Release Note for AIC SAS 6G Thunderbolt 4U24 Expander

Aug 07, 2013

Changelog

08/07/2013 (firmware 1.11.4.7 + mfg 1.4.0.3) - Part Number (B98-00XUXXE3110407 + B98-00XUXXG3040003)
Old Part Number B98-00XUXXE3110405 is replaced by B98-00XUXXE3110407.
1. While setting "RQST Insert" or "RQST Remove" in Array Device Slot control element, the respective bit can not be found in Array Device Slot status element
2. Resolve the temperature = -1 degree of Celsius while Bridge PIC can not read from the temperature sensor
3. Stop issuing Backplane I2C reset while accessing I2C

05/10/2013 (firmware 1.11.4.5 + mfg 1.4.0.3) - Part Number (B98-00XUXXE3110405 + B98-00XUXXG3040003)
Old Part Number B98-00XUXXE3110404 is replaced by B98-00XUXXE3110405.
1. SES String Out page supports 47-bytes and 48-bytes format

05/08/2013 (firmware 1.11.4.4 + mfg 1.4.0.3) - Part Number (B98-00XUXXE3110404 + B98-00XUXXG3040003)
Old Part Number B98-00XUXXE3110403 is replaced by B98-00XUXXE3110404.
1. Add firmware revisions of Backplane PIC and Bridge PIC in SES String In page
2. Add Backplane fan RPM in SES String In page
3. Add the control of Backplane fan and force poweroff in SES String Out page
4. Add an error count for data timeout monitored by expander

05/06/2013 (firmware 1.11.4.3 + mfg 1.4.0.3) - Part Number (B98-00XUXXE3110403 + B98-00XUXXG3040003)
Old Part Number B98-00XUXXG3040001 is replaced by B98-00XUXXG3040003.
1. Signal tuning.

02/25/2013 (firmware 1.11.4.3 + mfg 1.4.0.1) - Part Number (B98-00XUXXE3110403 + B98-00XUXXG3040001)
Old Part Number B98-00XUXXE3110402 is replaced by B98-00XUXXE3110403.
1. Enable SES page 0x04 and 0x80. This issue is introduced in firmware 1.11.4.2.

02/19/2013 (firmware 1.11.4.2 + mfg 1.4.0.1) - Part Number (B98-00XUXXE3110402 + B98-00XUXXG3040001)
Old Part Number B98-00XUXXE3110401 is replaced by B98-00XUXXE3110402.
1. Resolve the issue, the activity LED of the drive is still on when the power of the drive slot is turned off.

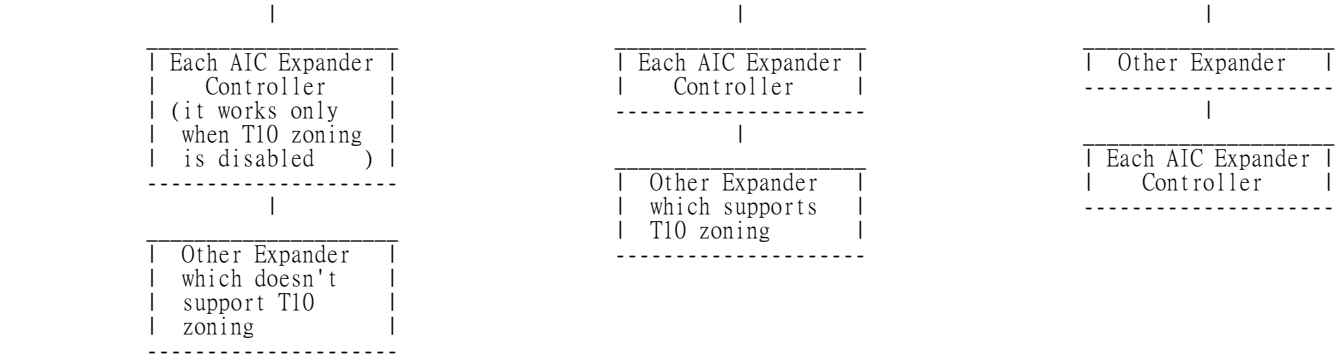
12/22/2012 (firmware 1.11.4.1 + mfg 1.4.0.1) - Part Number (B98-00XUXXE3110401 + B98-00XUXXG3040001)
1. Initial revision

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

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

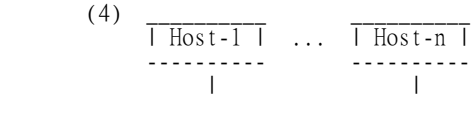
Supported Configuration

(1) (2) (3)



Most 3G Expanders don't support T10 zoning.

(4)



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 convertion

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
```