# Global-Net 2.0d Quick User Guide



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#### 1 Main Window



#### 2 Toolbar

2.1 Add System

Add a new Array Sub-System(s) to monitoring list.

2.2 Remove System

Remove the selected Array Sub-System from the monitoring list.

2.3 Alert Configuration

Including e-mail configuration, SNMP setting and windows LAN

#### broadcasting

2.4 Remote Monitoring

The function will be available on future version.

2.5 Even Log

Global-Net operation log

2.6 📕 Exit

Exit the Global-Net program

# 3 Monitoring List



#### 3.1 System Status

'O' means Array Sub-System is online, 'X' means Array Sub-System is offline.

3.2 Model Name

The model name of the array system

3.3 IP Address

The IP address of the array system

3.4 F (Fan Status)

'O' means OK, and 'X' means fail. If one fan failed, the signal will show 'X'.

3.5 T (Temperature status)

'O' means OK, and 'X' means fail. If the temperature is over 50oC, the signal will show 'X'.

3.6 P (Power status)

'O' means OK, and 'X' means fail. If the power module failed, the signal will show 'X'.

3.7 Message

System status display

#### 4 Quick Reference

004189200000042 33 C +12.0383 +5.0537 +3.6487 1973 rpm 2083 rpm

4.1 First Column

The serial number

4.2 Second Column

The temperature of the array system

4.3 Third Column

+12V voltage value

- 4.4 Fourth Column
  - +5V voltage value

- 4.5 Fifth Column
  - +3.3V voltage value, if used
- 4.6 Sixth Column

Fan 1 rpm

4.7 Seventh Column

Fan 2 rpm

#### 5 System Menu

# 5.1 System Information

Hardware information and the event log of the Controller

# 5.2 Login

Login to Array Sub-System

The default password is '0000'. The following functions only available after Login.

# 5.3 Config System

General setting of the Array Sub-System [Stripe Size setting, Write Buffer setting, Enable/Disable Beeper, Performance Adjusting, System time setting]

# 5.4 Config Host

Host channel information and settings [SCSI ID/Fibre Hard Loop ID]

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5.5	Config Array	

Array Group configuration [Create, Remove, Re-initial, Check]

|--|

Slice setting of the Array Groups

5.7 LUN Mapping

LUN mapping of hosts

Disk Tool 5.8

Disk information [Disk List, DST]

5.9 LUN Masking

LUN masking of each LUN Only available for Fibre Channel Models

#### 6 Operations

6.1 Add System

<mark>G</mark> Add System			_D×
Automatic Detected			
IP Address	MAC Address	IP	
192.108.2.222	00-01-3d-70-4a-a9	Netmask	
		Gateway	
		DHCP	Disabled 💌
			Save
Add	Setting Refresh		
Manually Add ——		1	
IP	Add		Close
			1.

- Global-Net will detect the array systems automatically and appear them on List. You could select one IP address and then click 'Add' to add into the monitoring list.
- Double-click the IP address or click 'Setting' for getting extra information of the IP configuration on the right part.
- You could also add the array system by typing IP address manually.

#### 6.2 Alert Configuration

#### 6.2.1 E-mail

Send alert message to assigned E-mail address.

G Alert Configuration		_ 🗆 🗵
E-mail SNMP Others		
SMTP Configuration		
Sender E-mail		
SMTP Server		
E-mail Address Configuration -		
Email Address		
Email:		Add Remove
	Save	Close

- Sender E-mail: Enter the e-mail address of the sender.
- SMTP Server: Enter the IP address or the domain name of the SMTP server.
- Adding E-mail address into the list by entering the E-mail address of receiver on the E-mail text field and 'Add'.
- After setup entire the configuration, click 'Save' button to save them.

#### 6.2.2 SNMP

G Alert Configuration E-mail SNMP Others	
Main Configuration	_
SNMP Server	
1	
Save	Close

• SNMP Server: Enter the IP address of the NMS (Network Management System, ex. HP Open View or other software).

#### 6.2.3 Others

G ▲lert Configuration
E-mail SNMP Others
Lan Broadcating
🗂 [Winpopup message]
Save Close

- This function only works on the Windows platform. Make sure the "Messenger" service is enabled on the workstations, in order to receive the alert message via broadcast.
- 6.3 Remote Monitoring

GRemote Monitoring
IP: 192.168.3.208
Port :
Start Close
<i>[i,</i>

• The IP where the Global-Net been installed. Enter port number and click 'Start' button to start the Remote Monitoring Service. (This function is currently not available, only for testing purpose)

#### 6.4 Event Log

G System Log		<u>-0×</u>
Date Time		Event
2005/01/03 17:36	General	Global-Net Loaded.
2005/01/03 17:35	General	Exit Global-Net.
•		
<u></u>		
	Clear Save	Close
		1.

