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In addition, free technical support is available from Chenbro engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

Preliminary Edition Printed in Taiwan Jan 2006

Hardware Specification

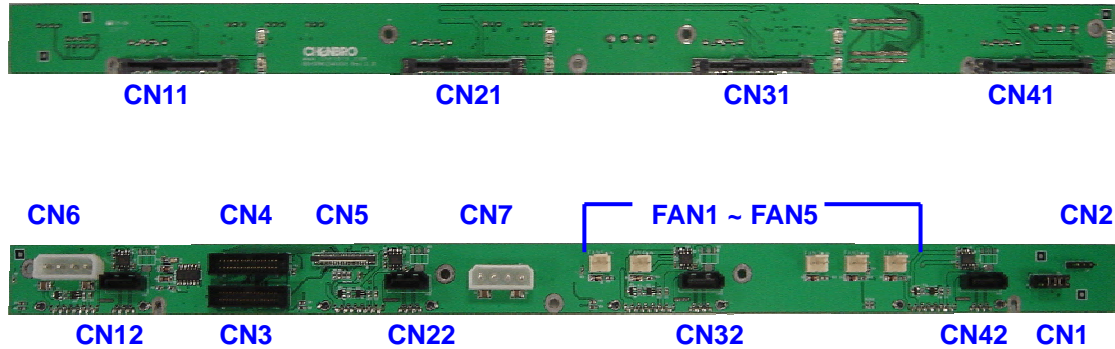| Specification	
Host Interface	**SAS**
HDD Interface	**SAS**
Hot-Swap	**Yes, allows user to on line replace Hard Disk Drive**
Display	**LED indicates Hard Disk Drive status** **Power LED – Blue (When HDD is present)** **Access LED –Green (When HDD is busy)** **Error LED –Red (When HDD is error)**
Cooling	**Five Fan connector**
Environment Monitor	**Temperature senor detect(TR1)**
Connectors	**1.S-ATA7P*4** **2.SAS29*4(for HDD),** **3.Standard 4P Power connector x 2 for +5V, +12V from power supply** **4.FPC*1** **5.BOX HEADER*2**
Dimension	**419.79(l) x 26.2(w) x 1.6(h) mm**
Material	**FR4 4layer**

Accommodated Chassis

This backplane can be applied to all Storage Server Chassis as below:

- **RM11704B**
- **RM12404B**
- **RM21508B**
- **RM31212B**
- **RM41416B**
- **RM51924B**
- **RM51224B**

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Backplane Layout

Backplane Connectors

Front view (HDD slot IN)

CN11   CN21   CN31   CN41

CN6   CN4   CN5   CN7   FAN1 ~ FAN5   CN2

CN12   CN3   CN22   CN32   CN42   CN1

Rear View (Host Connector IN)

(1) *[CN11 / CN21 / CN31 / CN41] : Connect 22-pin SATA2 HDD*

(2) *[CN5] : LED output connector (to LED board)*

(3) *[CN12 / CN22 / CN32 / CN42] : Connect 7-pin SATA2 Host*

(4) *[FAN1 / FAN2 / FAN3 / FAN4 / FAN5] : Fan power connectors*

(5) *[CN3 / CN4] : LED box header connector*

(6) *[CN6 / CN7] : Power connectors*

(9) *[CN2] : Control HDD LED Fail*

(10) *[CN1] : External HDD Access LED input*

Pin Assignment

[FAN1 / FAN2 / FAN3 / FAN4 / FAN5]

Pin	Def.
1	GND
2	+12V
3	Sensor

FAN Connector

[CN6 / CN7]

Pin	Def.
1	+12V
2	GND
3	GND
4	+5V

Power Connector

[CN2]

J7	Def
1	HDD1_Fail
2	HDD2_Fail
3	HDD3_Fail
4	HDD4_Fail

HDD Fail

Input

[CN1]

Pin	External HDD Access LED(-)	Pin	HDD Internal Access LED(-) Out
1	HDD1_Act	2	HDD1_Act
3	HDD2_Act	4	HDD2_Act
5	HDD3_Act	6	HDD3_Act
7	HDD4_Act	8	HDD4_Act
9	N/C	10	Key

