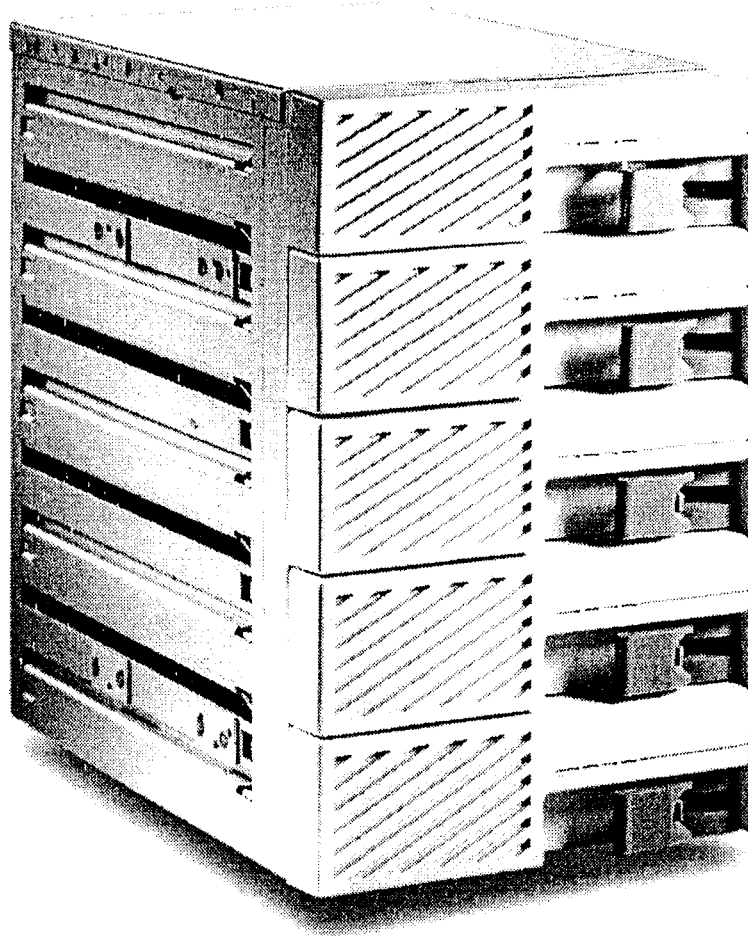


QTK99-F035

FCC ID: NHZ-9605-33-34

## BP-9605 user' manual



June 22, 1999

Manual Part Number : C14-200281-001

Version 1.0

**Amaquest Computer.Corp.**

**Amaquest Computer Corp.**  
**8F-1, 79 Hsin-Tai 5<sup>th</sup> Road, Sec. 1**  
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**Printed June 1999**

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### **Warning**

This equipment generates and uses radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio and television reception. It has been tested and found to comply with the limits of a Class B computing device in accordance with the specifications in Subpart B of Part 15 of the FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 following measures:

Re-orient the receiving antenna.

Re-locate the equipment with respect to the receiver.

Move the equipment away from the receiver.

Plug the equipment into a different power outlet so that the equipment and receiver are on a different branch circuit. If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20042, USA. Stock No. 004-000-00345-4.

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# 1. Introduction

BP-9605 is a disc array module, which may be fitted in any case as a storage sub system. To install such sub system to various chassis, please refer to the appropriate chassis manual accordingly.

