iStarUSA™

Storage Backplane Specifications

PD-BSS101
1U 1-PORT SAS and SATAII Backplane Specification: 1. Support SAS and SATAII 3Gb/s compatible interface connector 2. Support one 7+7+15 pin 29 pin SAS female connectors 3. Support one drive inrush current control for Hot-swapping 4. Support one port primary blue color 7 pin SATAII lock connectors 5. Support one port secondary black color 7 pin SATAII lock connectors 6. Support one drive insert power on LED shown pin header 7. Support one drive access LED shown pin header 8. Support one drive fail LED shown pin header 9. Support one HBA card access LED in put pin header 10. Support one HBA card fail LED in put pin header 11. Support one jumper setting for Drive access LED shown or HBA card access LED input 12. Support one FAN fail LED pin header 13. Support one FAN speed RPM fail buzzer alarm 14. Minimum Fan Speed Detection: The FAN IC asserts LED if the fan frequency is below 79 Hz, which corresponds to a fan speed of approximately 2370 rpm. The fan remains powered during a locked rotor or an under-speed failure condition 15. Support one point temperature sensor 16. Support one temperature monitor fail buzzer alarm 17. Temperature sensor is 60℃ max 18. Support one big 4-pin D-type DC power connectors

PD-BSS102
1U 2-PORT Raid Back-plane Specification: 1. Support serial ATA interface 2. Support 2-bay serial ATA hard disk drive inrush current control for Hot-swapping 3. Support serial ATA hard disk drive serial ATA interface + serial ATA power (7+15 pin)connectors 4. Support serial ATA interface in (7 pin) connectors 5. Support one big 4-pin D-type connector for DC power input

PD-BSS104
1U 4-port SAS and SATA Ⅱ Backplane Specification: 1. Support SAS and SATA Ⅱ 3Gb/s compatible interface connector 2. Support 4 port 7+7+15 pin 29 pin SAS female connectors 3. Support 4 port hard disk drive inrush current controls for Hot-swapping 4. Support hard disk voltage +3.3V and +5.0V and +12V 5. Support 4 pcs primary blue color 7 pin SATA Ⅱ lock connectors 6. Support 4 pcs secondary black color 7 pin SATA Ⅱ lock connectors 7. Support 4 hard disk insert power on LED shown pin header 8. Support 4 hard disk access LED shown pin header 9. Support 4 hard disk fail LED shown pin header 10. Support 4 HBA card access LED in put pin header 11. Support 4 HBA card fail LED in put pin header 12. Support Dipswitch setting for hard disk access LED shown or HBA card access LED in put.(default is for hard disk LED support) 13. Support 2 pcs big 4-pin D-type DC power connectors.

PD-BSS304
3U 4-PORT Raid Back-plane Specification: 1. Support SAS and SATA Ⅱ 3Gb/s compatible interface connector 2. Support 4 pcs 7+7+15 pin 29 pin SAS female connectors 3. Support 4 port HDD inrush current control for Hot-swapping 4.Support 4 pcs primary blue color 7 pin SATA Ⅱ lock connectors 5. Support 4 pcs secondary black color 7 pin SATA Ⅱ lock connectors 6. Support 4 pcs HDD insert and access high green color SMD LED on board 7. Hard disk insert LED is high green color bright, access LED is high green color flash 8. Support 4 pcs fail SMD red LED on board, Fail LED function from HBA card input shown 9. Support 1 X 4 pin header 2.54 mm for HBA card HDD fail LED input 10. Support 4 X 4 pin header for hard disk P11 short ground or HBA card access input 11. Support 2 pcs big 4-pin D-type DC power connectors

PD-BSS308
3U 8-PORT Raid Back-plane board Specification: 1. SATA 7 pin lock interface: for SAS 3G backward compatibility 2. Hard disk interface: SAS 29 pin male connector 3. Support 8 pcs SAS 7 pin blue connector for host primary 4. Support 8 pcs SAS 7 pin black connector for host secondary 5. Support 8 pcs SAS 29 pin female connector 6. Hard disk first ID default setting is J16-HDD0 blue color primary, J17-HDD0 black color

secondary ,J18-HDD1 blue color primary, J19-HDD1 black color secondary, J20-HDD2 blue color primary, J21-HDD2 black color secondary, J22-HDD3 blue color primary, J23-HDD3 black color secondary

