

Release Note for AIC SAS 6G Mezzanine Expander + 4-in-1 Backplane

Oct 18, 2012

Changelog

10/18/2012 (firmware 1.11.1.1 + mfg 1.6.0.1)

1. Initial revision

SAS connection between AIC Mezzanine Expander and AIC 4-in-1 Backplane

1. Only the SAS 8087 connector "CN2" in AIC Mezzanine Expander can support AIC 4-in-1 Backplane.

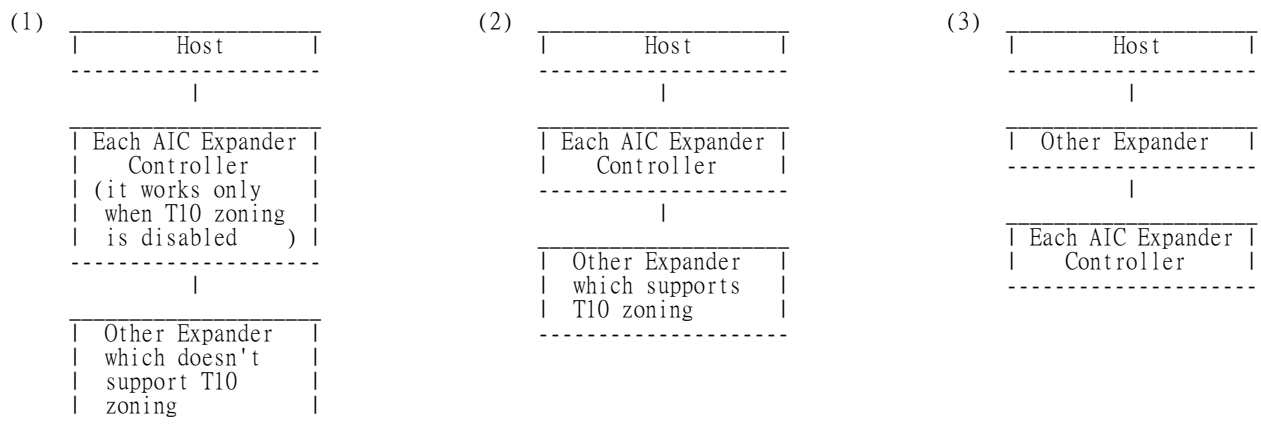
Definition of the visual LED indicators (blue and red) associated with a disk drive

Host Control Bit	Blue LED	Red LED
OK	ON	OFF
RSVD DEVICE	ON	OFF
HOT SPARE	ON	OFF
CONS CHECK	ON	Fast blink
IN CRIT ARRAY	ON	Slow blink
IN FAILED ARRAY	ON	Slow blink
REBUILD/REMAP	ON	Fast blink
R/R ABORT	ON	Slow blink
ACTIVE	ON	OFF
DO NOT REMOVE	ON	OFF
MISSING	ON	ON
INSERT	ON	Slow blink
REMOVE	ON	Slow blink
IDENT	Slow blink	OFF
FAULT	ON	ON
DEVICE OFF	ON	OFF

* The disk drives in AIC 4-in-1 Backplane can not be identified or located (the "IDENT" field).

* The red LEDs for all disk drives in AIC 4-in-1 Backplane can not be controlled by Host.

Supported Configuration



Most 3G Expanders don't support T10 zoning.

(4) _____

Host-1	...	Host-n
-----		-----
Each AIC 6G Expander		
Controller		
-----		-----

To have multiple host access support (the host number can be up to the number of wide ports on each AIC 6G Expander Controller), only the following drives are supported for shared access:

1. SAS drive
2. SATA drive with an interposer which provides SATA-to-SAS conversion

Unsupported Configuration

1. This only applies to the enclosure which supports dual AIC 6G Expander Controllers.
The enclosure with dual AIC 6G Expander Controllers attached is inserted with a SATA drive without any interposer. It will cause the drive LEDs behaves incorrect.

Command Line Interface Operation

1. How to enable/disable T10 zoning

The default T10 zoning configuration is off.

- (A) Check the current zoning state

```
cmd> phyzone state
Zoning is OFF
```

- (B) Enable zoning

```
cmd> phyzone on
```

- (C) Disable zoning

```
cmd> phyzone off
```

2. How to configure T10 zoning

After enabling T10 zoning, three predefined groups are Group1, Group8, and Group9. Each PHY should be in one of the three group, and all PHYs in a wide port should be in the same group. Each PHY in Group1 can access any PHY in other groups, and vice versa. Each PHY in Group8 cannot access any PHY in Group9, and vice versa.

The default configuration, which allows two wide ports can access all drives, follows.

- (A) PHY0 - PHY3 for the UP wide port (the first port) : Group8
- (B) PHY4 - PHY7 for the UP/DOWN wide port (the second port) : Group1
- (C) PHY8 - PHY11 for the third port if available : Group1
- (D) PHY12 - PHY35 for drive : Group1

The command syntax is "phyzone phy_index group". The following example shows how to setup one drive accessed only the first port and another drive accessed only by the second port.

- Step 1: Read the current group for PHY4

```
cmd> phyzone 4
Phy 4 for Zone Group 1
```

- Step 2: Assign the second port (PHY4 - PHY7) for Group9

```
cmd> phyzone 4 9
cmd> phyzone 5 9
cmd> phyzone 6 9
cmd> phyzone 7 9
```

- Step 3: Assign the drive on PHY12 to be accessed only by the first port instead of the second port

```
cmd> phyzone 12 8
```

- Step 4: Assign the drive on PHY13 to be accessed only by the second port instead of the first port

```
cmd> phyzone 13 9
```

- Step 5: Reset

3. How to get all revisions in AIC SAS 6G Expander

- (A) Expander firmware revision

```
cmd> rev
```

- (B) Expander configuration revision

```
cmd> showmfg
```

(C) Microchip firmware for managing sensors
cmd> sensor

4. How to configure temperature sensor

Four temperature settings in Celsius are T1, T2, warning threshold, and alarm (critical) threshold.

(A) Get the current temperature settings

cmd> temperature

Temperature in Celsius (t1=20 C, t2=55 C, warning=50 C, alarm=55 C)

(B) Set temperature with new T1=18 C, T2=52 C, warning threshold=48 C, and alarm threshold=54 C. The new setting will take effect after reset.

cmd> temperature 18 52 48 54

cmd> reset