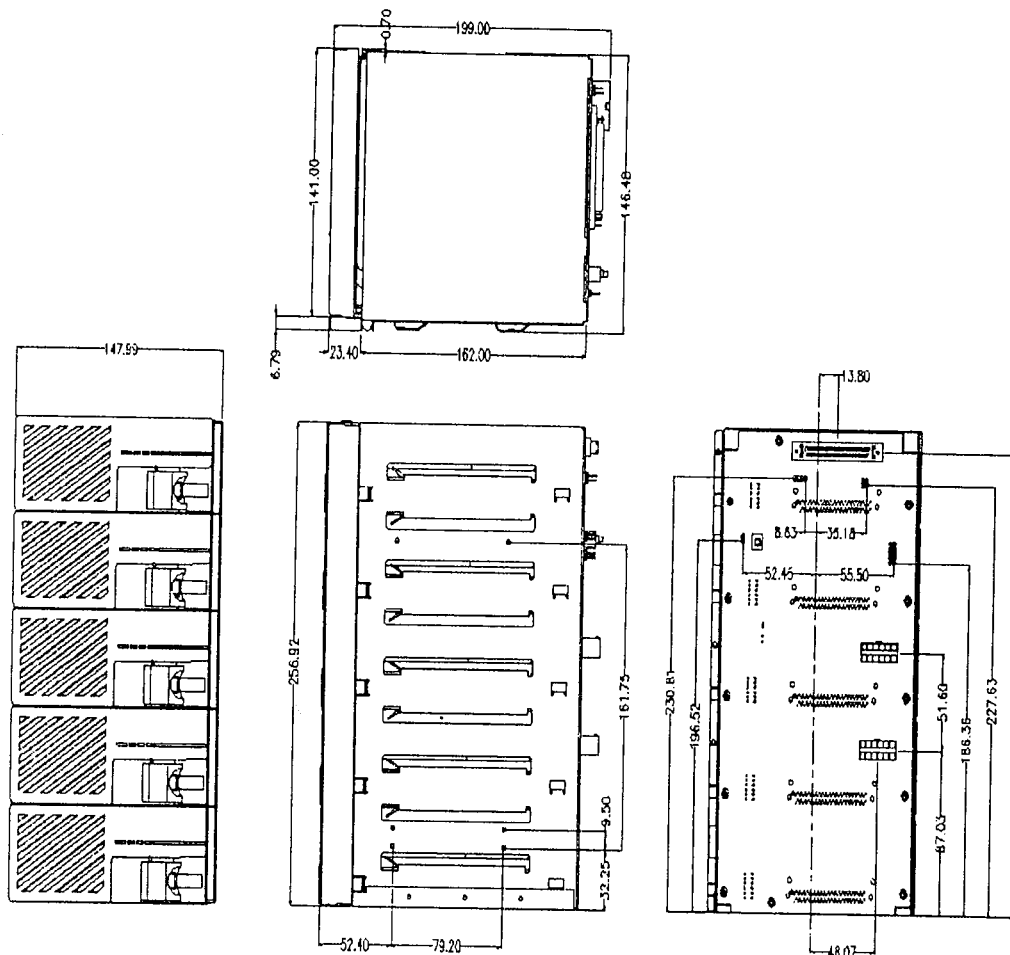
## 1.1 Features

BP-9605 can be configured as a standalone unit or with a RAID controller for redundancy required applications.

Item	Function	Description	Note
1.	80-pin SCA II connector (x5)	To connect to 1 or 1.6 inch SCSI hard disc. No jumper required.	Standard
2.	One 68-pin SCSI connector	Ultra wide SCSI interface connector, for SCSI-In.	Standard
3.	Auxiliary disc access LED connector	To be used as auxiliary disc access status indicator.	Standard
4.	On tray power LED	Indicator for power on/off status of each hard disc. Located on the front panel of mobile rack.	Standard
5.	On tray hard disc access LED	Indicator for access status of each hard disc. Located on the front panel of mobile rack.	Standard
6.	Latch	Handle for insertion, extraction and securing of the mobile rack.	Standard
7.	SE/LVD mode	Support SCSI Single Ended and Low Voltage Differential modes. Automatic distinguishes.	Standard
8.	Motor spin-up mode	Support three spin-up modes: at power on, while SCSI start command received, and sequentially started by ID.	Configurable by user. Standard
9.	Hot swap	Support on line swap.	Standard
10.	Fixed hard disc	Factory preset ID number from	Standard

	ID number	ID 0 to 4.	
11.	Inrush current control	Control inrush current during on line swapping to minimize power disturbance.	Standard
12.	Hard disc overheat warning	Indicate hard disc overheated through front panel Access/Temp LED.	Standard
13.	Temperature sensor	Monitor the hard disc temperature of each tray	Standard
14.	Sequential power turn on	During cold start, turn on hard disc power sequentially by hard disc ID number to minimize power surge.	Standard
15.	Fan connector	Support one fan per tray.	Standard
16.	Alert buzzer	Alarm fan failing and/or hard disk overheat.	Standard
17.	Fan fail warning	Blinking red LED while a low fan speed detected. Steady on red LED while a failed fan detected.	Standard
18.	Buzzer off switch.	Push-button to mute the buzzer.	Standard
19.	Buzzer off connector	Can be connected to an external buzzer. User can turn off alert buzzer via buzzer off button of UPS or power supply.	Standard
20.	I <sup>2</sup> C SAF-TE bus	Connect to RAID controller which supports I <sup>2</sup> C bus. Various disc drive information supported under SAF-TE standard.	Optional
21.	Width 147.99mm Height 256.92mm	Fit five 5 1/4" wide discs horizontally into six 1.6" high discs space	
22.	Current fuse	A positive temperature coefficient resistor to every hard disc power line.	Optional
23.	Power module	Connect to power module that	Optional

	connector	provides proper hot swap power control.	
24	SCSI device ID (first array backplane)	Top most = 0 Middle = 2 bottom most = 4	

