





Legal Information

First English printing, October 2002

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

Safety Instructions

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
 - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
 - Repair or attempted repair by anyone not authorized by us.
 - □ Any damage of the product due to shipment.
 - □ Removal or installation of the product.
 - $\hfill\square$ Causes external to the product, such as electric power fluctuation or failure.
 - $\hfill\square$ Use of supplies or parts not meeting our specifications.
 - □ Normal wear and tear.
 - □ Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. 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:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Contents

< Part 1 > Matrix DB-15 IP KVM

	M118	M218
	M1116	M2116
.1	Package cor	itents
.2	KVM port co	nnection
.3	IP, Remote &	Local console connection
.4	IP console se	etting
.5	Important Pr	econfiguration for IP console
1.6	KVM Cascad	le
1.7	Specification	S

< Part 2 > Matrix DB-15 KVM

	M018	M028	M038
	M0116	M0216	M0316
2.1	Package con	tents	
2.2	KVM port cor	nnection	
2.3	Remote & Lo	cal console conne	ction
2.4	KVM Cascad	le	
2.5	Specification	S	

< Part 3 > Usage

3.1	KVM Button	P.18
3.2	Password	P.19
3.3	KVM OSD	P.20
3.4	KVM Hotkey & Remote Console Hotkey	P.21
3.5	Resolution Support Information	P.22

Before Installation

- It is very important to mount the equipment in a suitable cabinet or on a stable surface.
- Make sure the place has a good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.

Unpacking

The equipment comes with the standard parts shown in package content. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

Installation for standalone KVM



Screw A: 2 pcs



M4 x 10 mm

- Install each bracket using screws provided shown in **Figure 1**.
- Fix the KVM into the rack



< Part 1 > Matrix DB-15 IP KVM < 1.1 > Package Contents



M118



M1116



M218



< 1.2 > KVM port connection



NE-6/NE-10/NE-15

- 6 / 10 / 15 ft Combo KVM cable
- Support PS/2 or USB server



< 1.3 > IP, Remote & Local console connection

Matrix DB-15 IP KVM



How to use a receiver to connect a remote console



The receiver provides a hotkey function for remote console. Please refer to P.19



< 1.4 > IP console setting

After the cable connection, please take the following steps to configure the IP KVM :

1. Download IPKVMsetup.exe

2. Double click IPKVMsetup.exe to configure the IP KVM by device setup as below.

Device		Network Configuration	
Device MAC address	C8:EE:08:00:00:7E	IP auto configuration	None
	Refresh Devices	IP address	192.168.1.22
Device Type		Subnet mask	255.255.255.0
Enable WLAN Config	uration (WLAN Devices only)	Gateway	0.0.0.0
Authentication		Wireless LAN Configuration	1
Super user login		Wireless LAN ESSID	
Super user password	?		Enable WEP encryption
New super user password		Wireless LAN WEP Key	
New password (confirm)		Query Device	Setup Device
		ОК	Cancel Help

- 3. Click Refresh Device to search the connected IP KVM
- 4. Select the M.A.C. address, which you want to setup, then click Query Device
- 5. Enter Super user login. The default is super
- 6. Enter Super user password. The default is pass
- 7. Enter the new super user password
- 8. Re-enter the new password
- 9. Change the desired IP address / Subnet mask / Gateway, then click Setup Device to confirm the setting to IP KVM
- 10. The default address is as below:--
- The single IP KVM model, such as M-IP1613 http://192.168.1.22
- The dual IP KVM model, such as M-IP1624 http://192.168.1.22 (for 1st IP)
 - http://192.168.1.23 (for 2nd IP)
- 11. Open Internet Explorer (I.E.), version 6.0 or above
- 12. Enter the IP KVM address into the address bar
 - For Single IP http://192.168.1.22
 - For Dual IP http://192.168.1.22 (for 1st IP) http://192.168.1.23 (for 2nd IP)
- 13. Enter username (default is super) Password (default is pass)

Authenticat	e Username and Password !
Username	
Password	
	Login

14. After successful login to IP KVM, the user will enter the main page of IP KVM



The setting is enough for intranet. If the users access KVM GUI via internet, please ask MIS for assistance and

download IP KVM user manual

< 1.5 > Important Preconfiguration for IP console



You must complete the following tasks after the IP console setting is performed.