Note: Factory default is with jumpers on Pin#1-2/3-4/5-6/7-8

HDD Access

LED Input

[CN5] / [CN4]

Pin	Def	Pin	Def	Pin	Def	Pin	Def
1	+5V	2	+5V	3	+5V	4	GND
5	GND	6	GND	7	Fan1 Sensor	8	Fan2 Sensor
9	Fan3 Sensor	10	Fan4 Sensor	11	Fan5 Sensor	12	GND
13	Thermal 1U	14	Thermal 2U	15	Thermal 3U	16	Thermal 4U
17	SAS LED A#1U	18	SAS LED B#1U	19	SAS LED C#1U	20	SAS LED D#1U
21	SAS LED A#2U	22	SAS LED B#2U	23	SAS LED C#2U	24	SAS LED D#2U
25	SAS LED A#3U	26	SAS LED B#3U	27	SAS LED C#3U	28	SAS LED D#3U
29	SAS LED A#4U	30	SAS LED B#4U	31	SAS LED C#3U	32	SAS LED D#4U
33	HDD SEQ	34	SEQ UP				

LED Output

(to LED board)

LED Output

(to LED board)

<u>Backplane Assembly</u>

The Chenbro 4-Port SATA Backplane can be only assembly on Chenbro Server Chassis RM11704B/12404B/21508B/31212B/41416B/51924B/51224B, please refer to the Chassis Quick Installation Guide for the necessary information.

1. Attach with 4 stand-offs on bracket location with "S" mark.
2. Attach with 4 screws for each backplane assembly.
3. Place backplane assembly along internal backplane guide rail.
4. Attach with 2 screws on both sides of chassis.
5. Repeat step 1~4 for 2nd backplame assembly and placement
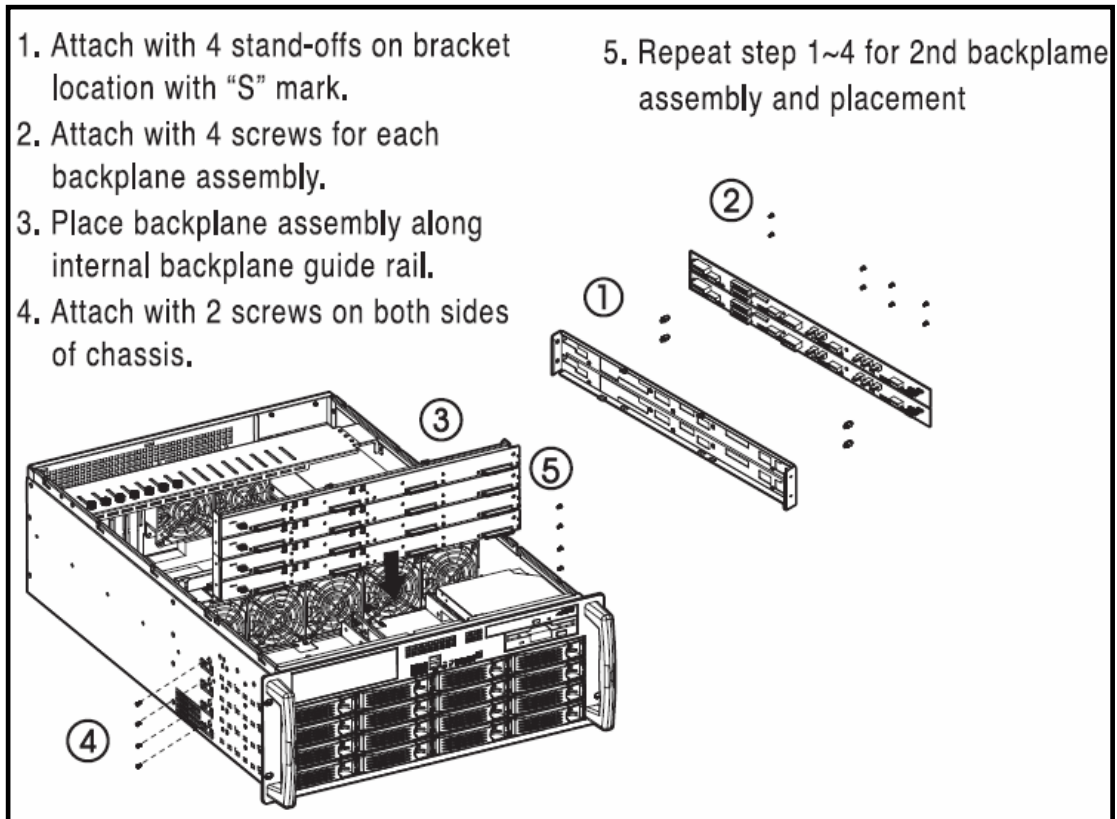
Example: Installing Backplane Assembly on RM41416B