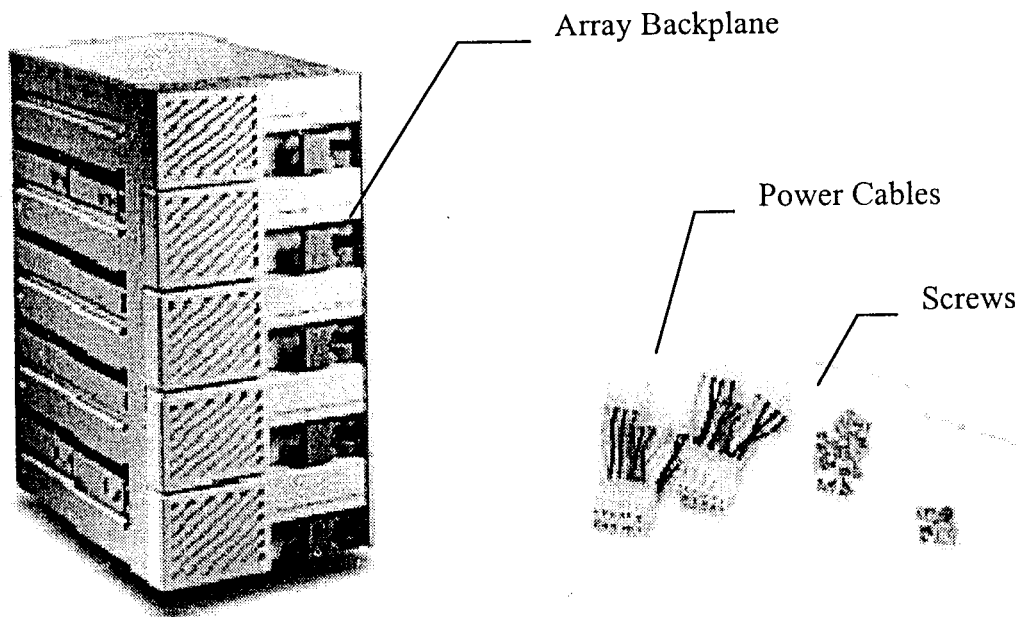


## 2. Package Contents

Before opening the shipping box, visually check and ensure there is no physical damage. If there is damage, please contact your local dealer.

A complete shipment contains the following items as shown below:

Items	Quantity	Part Number
Array backplane	1	F6-BP96050-022
Power Cables	2	C53-100460-100
Screws	20-#6-32UNC x L6 8-M3 x P0.5 x L5 mm	C60-606067-112 C60-130056-112
Manual	1	C14-200281-001

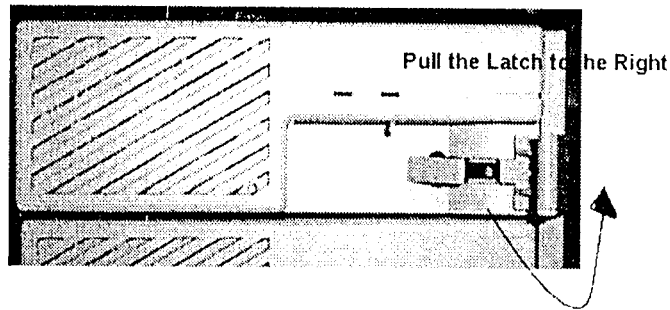


### 3. Installation

#### 3.1 Unlatching a Mobile Rack

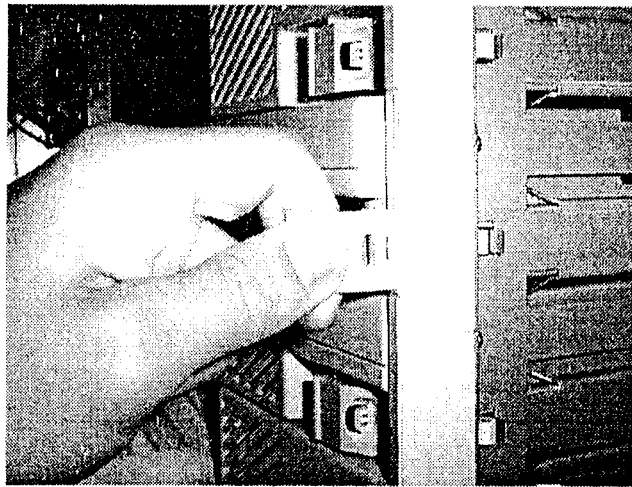
A typical disc array module contains no drives. To load a drive to a mobile rack, pull the latch to the right as shown on the image on next page.





### 3.2 Extracting a Mobile Rack

Once the latch is pulled in level position, the mobile rack can be extracted by pulling out all the way outward as shown below.