(1) TARGET SERVER SETUP **Servers connected to KVM

Resolution

The IP KVM remote console recognizes several varieties of video display formats with resolutions up to 1600 x 1200 @60Hz. (Refer to the User Manual for a list of supported video formats). Minimize bandwidth by setting the target server's video resolution to the minimum setting required for your remote monitoring application.

The following video modes are recommended:

- (i) 800 x 600 @ 60Hz
- (ii) 1024 x 768 @ 60Hz
- (iii) 1280 x 1024 @ 60Hz

On a Windows target server system, select Control Panel > Display > Settings. Modify the screen resolution value as necessary.

Mouse

Use generic mouse drivers for optimum mouse control during remote sessions. Set the mouse pointer speed to a middle setting with no acceleration or snap-to effects.

On a Windows target server system, select Control Panel > Mouse > Pointer Options Set the pointer speed to medium and disable Enhanced pointer precision

For Linux GUIs, set the mouse acceleration to exactly 1 and the threshold to exactly 1.

If your keyboard keeps repeating keys when it is plugged into the KVM. Please follow either one below :

(a.)

Enable key release timeout if you experience duplicated keystrokes during poor network performance.

- login to IP KVM remote console
- go to Interfaces KVM settings > Keyboard / Mouse
- click the Key Release Timeout
- adjust Timeout after if necessary

(b.)

Reduce video bandwidth usage if you experience duplicated keystrokes during poor network

- login to IP KVM remote console
- go to Interfaces KVM Settings > User Console > Transmission Encoding,
- select Manually
- adjust Compression to [0-none] and Color depth to [8-bit 256 col]

< 1.5 > Important Preconfiguration for IP console

(2) REMOTE CLIENT COMPUTER SETUP

The remote client computer must have a web browser (such as Microsoft Internet Explorer, Mozilla Firefox, and Netscape Navigator) and a Java Virtual Machine (version 1.4 or higher) installed. Enable Java on the web browser.



JAVA Security Issue

Due to the changes from Java security, customer may facing the "JAVA Block" message while accessing the remote console over IP.



If it said so, here is the workaround solution :

Customer can use the "Exception Site list" feature to run the applications blocked by security setting. Adding the URL of the blocked application to the Exception Site list allows it to run with some warnings.

Steps to Add URLs to the Exception Site list :

- Go to the Java Control Panel (On Windows Click Start and then Configure Java)
- Click on the Security tab
- Click on the Edit Site List button
- Click Add in the Exception Site List window
- Click in the empty field under the Location field to enter the URL (URL should begin with http:// or https://)

🚣 Java Control Panel		🚣 Exception Site List		
General Update Java Security Advanced		Applications launched from t	he sites listed below will be allowed to run after the approp	riate security prompts.
Enable Java content in the browser		Location		
Security level for applications not on the Exception Site list				
Very High - Only Java applications identified by a certificate from a trusted as allowed to run, and only if the certificate can be verified as not revoked.	uthority are			
High - Java applications identified by a certificate from a trusted authority an run, even if the revocation status of the certificate cannot be verified.	e alowed to	FILE and HTTP protoco	s are considered a security risk. We recommend using HT	Add Bemove TPS sites where available.
				OK Cancel
		Security Warning		×
Exception Site List			un this application?	
Exception Site List Applications launched from the sites listed below will be allowed to run after the prompts.	appropriate security	Do you want to r		
Applications launched from the sites listed below will be allowed to run after the prompts. http://192.168.1.22/		Do you want to r	iblisher: UNKNOWN	
Applications launched from the sites listed below will be allowed to run after the prompts. http://192.168.1.22/	appropriate security	Do you want to r	blisher: UNONOWN cation: http://192.168.1.22	×
Applications launched from the sites listed below will be allowed to run after the prompts. http://192.168.1.22/		Do you want to r	blisher: UNOYOWN cation: http://192.168.1.22 tion may be a security risk	
Applications launched from the sites listed below will be allowed to run after the prompts. http://192.168.1.22/		Do you want to r	blisher: UNONOWN cation: http://192.168.1.22	uter and personal
Applications launched from the sites listed below will be allowed to run after the prompts. http://192.168.1.22/	dit Site List	Do you want to r La Running this application wi Riske This application wi run this application More Information	blisher: UNONOWN cation: http://192.168.1.22 tion may be a security risk run with unrestricted access which may put your compt The information provided is unreliable or unknown so it	uter and personal

< 1.5 > KVM Cascade

- Cascade up to 8 levels, 240 servers
- Cascading multiple KVM with CMC-8 cascade cable.



