CHENBRO

Storage Chassis
8-Port 6Gb/s Mini-SAS Backplane

80H10323604A1

User's Manual

Feb / 10 / 2013

www.chenbro.com

15Fl., No.150, Jian Yi Road, Chung Ho City, Taipei Hsien, Taiwan R.O.C.,
Tel: +886 2 82265500 Fax: +886 2 82265392 Email: info@chenbro.com.tw

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Fax : 1-909-947-4300

Chenbro UK LTD
Tel: 44-(0)161-425-5341

Chenbro China Office
Tel: 86 010-6709-1786
Fax: 86 010-8791-0567

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Contents

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Revision History

Date	Modifications
Feb / 10 / 2013	● **First release (V1.0)**

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6Gb/s Backplane Specification

P/N : 80H10323604A1 (Version A0)

Specification	
Host Interface	MINI-SAS
HDD Interface	SAS
Hot-Swap	Yes, allows user to on line replace Hard Disk Drive
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	Four PWM fan connector
Environment Monitor	Temperature sensor detect(RT1, RT2)
Connectors	1.SAS 29P *8 2.MINI-SAS Connector *2 3.Standard 4P Power connector *4 for +5V, +12V from power supply 4. 2P Wafer CONN 2.54mm (1x2) *1
Dimension	425(L) x 54.7(W) x 2.4(H) mm
Material	FR4 4 layer

Accommodation Chassis

- ***RM23608***

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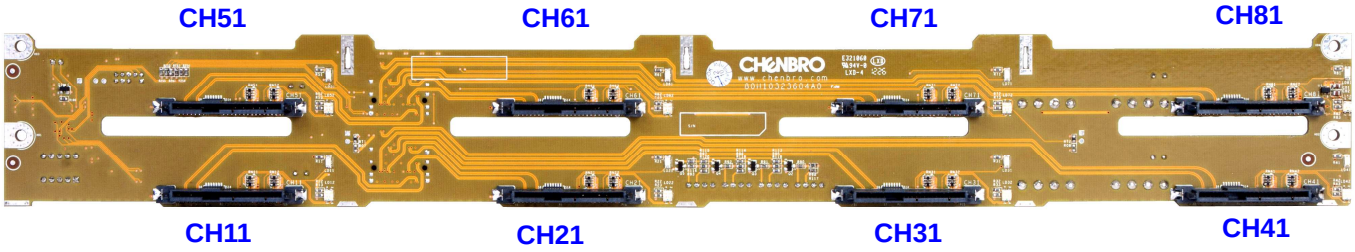
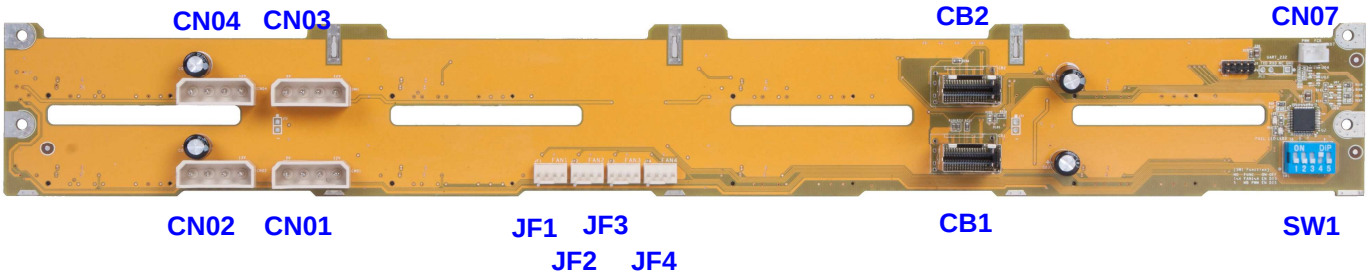
Backplane Layout

Backplane Connectors

Front View



Rear View



(1)[CH11 ~ CH41 / CH51 ~ CH81] : Connect to 22-pin SATA or 29-pin SAS

(2)[JF1 / JF2 / JF3 / JF4] : PWM Fan connectors 1~4

(3)[CN01 ~ CN04] : 4-pin Power connectors

(4)[CN07] : M/B fan signal connector (Clock and PWM)

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

(5)[SW1] : DIP switch function for fan control enable and disable

(detail information see below)

(6) [CB1 / CB2] : Mini-SAS connector

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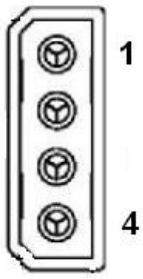
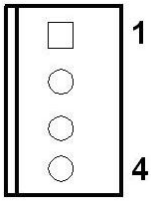
POWER Connector (CN01 ~ CN04)