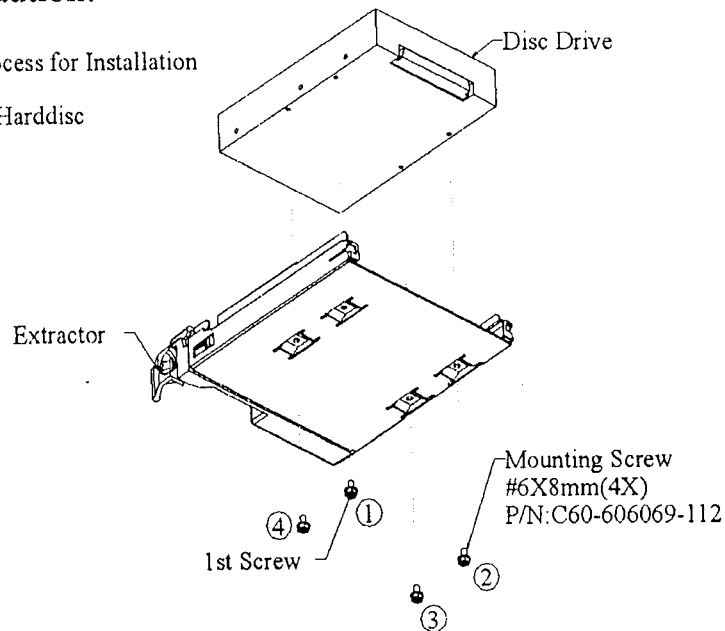


### 3.3 Load a Hard Disc Drive to Mobile Rack

To load a drive to a mobile rack, place a hard disc drive towards the mobile rack as shown below. Secure the hard disc drive to the mobile rack by tightening the screw numbered 1 then the rest screws.

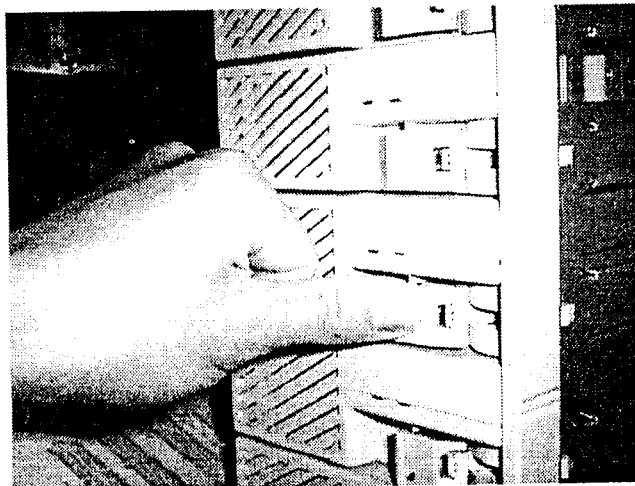
**Caution!**

Process for Installation  
of Harddisc



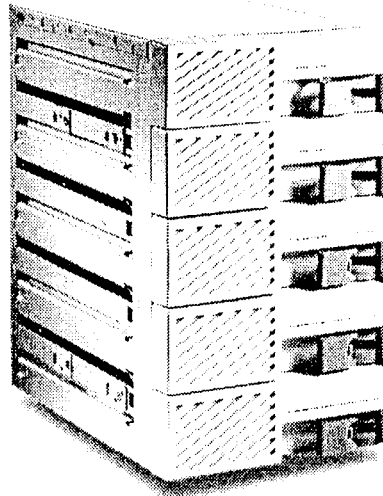
### 3.4 Inserting a Mobile Rack

Once all mobile racks are loaded, re-insert it to the array backplane. First, push the extractor in level position then insert the mobile rack to the array backplane. Slide the tray inward of the array backplane frame, press extractor to latch as shown below.



### 3.5 Latching a Mobile Rack

Slide the loaded mobile rack all the way inward till the stop position, press the extractor inward and latch the mobile rack to the array backplane frame. A latched mobile rack should be shown below.