Note: For 2U~5U Storage Server Chassis Backplane assembly, please use a "upper holder bracket" after the Backplane assembly is sliding into the chassis as shown in above diagram.

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Backplane Wiring

1. *Please use 4 pcs SATA2 cable per backplane for HOST to Backplane.*

2. *For the Fan connectors, please connect the system middle Fan (3P3C) to the Backplane.*

3. *For the Fail LED output, please connect the attached cable for RAID card (only if failure LED output is support) to Backplane (CN2).*

To LED BD

FFC cable connect the most top BP to LED board

HDD LED/FAN & Temp Status Signal to LED board by cascaded

#6 Backplane
#5 Backplane
#4 Backplane
To LED BD
#3 Backplane
#2 Backplane
#1 Backplane

To LED BD
#4 Backplane
#3 Backplane
#2 Backplane
#1 Backplane
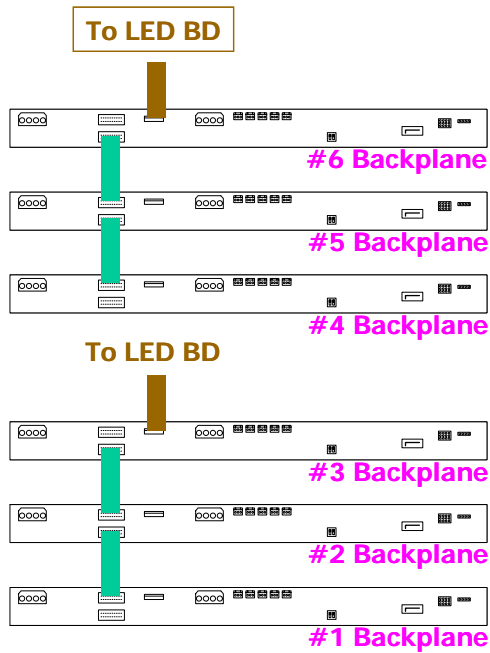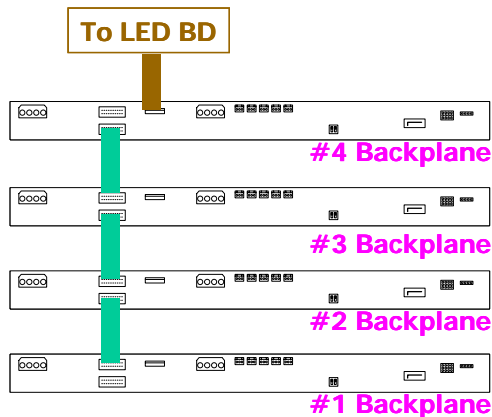
Fig-1: Wiring of SAS/SATA2 BP (5U)   *Fig-2: Wiring of SAS/SATA2 BP (2U~4U)*

Relative Part Number List

Part No.	Description	Unit	Remark
80H103124-005	SAS/SATA2, BP 4PORT,W/ANTI-STATIC BAG	Pcs	
55H103215-010	METAL BRACKET FOR BACKPLANE	Pcs	
26-113519-001	LED CABLE,100MM (for BP to BP)	Pcs	
26-113322-001	SIGNAL CABL, 5P TO 4P, 750MM	Pcs	
84-321510-037	Bulk Pack 4-port SAS/SATA2 Backplane	Pcs	

Chassis assembly example

See below for the example of how the wiring to be performed.