Cascaded KVMs from level 2 to 8 must be the models of M018/M0116

When multiple matrix KVMs cascade together, the master KVM at level 1 will take all control of other slave KVM switches (e.g. level 2 to 8).

The slave matrix KVM will be as a port expansion module of the master matrix KVM, the original remote console on slave KVM will be sacrificed and disabled.





CMC-8

8ft Matrix KVM cascade cable

< 1.7 > Specifications

	M118	M218
	M1116	M2116
KVM Port		
Number of ports:	8 or 16	
Connector:	DB-15 combo connector	
Connectivity:	Combo 4-in-1 KVM cable	
	up to 6, 10 & 15 feet	
Local Console		
Monitor port:	1 x DB-15 VGA (Up to 1920 x 1	080 / 1920 x 1200)
Keyboard & mouse port:	2 x USB type connector for keyb	oard & mouse
Cat6 Remote Console		
Number of remote port:	1	
Monitor port:	DB15-pin VGA, up to 1600 x 120	00
Keyboard & mouse port:	2 x USB type connector for keyb	oard & mouse
Remote I/O:	RJ45 via Cat5 / Cat5e / Cat6 cal	ble up to 500 feet
IP Remote Console		
Number of IP console:	1 for M-IP813 / M-IP1613 2 for M-IP824 / M-IP1624	
User management:	15-user login, 1 x active user	
Browser:	Internet Explorer, Firefox, Safari	
Security:	SSL v3, RSA, AES, HTTP / HTT	Ps, CSR
IP Access:	RJ45 Ethernet per IP console	
Expansion:	Up to 240 servers by 8-level cas	cade
Compatibility		
Multi-platform:	Mix PCs, SUN and Mac G3 / G4	Mac / iMac
Support:	Windows 7 / Vista / 2003 / XP, L	inux, Unix
Power		
Input:	AC power adapter	
Consumption:	Max. 48 Watt, Standby 5 Watt	
Regulatory		
Safety:	cUL, FCC & CE certified	
Environment:	RoHS2 & REACH compliant	
Environmental		
Operating:	0 to 55°C	
Storage:	-5 to 60°C	
Relative humidity:	90%, non-condensing	
Shock:	50G peak acceleration (11ms, ha	-
Vibration:	58~100Hz / 0.98G (11ms / cycle)
Product Information		
Dimension (W x D x H):	443 x 171 x 44 mm / 17.4 x 6.7	7 x 1.73 inch
Net weight:	3 kg / 6.5 lb	
Packing Information		
Dimension (W x D x H):	500 x 400 x 90 mm / 19.7 x 15	.7 x 3.5 inch
Gross weight:	5 kg / 11 lb	

Part 2. Matrix DB-15 KVM < 2.1 > Package Contents







Matrix DB-15 KVM



M0116



M028



M0216



M038



			و

< 2.2 > KVM port connection



NE-6/NE-10/NE-15

- 6 / 10 / 15 ft Combo KVM cable
- Support PS/2 or USB server





How to use a receiver to connect a remote console



The receiver provides a hotkey function for remote console. Please refer to P.19



< 2.4 > KVM Cascade

- Cascade up to 8 levels, 240 servers
- Cascading multiple KVM with CMC-8 cascade cable.



Cascaded KVMs from level 2 to 8 must be the models of M018 / M0116

When multiple matrix KVMs cascade together, the master KVM at level 1 will take all control of other slave KVM switches (e.g. level 2 to 8).

The slave matrix KVM will be as a port expansion module of the master matrix KVM, the original remote console on slave KVM will be sacrificed and disabled.





