CHENBRO

Storage Chassis
4-Port 6Gb/s SAS/SATA Backplane

80H10313601A0

User's Manual

08 / 07 / 2012

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Technical Support

Chenbro works hard to offer our customers maximum performance from our chassis. But in case you have any problem with our product you can find supports from the following resources.

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Detail information of our products is in our website. You can find technical updates, installation guides, FAQs, technical specifications and more. Our web address is: www.chenbro.com.

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You can also fill out the technical support form at our Technical Support page. You technical issue inquiries will be sent directly to our support professionals.

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Contents

Revision History

Date	Modifications
Aug / 07 / 2012	● **First release (V1.0)**

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6Gb/s Backplane Specification

P/N : 80H10313601A0 (Version A0)

Specification	
Host Interface	SATA
HDD Interface	SAS
Hot-Swap	Yes, allows user to replace hard disk drive during power on stage
Display	LED indicates Hard Disk Drive status Power LED – Blue (When HDD is present) Access LED – Green (When HDD is busy) Error LED – Red (When HDD is error)
Cooling	Six PWM fan connector
Environment Monitor	Temperature senor detect(RT1, RT2)
Connectors	1.SAS 29P *4 2. Dual SATA 7P *2 3.Standard 4P Power connector *2 for +5V, +12V from power supply 4. Pin header 2.54mm (2x5) *1 5. Pin header 2.5mm (2x1) *1
Dimension	417.5(L) x 55(W) x 1.6(H) mm
Material	FR4 4 layer

Description:

This BACKPLANE is design for **SAS/SATA 4 PORT** [3.5" SAS/SATA HDD]

LED Status:

Blue: HDD Power on indicator (Turn on when HDD is inserted)

Green / RED:

Green: HDD Accessing indicator (Flashing when HDD Accessing)

RED: HDD Fail indicator (Turn on when HDD failed)

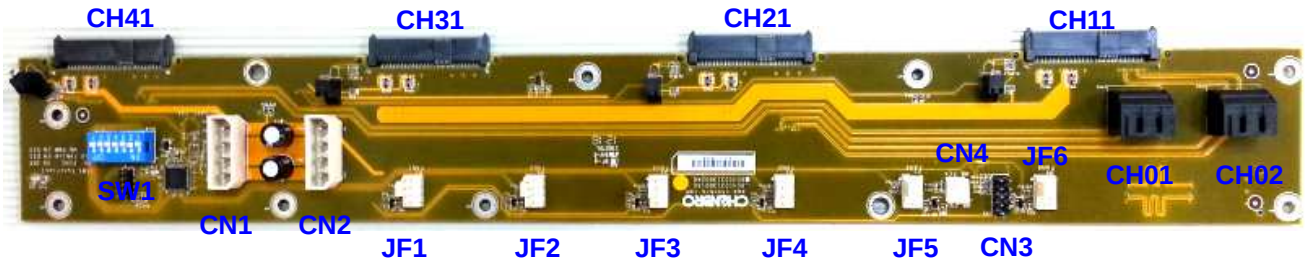
Accommodation Chassis

- ***RM13604***

Backplane Layout

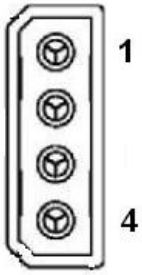
Backplane Connectors

Front View



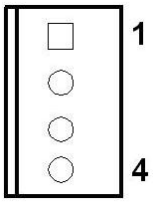
POWER Connector (CN1 ~ CN2)

Pin NO.	Descriptions
1	12V
2	GND
3	GND
4	5V



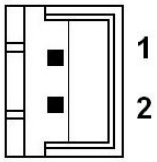
Fan Connector (JF1 ~ JF6)

Pin NO.	Descriptions
1	GND
2	12V
3	FAN Clock Input
4	FAN PWM Output



MB PWM Connector (CN4)

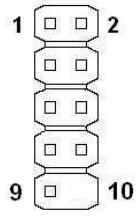
Pin NO.	Descriptions
1	FAN Clock Output to MB
2	FAN PWM Input from MB



(gets either PWM duty cycle of M/B or B/P for comparison to control fan speed , required one special cable P/N: 26H11313601A0)

SGPIO SIGNAL CONNECTOR (CN3)

Pin NO.	Descriptions	Pin NO.	Descriptions
1	SGPIO DATA INPUT	2	NC
3	SGPIO DATA OUTPUT	4	GND
5	GND	6	SGPIO LOAD
7	CONTROL TYPE	8	SGPIO CLOCK
9	NC	10	KEY PIN



Remarks:

CN05 for HDD connector CH11 ~ CH41

CN06 for HDD connector CH51 ~ CH81

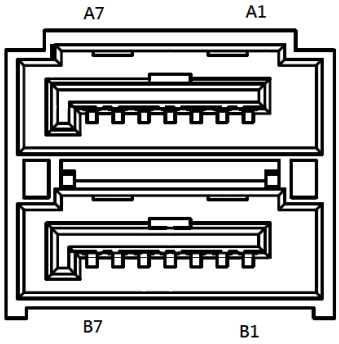
Recommend SAS/SATA cable with SGPIO side band supporting as below,

mini SAS SFF-8087 to 4 SATA with side band

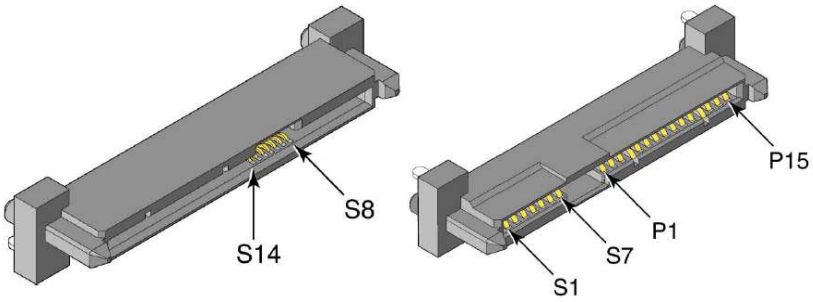
(P/N: 26H12323601A0)

HOST IN Connector (CH01 ~ CH02) 7 Pin SATA *4 port

Pin NO.	Descriptions	Pin NO.	Descriptions
A1	GND	B1	GND
A2	RP1	B2	RP2
A3	RN1	B3	RN2
A4	GND	B4	GND
A5	TN1	B5	TN2
A6	TP1	B6	TP2
A7	GND	B7	GND

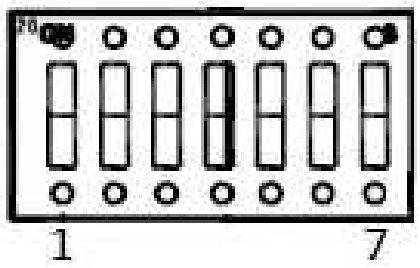


HDD IN Connector (CH11, CH21, CH31, CH41)



Pin NO.	Descriptions	Pin NO.	Descriptions
S1	GND	P1	NC
S2	RP	P2	NC
S3	RN	P3	NC
S4	GND	P4	GND
S5	TN	P5	POWER ENABLE
S6	TP	P6	GND
S7	GND	P7	5V PRE-CHARGE
S8	NC	P8	5V
S9	NC	P9	5V
S10	NC	P10	GND
S11	NC	P11	ACCESS SIGNAL
S12	NC	P12	GND
S13	NC	P13	12V PRE-CHARGE
S14	NC	P14	12V
		P15	12V

SW1 FUNCTION



SW1-1: FAN1 Monitor Enable/Disable Setting

Sw1-1	FAN1
ON	Enable
OFF	Disable (Default)

SW1-2: FAN2 Monitor Enable/Disable Setting

Sw1-2	FAN2
ON	Enable
OFF	Disable (Default)

SW1-3: FAN3 Monitor Enable/Disable Setting

Sw1-3	FAN3
ON	Enable
OFF	Disable (Default)

SW1-4: FAN4 Monitor Enable/Disable Setting

Sw1-4	FAN4
ON	Enable
OFF	Disable (Default)

SW1-5: FAN5 Monitor Enable/Disable Setting

Sw1-5	FAN5
ON	Enable
OFF	Disable (Default)

SW1-6: FAN6 Monitor Enable/Disable Setting

Sw1-6	FAN6
ON	Enable
OFF	Disable (Default)

SW1-7: MB PWM Monitor Enable/Disable Setting

Sw1-7	MB PWM
ON	Enable
OFF	Disable (Default)

Backplane Assembly

The Chenbro 4-Port 6Gb/s Mini-SAS Backplane can be assembled on Chenbro Storage Server Chassis RM13604 only. Please refer to the Chassis Quick Installation Guide for detail information.