Example for 2U chassis with SATA backplane wiring diagram (RM215):

SATA Card   **Chassis Fan x4**

HDD5   **HDD6**   **HDD7**   **HDD8**

HDD1   **HDD2**   **HDD3**   **HDD4**

LED Board

SATA cable (BP to Host Adaptor, 4x cables per BP)

LED Flat cable (10cm, BP to BP)

Chassis fans wiring (Connection start from FAN1)

LED FFC cable (BP to LED board)
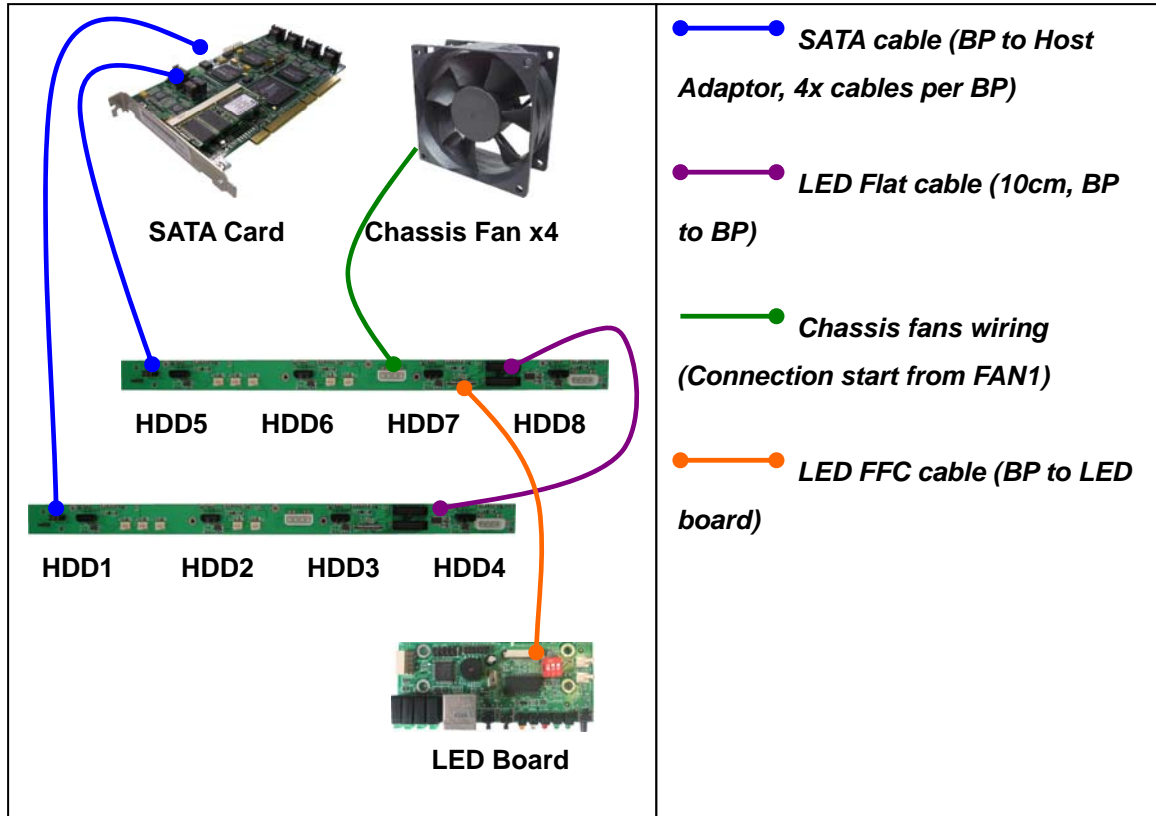
Example for 3U chassis with SATA backplane wiring diagram (RM312):

12 Port SATA Card

Chassis Fan x4

HDD9   HDD10   HDD11   HDD12

HDD5   HDD6   HDD7   HDD8

HDD1   HDD2   HDD3   HDD4

LED Board

SATA cable (BP to Host Adaptor, 4x cables per BP)

LED Flat cable (10cm, BP to BP)

Chassis fans wiring (Connection start from FAN1)