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



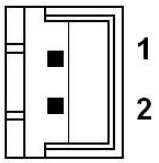
Fan Connector (JF1 ~ JF4)

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



MB PWM Connector (CN07)

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)

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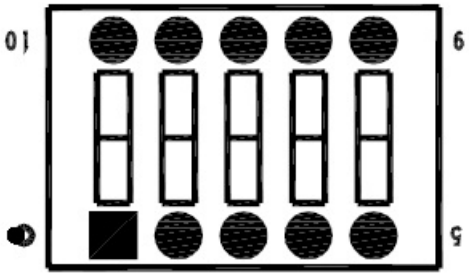
SW1 FUNCTION



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 (Default)
OFF	Disable

SW1-3: FAN3 Monitor Enable/Disable Setting

Sw1-3	FAN3
ON	Enable (Default)
OFF	Disable

SW1-4: FAN4 Monitor Enable/Disable Setting

Sw1-4	FAN4
ON	Enable (Default)
OFF	Disable

SW1-5: MB PWM Monitor Enable/Disable Setting

Sw1-5	MB PWM
ON	Enable
OFF	Disable (Default)

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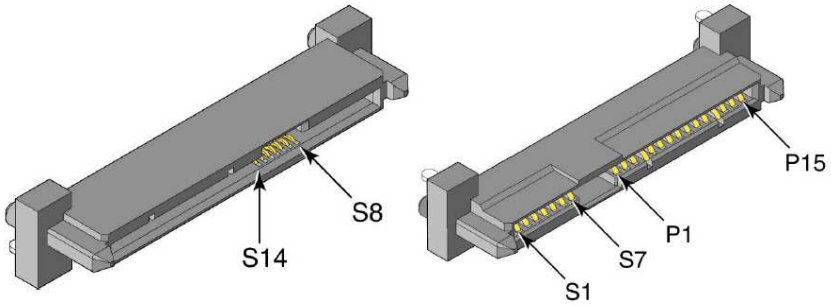
HDD IN Connector (CH11, CH21, CH31, CH41, CH51, CH61, CH71, CH81)



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

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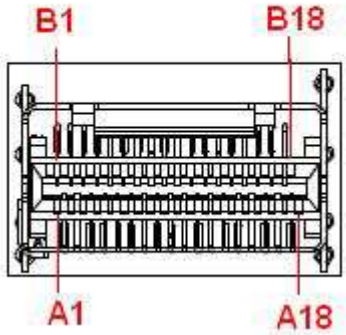
Mini SAS CONNECTOR (CB1 ~ CB2)

Front View



Pin NO.	Descriptions	Pin NO.	Descriptions
A1	GND	B1	GND
A2	RP1	B2	TP1
A3	RN1	B3	TN1
A4	GND	B4	GND
A5	RP2	B5	TP2
A6	RN2	B6	TN2
A7	GND	B7	GND
A8	SG_CK	B8	NC
A9	SG_LD	B9	GND
A10	GND	B10	SG_DO
A11	NC	B11	SG_DI
A12	GND	B12	GND
A13	RP3	B13	TP3
A14	RN3	B14	TN3
A15	GND	B15	GND
A16	RP4	B16	TP4
A17	RN4	B17	TN4
A18	GND	B18	GND

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Backplane Assembly

The Chenbro 8-Port 6Gb/s Mini-SAS Backplane can be assembled on Chenbro Storage Server Chassis RM23608 only. Please refer to the Chassis Quick Installation Guide for detail information.