CMC-8

8ft Matrix KVM cascade cable

< 2.5 > Specifications

		M018	M028	M038
		M0116	M0216	M0316
	KVM Port			
	Number of ports:	8 or 16		
	Connector:	DB-15 combo con	nector	
	Connectivity:	Combo 4-in-1 KVI up to 6, 10 & 15 fe		
	Local Console			
	Monitor port:	1 x DB-15 VGA (l	Jp to 1920 x 108	30 / 1920 x 1200)
	Keyboard & mouse port:	2 x USB type con	nector for keybo	ard & mouse
	Cat6 Remote Console			
	Number of remote port:	1 for M018 / M011	6	
		2 for M028 / M021		
		3 for M038 / M031		
	Monitor port:	DB15-pin VGA, up		
	Keyboard & mouse port: Remote I/O:	2 x USB type con		
E		RJ45 via Cat5 / C		
	Expansion:	Up to 240 servers	by 8-level casca	ade
	Compatibility			
	Multi-platform:	Mix PCs, SUN an		
	Support:	Windows 7 / Vista	/ 2003 / XP, Lin	ux, Unix
	Power			
	Input:	AC power adapter		
	Consumption:	Max. 48 Watt, Sta	ndby 5 Watt	
	Regulatory			
	Safety:	cUL, FCC & CE c	ertified	
	Environment:	RoHS2 & REACH	compliant	
	Environmental			
	Operating:	0 to 55°C		
	Storage:	-5 to 60°C		
	Relative humidity:	90%, non-conden	-	
	Shock:	50G peak acceler		f-sine wave)
\vdash	Vibration:	58~100Hz / 0.98G	6 (11ms / cycle)	
	Product Information			
	Dimension (W x D x H):	443 x 171 x 44 mi	m / 17.4 x 6.7 >	< 1.73 inch
	Net weight:	3 kg / 6.5 lb		
	Packing Information			
	Dimension (W x D x H):	500 x 400 x 90 m	m / 19.7 x 15.7	x 3.5 inch
	Gross weight:	5 kg / 11 lb		

3.1 KVM Button

Power ON

- Turn off all servers and KVM switches
- Make sure all cables / connectors are properly connected
- Recommend Power ON sequence is monitor, KVM switch finally computer



3.2 Password

The password is enabled by default, the default password is "00000000" eight zeros (**Do not use "0" on number pad**)

Enable password

- 1. Press the KVM hotkey Scroll Lock + Scroll Lock + U
- 2. Logout the KVM by pressing the hotkey Scroll Lock + Scroll Lock + P
- 3. In SUPERVISOR level, enter "00000000" eight zeros in user name & password field (Do not use "0" on number pad)
- In USER level, press Space bar + Enter in user name & password field Remark: Automatic logout after 10 minutes of inactivity

Set your own user name & password

- 1. Login the KVM in SUPERVISOR level by pressing "00000000" eight zeros in user name & password field
- 2. Call KVM OSD menu by pressing the KVM hotkey **Scroll Lock + Scroll Lock + Space Bar**
- 3. Press F1 to the MAIN MENU
- 4. Select "USER SECURITY"
- 5. Set password in SUPERVISOR & USER level
 - a. In the left-top row "S" (SUPERVISOR), press Enter to set your own user name & password
 - b. In the row 1 to 8 (USER), press Enter to set your own user name & password
- 6. Press Enter to save the setting or press Esc to cancel the editing without any change

Remark: a. Blank has underscore, while SPACE doesn't have

b. Press any alphanumeric key to move to next input item. SPACE is treated as a valid character

Change your password

- 1. Login the KVM in SUPERVISOR level by pressing your own user name & password
- 2. Call KVM OSD menu by pressing the KVM hotkey Scroll Lock + Scroll Lock + Space Bar
- 3. Press F1 to the MAIN MENU
- 4. Select "USER SECURITY"
- 5. Change password in SUPERVISOR & USER level
 - a. In the left-top row "S" (SUPERVISOR), press Enter to change your user name & password
 - b. In the row 1 to 8 (USER), press Enter to change your user name & password
- 6. Press Enter to save the setting or press Esc to cancel the editing without any change
 - Remark: a. Blank has underscore, while SPACE doesn't have
 - b. Press any alphanumeric key to move to next input item. SPACE is treated as a valid character

Disable your password

- 1. Press the KVM hotkey Scroll Lock + Scroll Lock + U
- 2. Logout the KVM by pressing the KVM hotkey Scroll Lock + Scroll Lock + P
- 3. You don't need user name & password to access the KVM OSD menu

Forget your password

Please contact your supplier for further support

Remark:

- You must press the KVM hotkey within 2 seconds
- A beep sound will be heard for successful entering KVM hotkey