LED FFC cable (BP to LED board)
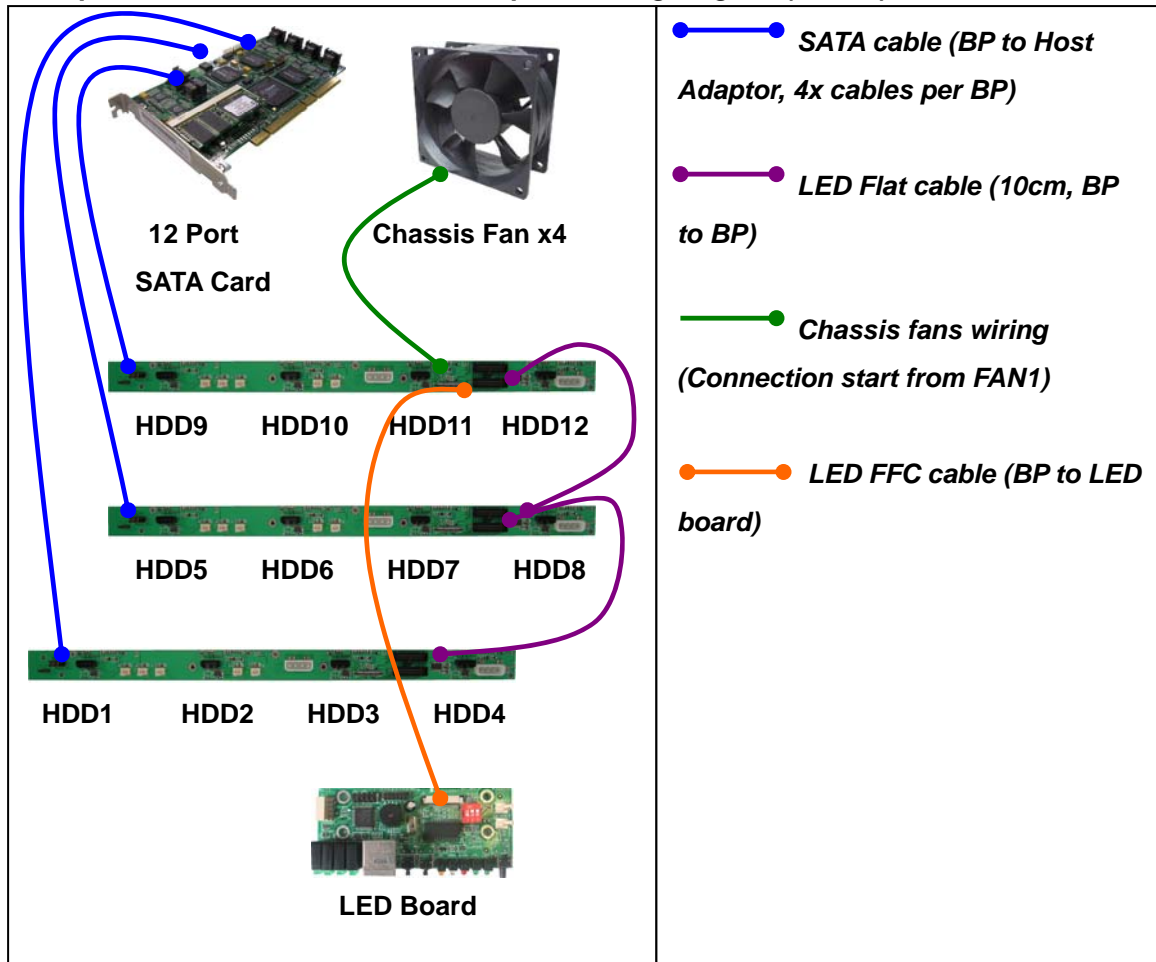
Example for 4U chassis with SATA backplane wiring diagram (RM414):

8 Port
SATA Card #1

Chassis Fan
x5

8 Port
SATA Card #2

HDD13   HDD14   HDD15   HDD16

HDD9   HDD10   HDD11   HDD12

HDD5   HDD6   HDD7   HDD8

LED Board

HDD1   HDD2   HDD3   HDD4

SATA cable
(BP to Host Adaptor, 4x
cables per BP)

LED Flat
cable (10cm, BP to BP)

Chassis fans
wiring (Connection
start from FAN1)

