/Video Capture & Edit, 3D Graphics designs, File sharing, Database exchange, Server, Workstation and Web/Email servers etc.
- Data Protection
  - After PC shutdown, the stored data can be protected by using PC standby power.
  - When AC wall power is off or after unplug power cord; the stored data can be protected by using i-RAM backup battery<sup>(Note 1)</sup>. This is good for user/engineer to do some needful actions (e.g. move i-RAM alone or with PC in the short distance/period and backup i-RAM data) before AC wall power resume or re-plug in power cord.
- No additional drivers required.
- Supports Backup and Restore software utilities.
- Noiseless solution compared to traditional hard drives.
- Vibration proof compared to traditional hard drives.

## 2. Product Specifications

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- PCI 2.2 Mechanical Compliant:
  - Get working power from PCI slot
  - Suitable for PC and Server systems
- SATA Interface
  - SATA 1.0a Compliant
  - Supports one SATA connector
  - Up to 150MB/s data transfer rate
- Memory Interface
  - Max amount of memory supported is 4GB
  - Four 184-Pin/2.5V DDR DIMM sockets
  - Supports DDR 266/333/400<sup>(Note 2)</sup>
  - Supports DIMM up to 4.2mm thickness (including heat-sink)
- Backup Battery
  - One 1,600mAh lithium battery

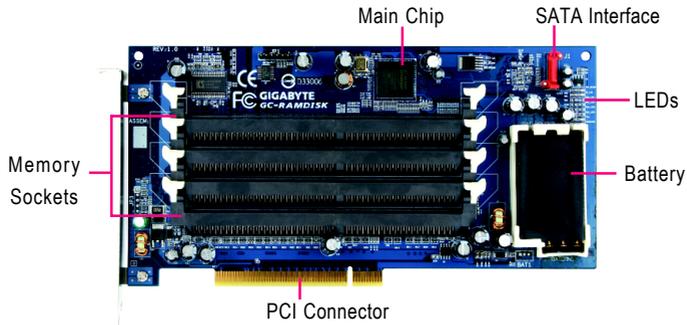
(Note 1): Actual battery life may vary based on usage and different memory modules.

(Note 2): Please refer to the recommended memory support list on Page 8.

### 3. System Requirements

- One available PCI 2.2 compliant slot
- One available SATA (1.5Gb/s) compliant connector
- Systems based on Intel ICH6/ICH7 series, VIA 8237 series, SiS 964, or ULI M1689 South Bridge.

### 4. Board Layout



## 5. Precautions

### General Precautions:

- ◆ The memory size available will be less than the total size of the installed memory.
- ◆ When the system is set to RAID mode, the RAID controller might occupy some disk space as buffer. For example, when the ICH7R RAID controller is set to RAID 0 or RAID 1, the total hard drive capacity will be 512MB~1GB less than the actual capacity.
- ◆ For users who wish to install operating system in i-RAM, please prepare the minimum free hard disk space for the operating system.
- ◆ To protect data integrity and extend battery lifespan, it is not recommended that you unplug the AC power cord of the power supply.

### Important Battery Information:

- ◆ Please do not remove the battery. If the battery appears to be damaged or does not function properly, please contact the place of purchase for further checking.
- ◆ i-RAM memory sockets are powered on after the battery is charged, please handle with care to prevent short circuit and damage.
- ◆ Do not dispose of the battery in fire. To avoid injuries or causing fire hazard, please do not disassemble or touch battery terminals with metal objects or your fingers.

### Data Loss Preventions:

To prevent data from being lost or damaged, read the following guidelines:

- ◆ Do not remove i-RAM from the PCI slot or remove the AC power from the power supply for too long.
- ◆ Do not remove the installed memory module(s) from i-RAM.
- ◆ Do not remove i-RAM from the PCI slot and also detach the battery.
- ◆ Please back up the data in i-RAM regularly using either GIGABYTE's backup tool (please download it from GIGABYTE's website at <http://www.gigabyte.com.tw>) or third-party backup utilities. Please note that data in i-RAM is not covered under the warranty.