### 3.6 Powering a Array Backplane

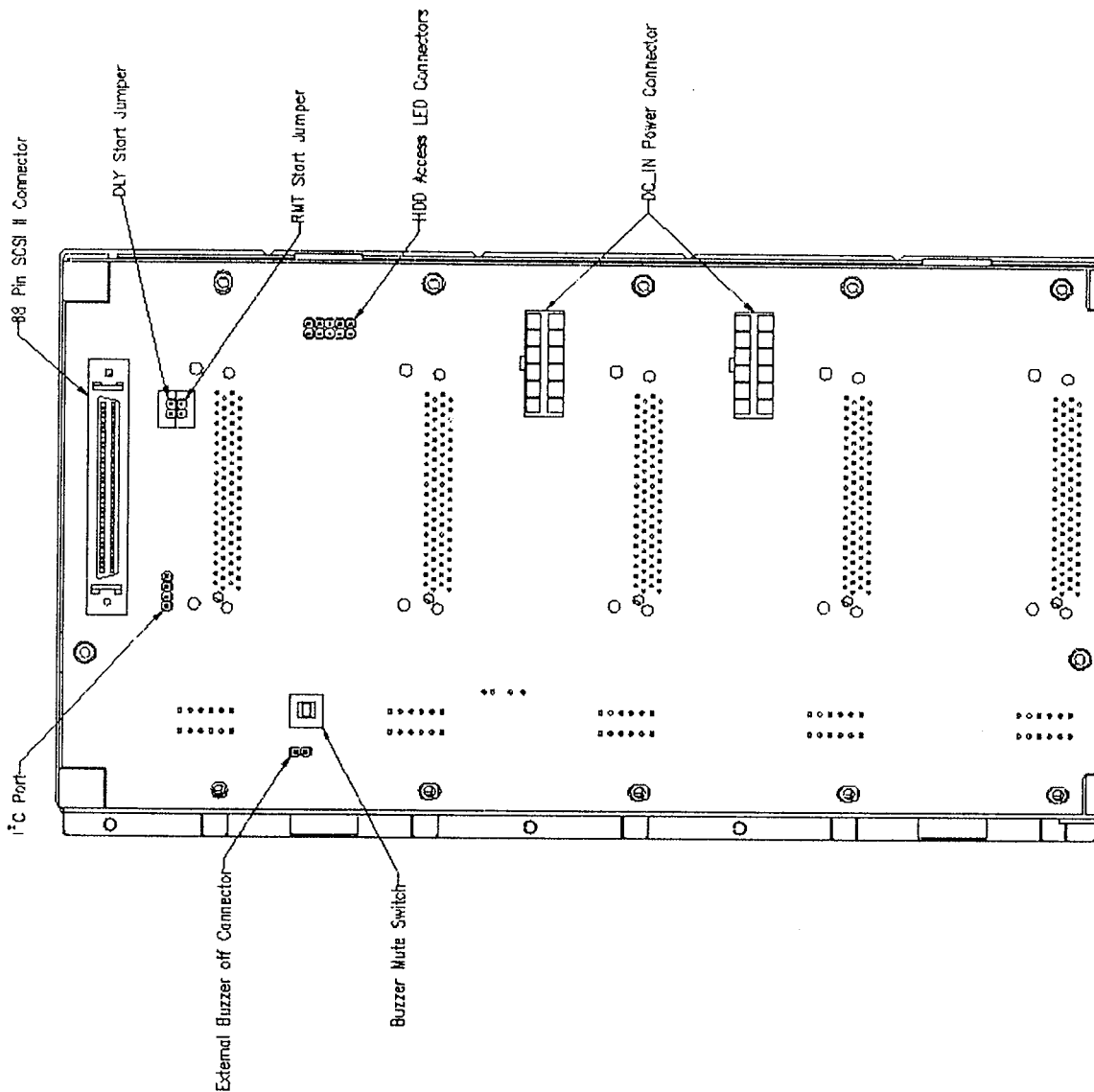
Once all the mobile racks are in position and latched, connecting the 2x6 power connector to the array backplane. Ensure that the 2x6 connector is in correct orientation by referring the “press-snap-latch” position. The “press-snap-latch” design prevents disorientation unless extremely force it. The other side of the 2x6 connector are three 4-pin male power connectors which may be connected to a PC power supply. It is recommended all three 4-pin connector be connected to the PC power supply. If there are not enough PC power slots available, connect at least two 4-pin connectors for ensuring enough power energy to the disc array module.

### 3.7 Set Disc Drive Spins Up Modes

BP-9605 supports drives with SCA type connector. There are ways to spins up the disc drive. To verify various spins up modes, referring to the “RMT\_START” and “DLYD\_START” jumpers setting. The factory default setting is motor spins up at D.C. power on which are both “RMT\_START” and “DLYD\_START” are set to open position. Customer may change the motor spins-up mode by re-configuring these two (2) jumpers. Table 3.7 shown below is the jumper settings with corresponding modes.

Case	DLYD_START	RMT_START	Motor Spin Function
1	Open	Open	Motor spins up at D.C. power on.
2	Open	Ground	Motor spins up only when START UNIT command is received.
3	Ground	Open	Motor spins up at D.C. power on. Hard discs will be turned on sequentially with 12 time intervals.
4	Ground	Ground	Reserved