- This log records any user operation while Global-Net is loaded.
- Click 'Clear' button to clear the list. Or click 'Save' button to save current records as a \*.txt file on hard disk.

# 6.5 System Information

#### 6.5.1 System Information

Model Name	/	1 01030
	EASYRAID Q12	
Serial Number	004189200000042	Save
IP Address	192.168.3.215	
Firmware Version	1.01b	
Memory Size	256 MB	
Host Channel Number	2	
Max Array Group	8	
Total Slice	16	
Total LUN	128	
Temperature	34 C	
+57	+5.053¥	
+3.3∀	+3.632∀	
+12¥	+12.038V	
Fan 1	1973 rpm	
Fan 2	2070 rpm	

- System Information: This list displays the general information of the system hardware.
- Click 'Save' button to save the info as a \*.txt file.

#### 6.5.2 Event Log

G System Inf	ormation		_ 🗆 🗙
System Informa	tion EventLog		
Date Time			Close
11/29 10:49	Disk 1 Off-Line		
11/29 10:45	Disk 1 Off-Line		Save
11/29 10:06	Disk 1 Off-Line		
11/27 17:49	Disk 3 EXT DST Start		
11/23 14:31	Disk 7 DST Completed with Read failure Fail		
11/23 14:31	Disk 7 SHT DST Start		
11/23 14:27	Disk 7 DST Completed with Read failure Fail		
11/23 14:19	Disk 7 EXT DST Start		
11/20 15:41	Disk 4 DST Completed without Error PASS		
11/20 15:40	Disk 4 SHT DST Start		
11/20 15:40	Disk 4 DST Stopped by RAID controller Stopped		
11/20 15:40	Disk 8 DST Stopped by RAID controller Stopped		
11/20 15:40	Disk 7 DST Stopped by RAID controller Stopped		
11/20 15:40	Disk 1 DST Stopped by RAID controller Stopped		
11/20 15:40	Disk 6 DST Stopped by RAID controller Stopped		
11/20 15:40	Disk 4 SHT DST Start		
11/20 15:40	Disk 6 SHT DST Start		
11/20 15:40	Disk 7 SHT DST Start		
11/20 15:40	Disk 8 SHT DST Start		
11/20 15:40	Disk 1 SHT DST Start		
11/20 15:39	Disk 4 DST Stopped by RAID controller Stopped		
1 11/20 15:20	D.L 7 DOT GL J L. D & ID L-11 GL J	1	

- List the controller event log dynamically. This log records any event occurs within the system.
- Click 'Save' button to save the list as \*.txt file.

#### 6.6 Config System

#### 6.6.1 Configuration

G Config System	
Configuration Alert Date Time	
Stripe Size Configuration	
128 <b>•</b> Save	
Write Buffer Configuration	
Auto Enable Disable	
Beeper Configuration	
Enable Disable	
Performance	
Sequential Random	
	Close
	1.

- Stripe Size Configuration: Click on 'Save' to apply setting. It will reboot the system.
- Write Buffer Configuration
- Beeper Configuration: Enable or disable the beeper.
- Performance: Click the button and it will reboot the system.

**Note:** The Performance function only works when the Array Group(s) exists.

# 6.6.2 Alert

G Config System	×
Configuration Alert Date Time	
Power	
I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I	
Fan 🔽 Fan 1 🔽 Fan 2	
Disk 🔽 Disk Offline 🔽 Bad Sectors 🖵 Disk Rebuild	
Array Array Fail 🔽 Array Rebuild	
Other Temperature	
Save Close	
	_//,

• Enable or Disable the alerts

#### 6.6.3 Date Time

				me
🖪 Sun Moi	January 20 n Tue Wed	005 💽 Thu Fri Sa	at	
2 3	45	678		17:42:00
9 10 16 17	11 12 18 19	13 14 1 20 21 2	2	
23 24 30 31	25 26	27 28 <mark>2</mark>	9	

 Only available on the controller with real time clock. The date and time displayed on the window are date and time of the Array Sub-System.

# 6.7 Config Host

# 6.7.1 SCSI Model

G Config Host	
Host Channel 1 Host Ch	annel 2
SCSI ID	<b>_</b>
Host Information ——	
SCSI ID :	0
Wide :	16-bit
Speed :	Ultra 320
Max Speed :	Ultra 320
Tagged Command :	Support
Environment :	LVD
Host Arbitration :	Enable
Termination :	Disable
	Save Close
Environment : Host Arbitration : Termination :	LVD Enable Disable Save Close

#### 6.7.2 Fibre Channel Model

G Config Host								
Host Channel 1 Host C	Host Channel 1   Host Channel 2							
HARD Loop ID								
Host Information ——								
HARD Loop ID :	10							
Visable for All Host :	Enable							
Speed :	Auto-Negotiated							
Max Speed :	Fibre 2G							
Connection Mode :	Arbitration Loop							
Environment :	Fibre							
Host Arbitration :	Enable							
	Save Close							
	li.							