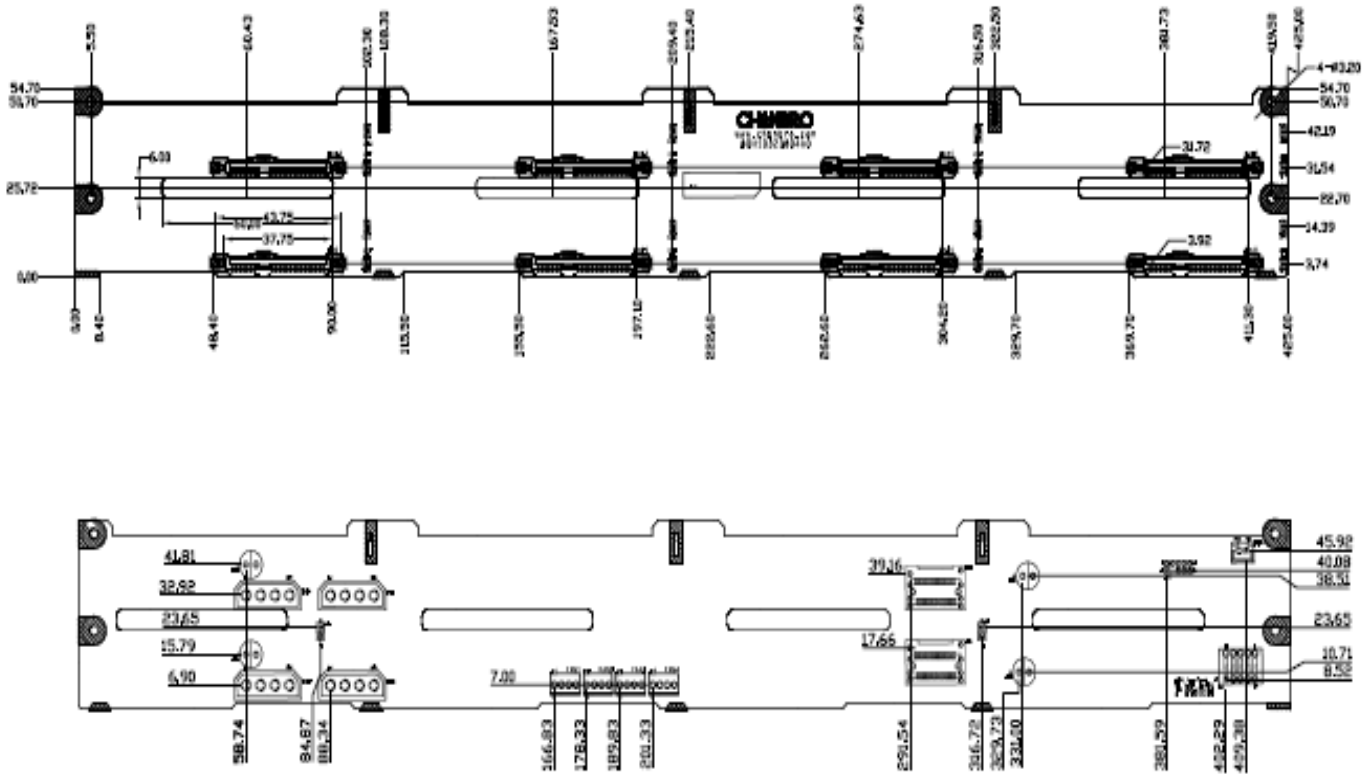
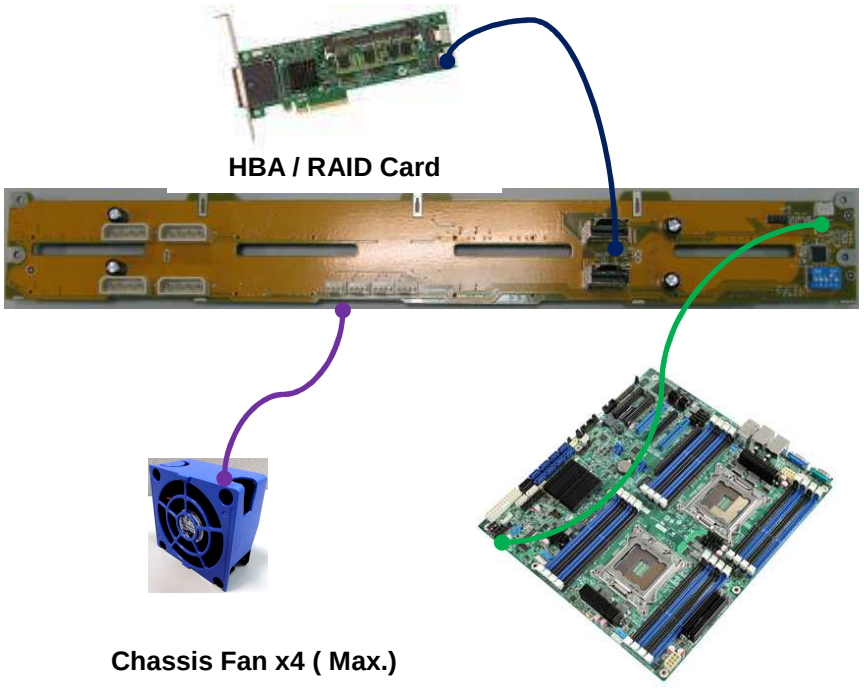


Figure : Front and Rear View of 8-port Backplane

Backplane Wiring



Mini-SAS cable

Fan 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%

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