**Note:** Top Row: DLYD\_START position;  
Lower Row: RMT\_START position



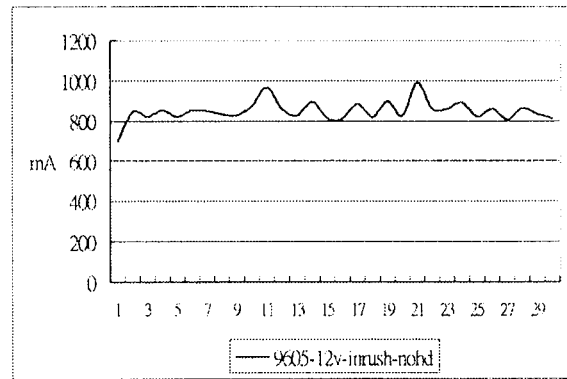
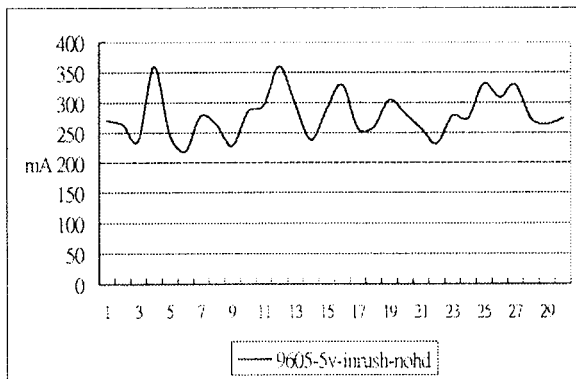
### 3.8 Cables and Terminator

The optional 25cm in length, differential type cable may be used for connecting the first array backplane to the second (cascaded) array backplane.

Notice that BP-9605 is designed with built-in terminator on board .

### 3.9 Inrush Current of a Array Backplane

While an unloaded array backplane is installed, the power consumption is relatively least significant to the system power source. In any cases, an unloaded array backplane should not affect the system power. Charts below are inrush current profile of 9605 array backplane. The steady state current is almost negligible. The Y-axis unit is ma (milli-ampere) for both charts.



### 3.10 Drop Test Result

BP-9605 meets the following standards, the maximum impact (G-force) is less than 60 regardless direction. However, it is recommended care must be taken when handling array backplane with disc drives loaded.

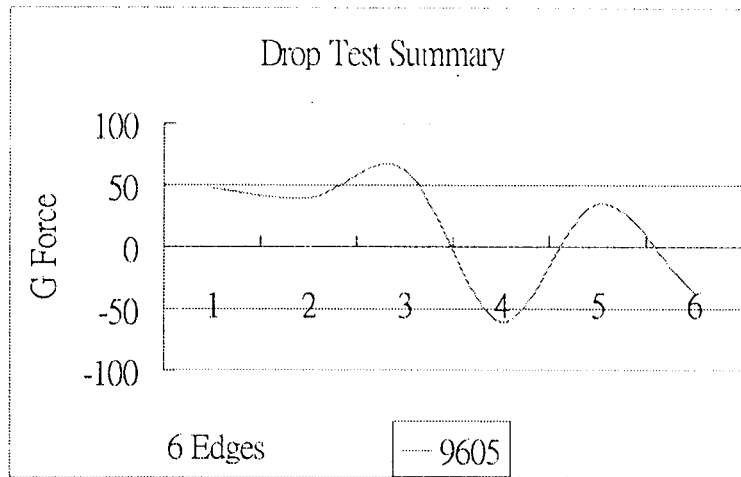
Y-axis represents G-force

X-axis represents edges

IEC 68-2-32 (packed transport)

ISO 4180/2 (land/air transport)

ISO 4180/2 (water transport)



### 3.11 Supported Disc Drives

Disc drives listed below are tested and verified, other models may or may not work with BP-9605 with no manufacturer guarantee.

<b>Seagate</b>	ST-39173WC (Barracuda ,7200 RPM , SE)
	ST-39173LC (Barracuda ,7200 RPM ,LVD)
	ST-39102LC (Cheetah , 10,000 RPM ,LVD)
	ST-19170WC (Barracuda ,7200 RPM ,1.6 inch , SE)
<b>IBM</b>	DDRS-34560 (7200 RPM ,SE)
	DDRS-39130 (7200 RPM ,SE/LVD)
	DRVS-39130 (10,000 RPM ,SE/LVD)
<b>Quantum</b>	Atlas III 9.1GB (7200 RPM ,SE/LVD)
	Atlas III 18GB (7200 RPM , 1.6 inch ,SE/LVD)

## **4. Technical Support Information**

Amaquest Technical Support can be reached at:

Amaquest Computer Corp.