• To change the SCSI ID or Hard Loop ID, select new value of host channel 1 or host channel 2 and then click 'Save' button.

#### 6.8 Config Array

#### 6.8.1 Create an Array Group

G Config Array
Array 1 Array 2 Array 3 Array 4 Array 5 Array 6 Array 7 Array 8
Step 1 -> Select RAID LevelStep 2 -> Select Disk Numbers
C Level 1 C Level 30
C Level 3 C Level 50
C Level 5 C Level NRAID
Step 3 -> Additional Options
Enable Background Initialization
Stripe Size 256 💌
Step 4 -> Actions
ReInit Check Create Array Close
On-Line Expand
'On-Line Expand 'increases the storage capacity of the group.
Disk Numbers Expand

- Step 1 -> Select RAID Level: Select a desired RAID level. Some of the RAID levels might not be able to select, when there are not enough free disks or the system just simply not support the particular RAID level.
- Step 2 -> Select Disk Numbers: According to selected RAID level, the required number of disks may vary.
- Step 3 -> Additional Options: Enable background initialization if necessary. Select the stripe size if there is no other Array Group

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been created.

**Note:** Only the capacity of disks above 120GB could support the stripe size 512 or 1024.

- Step 4 -> Click 'Create Array' will reboot the system.
- 6.8.2 Configure an existed Array Group

1 4 0	6 0 mm 2 1 4 4	
array I   Array 2	Allay 5 Array 4	Array 5   Array 6   Array 7   Array 8
-Step 1 -> Select	RAID Level	Step 2 -> Select Disk Numbers
C LevelO	C Level 0+1	3
C Level 1	C Level 30	
C Level3	C Level 50	
• Level 5	C Level NRAID	
-Step 3 -> Additi	onal Options	
📕 Enable Ba	ckground Initialization	
Stripe Size	256 💌	
-Step 4 -> Action	8	
-Step 4 -> Action 	sCheck	Erase Array Close
⊂Step 4 -> Action 	sCheck	Erase Array Close
⊂ Step 4 -> Action 	S Check	Erase Array Close
- Step 4 -> Action ReInit On-Line Expand 'On-Line Exp	S Check	Erase Array Close
- Step 4 -> Action ReInit - On-Line Expand ' On-Line Exp Disk Numbers	S Check	Erase Array Close e capacity of the group. Expand

- Step 4 -> Actions: Only Level5 and Level3 could use 'ReInit' and 'Check'. Click 'Erase Array' will reboot the system.
- On-Line Expand: The option value depends on the spare disks of the array system.

#### 6.9 Setting Slice

G	Setting Sli anay 1 Ama	ce y2   Annay3   Ann	ay 4   Amay 5	Array 6 Array	× 7   Amay 8
	Capacity : Disk Mem	155425 MB ber: 1, 3, 4	Left :	0 MB	
	Slice	Volume (MB)	Slice	Vloume (MB)	
	0	155425	8		
	1		9		
	2		10		
	3		11		
	4		12		
	5		13		
	6		14		
	7		15		
				Apply	Close

- By default, Slice 0 contains total capacity of the Array Group after an Array Group has been created.
- The Slice size can only be modifying in sequence.
- Press ENTER after each change of Slice size.
- If wish to delete the slice, enter '0' or '' and press ENTER.
- Click 'Apply' button to save the configuration and it will reboot the system, or click 'Close' button to ignore the configuration and close this window. 'Apply' will not be available if total Slice size is over the total capacity.

#### 6.10 LUN Mapping

GLUN Ma	pping	, in the second s	
Host Channe	1   Host Cha	nnel 2	
LunO	Array 1	Slice O	Lun 1
			Apply Close

- The list on left shows the current LUN mapping. You could add new mapping by the box on right side.
- Select LUN and available Slice from the Array Group to add new mapping for the host channel.
- To delete a mapping, select the LUN mapping from the list and click the 'Delete' button.
- Click 'Apply' button to save the configuration and it will reboot the system, or click 'Close' button to ignore the configuration and close this window.