3.3 KVM OSD

Matrix DB-15 KVM Usage

OSD Menu	PORT NAME		
	BANK:1 F1:MENU 01☆ SYSTEM 01 02☆ SYSTEM 02 03☆ SYSTEM 03 04☆ SYSTEM 04 05☆ SYSTEM 05 06☆ SYSTEM 06 07☆ SYSTEM 07 08☆ SYSTEM 08		
OSD operation	08¢ SYSTEM 08 USER : SUPERVISOR SCAN TIME : 10 SEC FW1V3		
next to the system name	The PC is powered on		
next to the system name	The PC is selected		
F1	Access F1 MAIN MENU		
F2	Logout the OSD menu		
F3	Previous menu		
Esc	Cancel / Quit		
Enter	Complete / Switch to selected port		
★ / ↓	Switch to previous or next port		
PgUp/PgDn	Switch to previous bank or next bank		
1/2/3/4	Display port 01 ~ 08 / 09 ~ 16 / 17 ~ 24 / 25 ~ 32 Remark: Display port 17 ~ 32 for 32 port model only		

-1 Main Menu	MAIN MENU 🖘 X		
	SELECT OPTION :		
	01LANGUAGE02PORT NAME EDIT03PORT SEARCH04USER SECURITY05ACCESS LIST06HOTKEY07TIME SETTINGS08OSD MOUSE		
01 LANGUAGE	OSD language change		
02 PORT NAME EDIT	Define port name		
03 PORT SEARCH	Quick searching by port name		
04 USER SECURITY	Change password		
05 ACCESS LIST	Define user access authority		
06 HOTKEY	Change hotkey		
07 TIME SETTINGS	Modify scan display time interval		
08 OSD MOUSE	Modify OSD mouse speed		

3.4 KVM Hotkey & Remote Console Hotkey

Local Console Hotkey	Function
Scroll Lock + Scroll Lock + Space Bar	Calling OSD menu
Right-button mouse + Esc	Calling OSD menu
Scroll Lock + Scroll Lock +	Switch to previous port
Scroll Lock + Scroll Lock + 🔻	Switch to next port
Scroll Lock + Scroll Lock + PgUp / PgDn	Switch to previous bank or next bank
Scroll Lock + Scroll Lock + Bank no. + Port no.	Switch to specific port
Scroll Lock + Scroll Lock + B	Turn the buzzer ON and OFF * Default the buzzer is ON
Scroll Lock + Scroll Lock + P	Logout the KVM if password security is ON. Show up the status windows
Advance hotkeys (for Supervisor login on	ly)
Scroll Lock + Scroll Lock + S	Activate auto-scan mode for connected servers *Press any key to exit the auto-scan mode
Scroll Lock + Scroll Lock + R	Reset all the KVM settings to factory default *Except User Security settings
Scroll Lock + Scroll Lock + U	Disable and enable password security *Default security is ON
Scroll Lock + Scroll Lock + L	To enable / disable the screen saving function and 10 minutes auto-logout *Default the screen saving is OFF
 marks: Example of "Scroll Lock + Scroll Lock Bank No. : 1 to 8 Port No. : 01 to 16 e.g. Bank 1 Port 4 : Scroll Lock + S e.g. Bank 2 Port 16 : Scroll Lock + You must press the hotkey within 2 second A beep sound will be heard for successful The numeric keypad is not supported, whi PgDn, and Enter keys are supports 	Scroll Lock + 1 + 0 + 4 Scroll Lock + 2 + 1 + 6 ds entering

Remote Console Hotkey	Function
Scroll Lock + Scroll Lock + C	Toggle switch between remote & local port
Scroll Lock + Scroll Lock + Q	Turn the buzzer ON & OFF *Default the buzzer is ON
Scroll Lock + Scroll Lock + S	Activate auto-scan mode for remote & local port *The scan time interval is 5 seconds
Scroll Lock + Scroll Lock + A	Auto-adjust the video signal

< 3.5 > Resolution Support Information

IP Console

Resolution	Frequency (Hz)
1600 x 1200	60
1280 x 1024	60
1280 x 960	60
1152 x 864	75
1024 x 768	60 / 70 / 75
800 x 600	60 / 72 / 75
640 x 480	60 / 72 / 75

Remote Console

Resolution	Frequency(Hz)
1600 x 1200	60
1440 x 900	60
1280 x 1024	60
1280 x 960	60
1152 x 864	75
1024 x 768	60 / 70 / 75
800 x 600	60 / 72 / 75
640 x 480	60 / 72 / 75