Far East World Center, Block C

8/F, 79 Hsin-Tai 5<sup>th</sup> Rd., Sec. 1

Shijr, Taipei, Taiwan 221

Phone: 886 2 2698-9366

Fax: 886 2 2698-9376

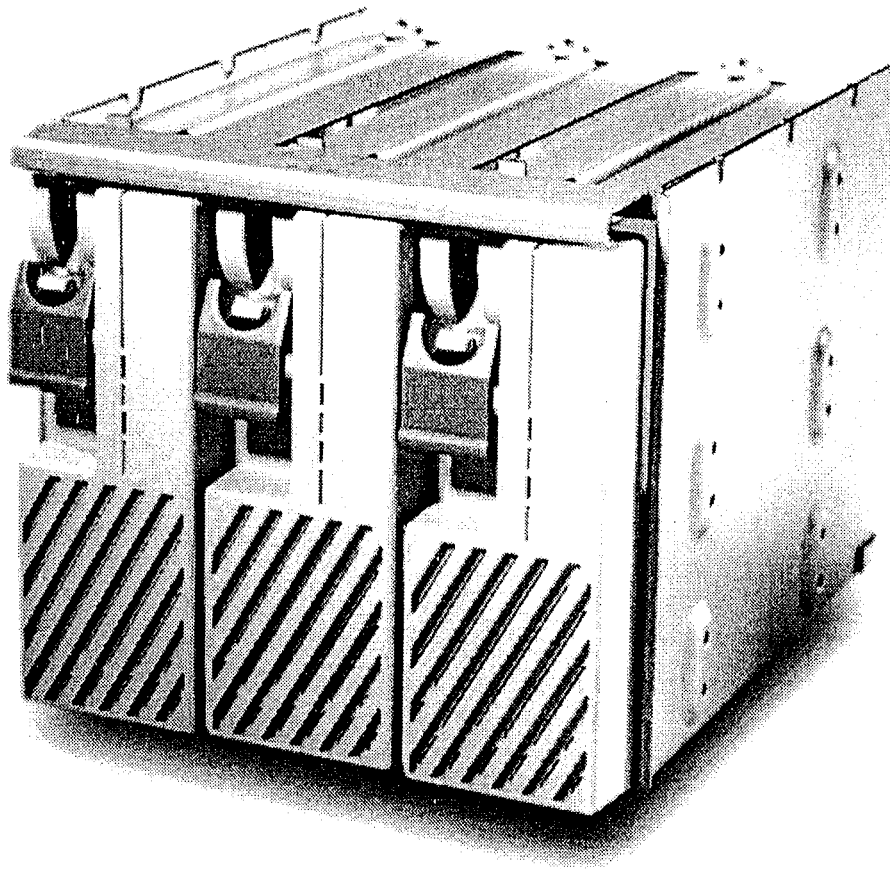
E-mail: [sales@amaquest.com.tw](mailto:sales@amaquest.com.tw)

For latest product specifications, sales, and technical support,  
please visit our website:

<http://www.amaquest.com.tw>



# BP-9633 user's manual



Mar. 10, 1999

Manual Part Number : C14-200301-001

Version 1.0

**Amaquest Computer Corp.**

Amaquest Computer Corp  
8F-1, 79 Hsin-Tai 5<sup>th</sup> Road, Sec. 1  
Shijr, Taipei Hsien 221  
Taiwan, R.O.C.

Printed January 1999

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Plug the equipment into a different power outlet so that the equipment and receiver are on a different branch circuit.

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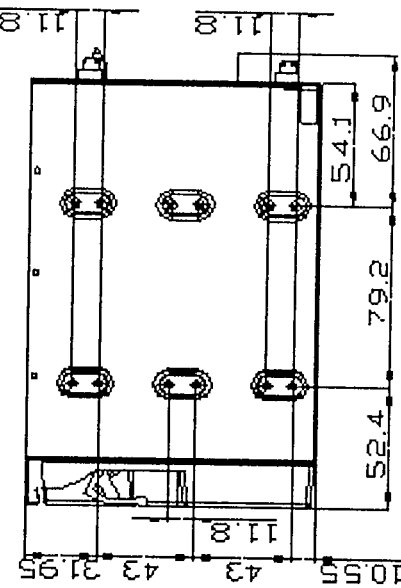
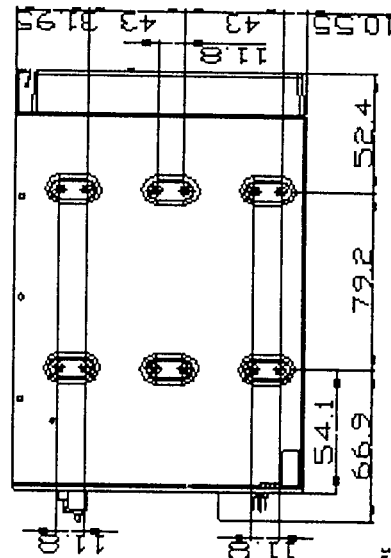
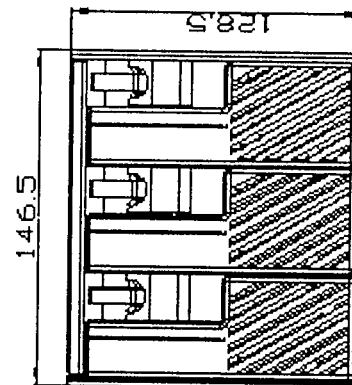
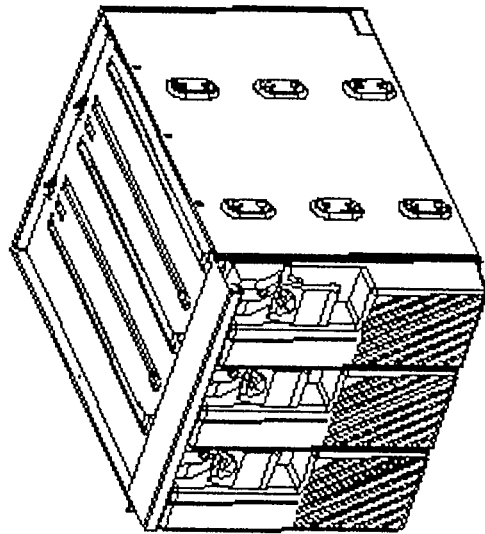
## 1. Introduction