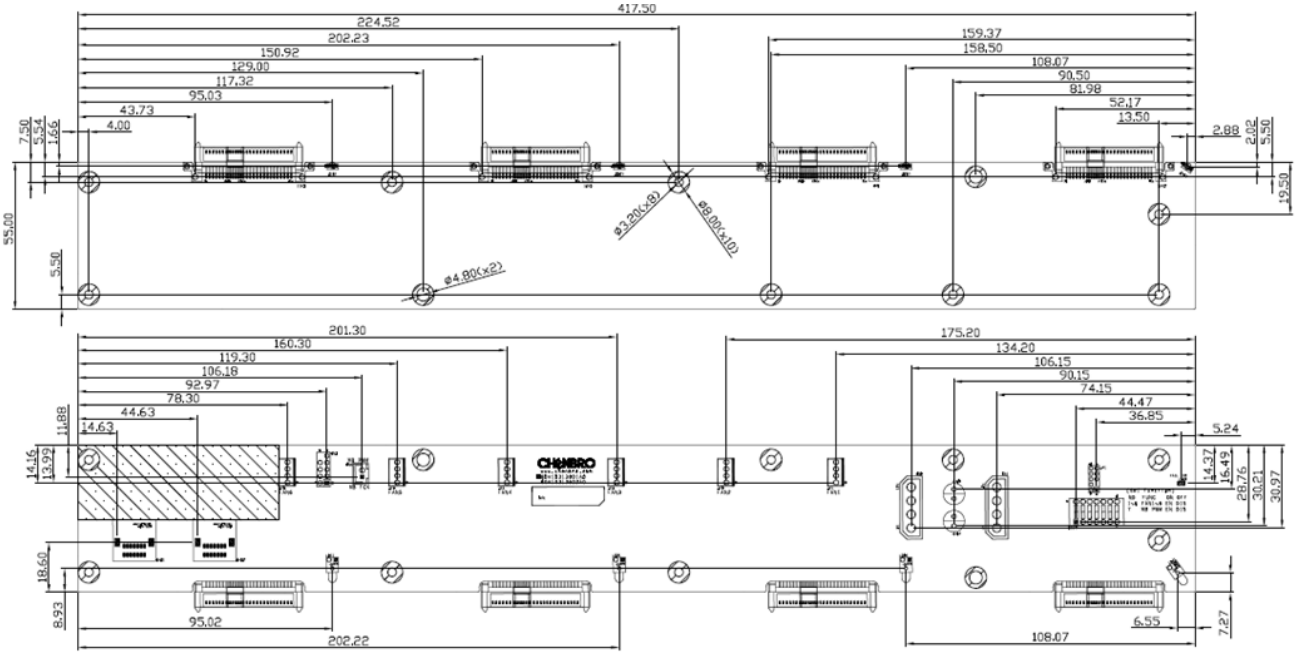
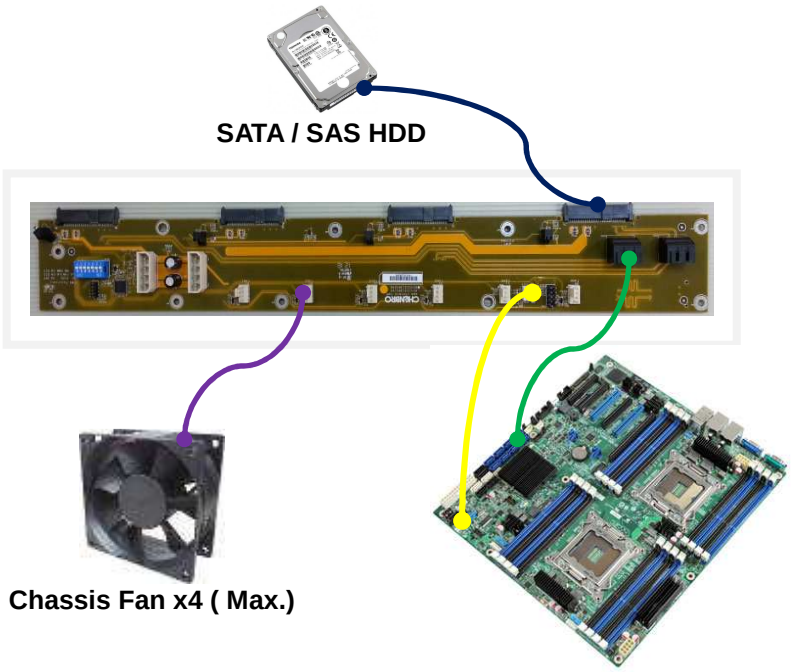


Figure : Front and Rear View of 4-port Backplane

Backplane Wiring



To SATA/SAS HDD

Fan cable

SATA Cable

M/B PWM / clock Fan signal cable (2-pin to 4-pin) see note

Note :

This optional cable (26H11313601A0) subjects to PWM and clock signal connection between M/B and B/P, to get PWM duty signal (depends on thermal sensor on M/B) for comparison with B/P and control fan speed. Meantime, report fan clock signal to M/B for fan speed indication in the system.

Appendix 1

PWM fan duty cycle definition table

Temperature (℃)	Loading percentage (%)
<= 31℃	34%
32℃	38%
33℃	42%
34℃	46%
35℃	50%
36℃	54%
37℃	58%
38℃	62%
39℃	66%
40℃	70%
41℃	73%
42℃	76%
43℃	79%
44℃	82%
45℃	85%
46℃	88%
47℃	91%
48℃	94%
49℃	97%
>= 50℃	100%