## 6. Installation Directions

Please read the following installation directions before using i-RAM:

### Step 1: Install Memory Module(s)

Place i-RAM card on an anti-static pad. The DIMM socket has a notch, so the memory module can only fit in one direction. Push the clips at either end of the DIMM socket outwards to the open position. Insert the memory module into the DIMM socket. Then push it down until the retaining clips snap into place (Figure 1).

We recommend slotting memory modules from the top socket.



To remove the memory module, support the memory module with your fingers while spreading the clips. This prevents the memory module from being damaged when it pops out.

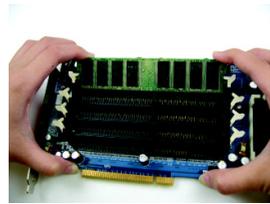


Figure 1

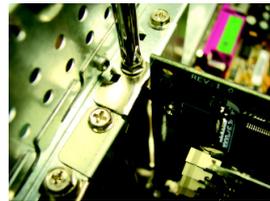


Figure 2

### Step 2: Install i-RAM

Select a free PCI slot and remove the screw and slot bracket. Press the i-RAM card firmly into the slot and replace the screw to secure the slot bracket of the i-RAM card. (Figure 2)

### Step 3: Connect SATA Cable

Attach one end of the SATA interface cable to the SATA connector on the i-RAM card (Figure 3). Locate an available SATA connector on your motherboard and plug the other end of the SATA interface cable into the SATA connector.

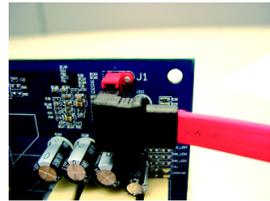


Figure 3

### Step 4: Configure System BIOS

At system startup, enter system BIOS when prompted. Read the motherboard or system documentation and assure that the motherboard SATA port connecting to i-RAM is enabled. Finally, make sure i-RAM has been detected as a normal hard drive by system BIOS.

### Step 5: Format i-RAM

In order for i-RAM to be visible in your operating system, it must be formatted. You can format i-RAM using FDISK, Windows Disk Management or other third-party tools.

You are now ready to use i-RAM as a normal hard drive.

### LEDs Information:

The LEDs in the lower right of the SATA connector provide the following information:

LED	Color	Description
PHY_READY	Blue	i-RAM is correctly detected
HD_LED	Blue	i-RAM is writing or reading data
FULL	Green	The battery is at full charge
CHARGING	Yellow	The battery is being charged

## 7. Appendix

### Recommended Memory Support List

Please refer to the memory support list below:

#### DDR400 (256MB)

Module Supplier	Comp. Used	Module P/N.	Component P/N.
Samsung	Samsung	KOREA 0309 PC3200U-30331-A1 M381L3223ETM-CCC 256MB DDR PC3200 CL3 ECC	K4H560838E-TCCC (ECC)
Micron	Micron	MT16VDDT3264AG-40BB5 PC3200U-30330-B1 256MB DDR400 CL3	MT 46V16M8-5B
Buffalo	Buffalo	DD4333-S256/MC PC3200U-30330-A1 256MB 400Mhz-CL3	MT 46V32M8-5BC

#### DDR400 (512MB)

Module Supplier	Comp. Used	Module P/N.	Component P/N.
Transcend	Mosel	V58C2256804SAT5B	512M 184 DDR=HP 512M DDR400 DIMM 3-3-3 8144 Y0347
Elixir	Elixir	ELIXIRN2DS25680CT-5T	M2U51264DS8HC1G-5T 512MB DDR400 CL3PC3200U-30330
Geil	Geil	MPEA3200C2UD2-512	512M DDR400ULTRA(32M8)
ProMOS	Mosel	0512PP V58C2256804SC15	V826664K24SCIW-D3
Transcend	PSC	PSD A256D30BTP 513ASN14 TAIWAN AN-5	512M DDR400 DIMM2.5-3-3

#### DDR400 (1GB)

Module Supplier	Comp. Used	Module P/N.	Component P/N.
Transcend	Micron	1G184PDDR=LR 1GDDR400 DIMM 3-3-3	MT 46V64M8-5B C
Kingston	Samsung	KVR400X64C3A/1G	K4H510838C-UCCC

Note: For the latest memory support list information, please visit GIGABYTE's website at <http://www.gigabyte.com.tw>.