BP-9633 is a disc array module, which may be fitted in any case as a storage sub-system. To install such sub-system to various chassis, please refer appropriate chassis manual accordingly.

### 1.1 Features

BP-9633 can be configured as a standalone unit or with a RAID controller for redundancy required applications.

Item	Function	Description	Note
1.	80-pin SCA II connector (x3)	To be connected to 1 inch or 1.6 inch SCSI hard disc. No jumper required.	Standard
2.	Two 68-pin SCSI connector	Ultra wide SCSI interface connector. One for SCSI-In and the other for SCSI-Out	Standard
3.	Auxiliary disc access LED connector	To be used as auxiliary disc access status indicator.	Standard
4.	On tray power LED	Indicator for power on/off status of each hard disc. Located on the front panel of mobile rack.	Standard
5.	On tray hard disc access LED	Indicator for access status of each hard disc. Located on the front panel of mobile rack.	Standard
6.	Latch	Handle for insertion, extraction and securing of the mobile rack.	Standard
7.	SE/LVD mode	Support SCSI Single Ended and Low Voltage Differential modes. Automatic distinguishes.	Standard
8.	Motor spin-up mode	Support three spin-up modes: at power on, while SCSI start command received, and sequentially started by ID.	Configurable by user. Standard
9.	Hot swap	Support on line swap.	Standard
10.	Fixed hard disc ID number	Factory preset ID number from ID 0 to 2.	Standard
11.	Inrush current control	Control inrush current during on line swapping to minimize power disturbance.	Standard
12.	Hard disc overheat warning	Indicate hard disc overheated through front panel Access/Temp LED.	Standard
13.	Temperature sensor	Monitor the hard disc temperature of each tray	Standard
14.	Sequential power turn on	During cold start, turn on hard disc power sequentially by hard disc ID number to minimize power surge.	Standard
15.	Fan connector	Support one fan per tray.	Standard
16.	Alert buzzer	Alarm fan failing and/or hard disk overheat.	Standard



1. The following information is being furnished to you for your information only. It is not intended to be used for any other purpose.

[illegible]

Item	Function	Description	Note
17.	Fan fail warning	Blinking red LED while a low fan speed detected. Steady on red LED while a failed fan detected.	Standard
18.	Buzzer off switch.	Push-button to mute the buzzer.	Standard
19.	Buzzer off connector	Can be connected to an external buzzer. User can turn off alert buzzer via buzzer off button of UPS or power supply.	Standard
20.	I <sup>2</sup> C SAF-TE bus	Connect to RAID controller which supports I <sup>2</sup> C bus. Various disc drive information supported under SAF-TE standard.	Optional
21.	Width 146.5mm Height 128.5mm	Fit three 1.6-inch high discs vertically into three 5 1/4 –inch wide discs space	
22.	Current fuse	A positive temperature coefficient resistor to every hard disc power line.	Optional
23.	Power module connector	Connect to power module that provides proper hot swap power control.	Optional
24	SCSI device ID (first array backplane)	Left most = 0 Middle = 1 Right most = 2	

## 2. Contents of the package

Before opening the shipping package, visually check the package. Shall any physical damage, please contact your local dealer.

A complete shipment contains the following items (Table 2.1):

Table 2.1 complete shipment contains the following items:

Items	Quantity	Part Number
Array backplane	1	F6-BP96330-011
Power Cables	2	C53-100460-100
Screws	20-#6-32UNC x L6	C60-606067-112
	8-M3 x P0.5 x L 5 mm	C60-130056-112
Manual	1	C14-200291-001