#### 6.11 Disk Tool

#### 6.11.1 Disk List

<u> </u>					
ID	Status	Name	Volume	ST DC	
1	Array 1	Maxtor 6Y080M0	77,712 GI	8	
2	Online	Maxtor 6Y080M0	77.712 GI	B	
3	Array 1	Maxtor 6Y080M0	77.712 GI	В	
4	Array 1	Maxtor 6Y080M0	77.712 GI	В	
5	Offline	NO Disk	0 GB		
6	Online	Maxtor 6Y080M0	77.712 GI	В	
7	Online	Maxtor 6Y080M0	77.712 GI	В	
8	Offline	NO Disk	0 GB		
Deta	ail Informa	tion Disk Self Test			
Deta ID	ail Informa	tion Disk Self Test	LBA :	Not Support	
Dets ID	ail Informs :	tion Disk Self Test	LBA :	Not Support	
Dets ID Sta	ail Informe : atus :	tion Disk Self Test 1 Array 1	LBA : SMART :	Not Support Support	
Deta ID Sta Na	ail Informs : atus : me :	ttion Disk Self Test 1 Array 1 Maxtor 6Y080M0	LBA : SMART : State :	Not Support Support Working	
Dets ID Sta Na	ail Informs : atus : me : olumn :	tion Disk Self Test 1 Array 1 Maxtor 6Y080M0 77712 MB	LBA : SMART : State : Mode :	Not Support Support Working Ultra DMA mode 6	
Deta ID Sta Na Vo	ail Informs : atus : me : olumn : d. Plock :	tion Disk Self Test 1 Array 1 Maxtor 6Y080M0 77712 MB	LBA : SMART : State : Mode :	Not Support Support Working Ultra DMA mode 6	
Deta ID Sta Na Vo Ba	ail Informs : atus : ume : olumn : d Block :	ttion Disk Self Test 1 Array 1 Maxtor 6Y080M0 77712 MB 0	LBA : SMART : State : Mode :	Not Support Support Working Ultra DMA mode 6	
Dets ID Sta Na Vo Ba	ail Informs : atus : me : olumn : d Block :	ttion Disk Self Test 1 Array 1 Maxtor 6Y080M0 77712 MB 0	LBA : SMART : State : Mode :	Not Support Support Working Ultra DMA mode 6	
Deta ID Sta Na Vo Ba	ail Informs : atus : ume : olumn : d Block :	tion Disk Self Test 1 Array 1 Maxtor 6Y080M0 77712 MB 0 Clo	LBA : SMART : State : Mode :	Not Support Support Working Ultra DMA mode 6	

- ST: The percentage of Disk Self Test.
- DC: The percentage of Disk Clone. (This function is current not available.)

#### 6.11.2 Disk Self Test

G Dis	sk Tool				_ 🗆 🗙
ID	Status	Name	Volume	ST	DC
1	Array 1	Maxtor 6Y080M0	77.712 GB		
2	Online	Maxtor 6Y080M0	77.712 GB		
3	Array 1	Maxtor 6Y080M0	77.712 GB		
4	Array 1	Maxtor 6Y080M0	77.712 GB		
5	Offline	NO Disk	0 GB		
6	Online	Maxtor 6Y080M0	77.712 GB		
7	Online	Maxtor 6Y080M0	77.712 GB		
8	Offline	NO Disk	OGB		
Det	ail Informati Single Disk -	on Disk Self Test			
	Short St	art Extend Start	Stop		
	All Disks Short Star	t AllExtend Start All	Stop All		
		Close			
					111

• Select a disk if wish to perform a single disk self testing.

**Note:** Please refer to user manual for detail information regarding Disk Self Test.

6.12 LUN Masking

Only available on Fibre Channel Model

#### 6.12.1 LUN Masking

GLUN Masking	
Host Channel 1 Host Channel 2 WWN	
Visible Hosts	
Lun 0 1, 2	Lun 0 💌
	Host 1 💌
	Visible
	Masking
	Apply Close

- Click the 'Visible' and 'Masking' buttons to setup the LUN masking.
- Click 'Apply' button to save the configuration and it will reboot the system, or click 'Close' button to ignore the configuration and close this window.

#### 6.12.2 WWN

G LUN Masking	
Host Channel 1 Host Channel 2 WWN	
Word Wide Name    1 a1b2c3d4e5f6a1b2    2 3    4 5    6 7	a1b2c3d4e5f6a1b2
8 9 10 11 12 13 14 15 16	Delete
	Apply Close

- Enter the WWN of the fibre HBA in the text field and then click 'Set' button.
- If you would like to remove the Fibre HBA from list, select the WWN and then click 'Delete' button.
- Click 'Apply' button to save the configuration and it will reboot the system, or click 'Close' button to ignore the configuration and close this window.

For further information and the newest Global-Net version look at the easyRAID-Website:

# http://www.easyRAID.com