LED FFC
cable (BP to LED
board)
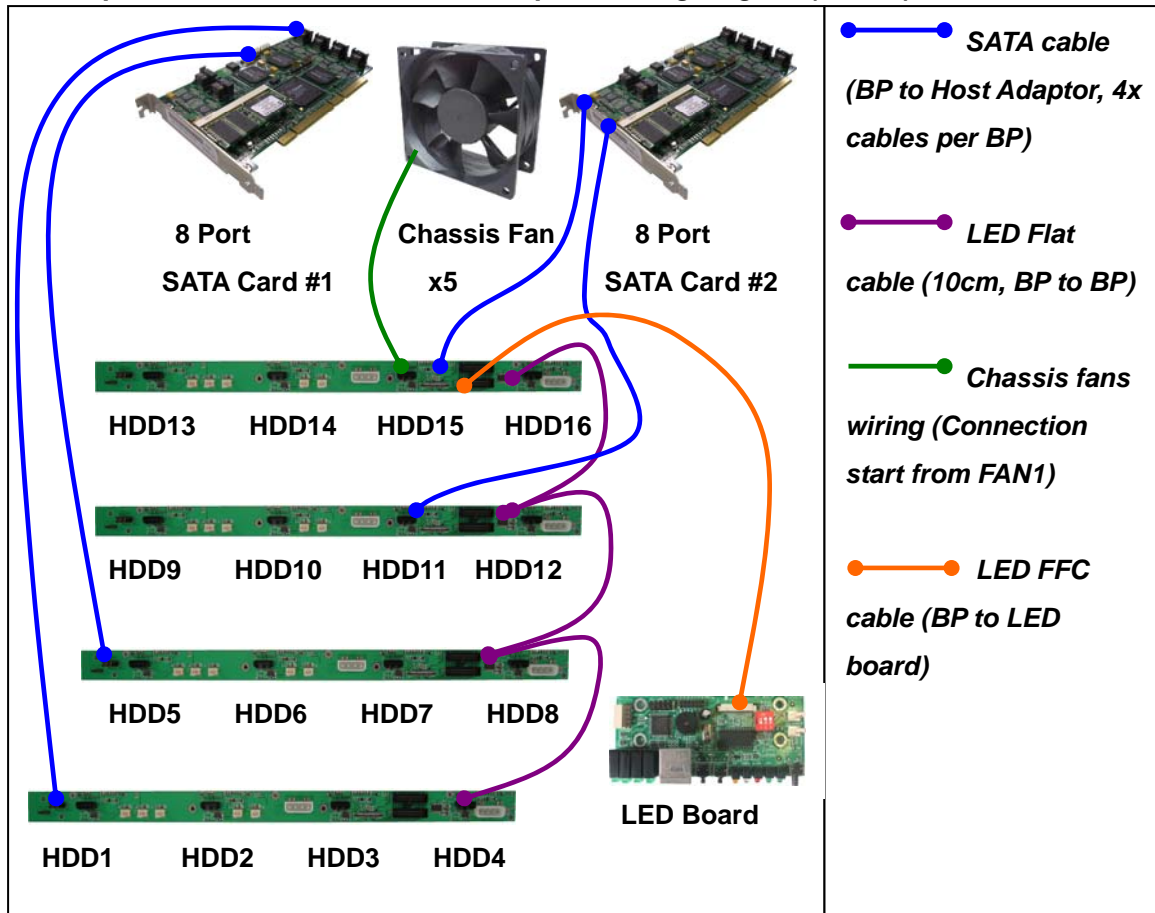
Example for 5U chassis SATA backplane wiring diagram (RM519):

**12 Ports
SATA Card #1**

**Chassis Fan
x3**

**Chassis Fan
x5**

**12 Ports
SATA Card #2**

HDD9   HDD10   HDD11   HDD12

HDD21   HDD22   HDD23   HDD24

HDD5   HDD6   HDD7   HDD8

HDD17   HDD18   HDD19   HDD20

HDD1   HDD2   HDD3   HDD4

HDD13   HDD14   HDD15   HDD16

LED board

SATA cable (BP to Host Adaptor, 4x cables per BP)

LED Flat cable (10cm, BP to BP)

Chassis fans wiring (Connection start from FAN1)

LED FFC cable (BP to LED board)