7. Hard disk second ID default setting is J24-HDD4 blue color primary, J25-HDD4 black color secondary ,J26-HDD5 blue color primary, J27-HDD5 black color secondary, J28-HDD6 blue color primary, J29-HDD6 black color secondary, J30-HDD7 blue color primary, J31-HDD7 black color secondary
8. Support 8 bay hard disk drive inrush current control for Hot-swapping
9. Support 3 pcs 4 pin FAN1~FAN3 PWM control from M/B. Support FAN1~FAN3 tech for M/B sensor
10. Support 1 pcs 2 x 5 pin headers and 2 pcs 2 x 7 pin header for hard disk power insert LED and hard disk LED shown
11. Hard disk insert power LED is On, not insert power LED is off
12. SAS hard disk ready LED is on, access R/W LED is flash, from HDD P11 support
13. SATA hard disk ready LED is off, access R/W LED is blink, from HDD P11 support
14. Support 3 pcs white power connectors in big 4-pin D-type
15. Support HDD power DC+3.3V, DC +5.0V, DC +12V
16. Support 1 pcs power small 4p connector
17. Support one pcs slim CD-ROM connector and one pcs CD-ROM box header
18. Support in and out 2 X 5 pin header for USB. (default key pin-9)
19. Support 2 X 12 box header for system LED and LAN LED and system switch
20. Support 2 X 7 pin 2.0 mm for FAN pwm in put and FAN tech

PD-BSS328
Expander 28 port Specification: 1. Support LSI expander CHIP LSA62045B1 SAS X28 port 2. Support 28 fully-independent SAS and SATA Ⅱ ports 3. SSP, SMP, STP protocol support 4. Support 1.5G/3.0G b/s SAS/SATA Ⅱ data transfer rates 5. Support Port independent auto-negotiation 6. Ports are non-denominational. Initiator or target connect. Provides a low latency connection router with crossbar module to efficiently create and maintain connections 7. Support SATA/SAS HDD spin-up sequencing, configurable on a per-PHY basis 8. Support J1 1 pcs 25 pin infiniband connector 4 port for SAS HBA card input 9. Support J2 1 pcs 25 pin infiniband connector 4 port SAS daisy chain to next expander JBOD use 10. Support J3~J7 5 pcs 25 pin infiniband connector 20 port hard disk for SAS backplane 11. Support JP3 2 X 10P pin header for firmware update 12. Support JP1 2 X 20p pin header for hard disk activity LED bright 13. Support JP2 2 X 20p pin header for hard disk fail LED bright 14. Support single port for SAS expander

15. Support small 4P DC power connector

PD-BSA101

1U 1-PORT Raid serial ATA Backplane Specification:

1. Support serial ATA Ⅱ interface
2. Support 7+15 pin SATA Ⅱ hard disk connectors
3. Support 7 pin SATA Ⅱ interface connectors
4. Support one DC power in connectors big 4-pin D-type
5. Support Hard disk DC +12V, DC +5V
6. Support 2 X 3 pin HDD power LED and access LED shown
7. Support 2 X 3 pin LOCAL HD ACT or HD P11 TO GND setting

PD-BSA102

1U 2-PORT Raid Back-plane Specification:

1. Support serial ATA interface
2. Support 2-bay serial ATA hard disk drive inrush current control for Hot-swapping
3. Support serial ATA hard disk drive serial ATA interface + serial ATA power (7+15 pin) connectors
4. Support serial ATA interface in (7 pin) connectors
5. Support one big 4-pin D-type connector for DC power input

PD-BSA104

1U 4-PORT Raid Backplane Specification:

1. Support SATA Ⅱ interface 3Gb/s or backward compatibility
2. Support 4-bay 7 + 15 pin SATA Ⅱ interface
3. Support Hard disk drive inrush current control for Hot-swapping
4. Support 7 pin SATA Ⅱ interface connector for HBA
5. Support two big 4-pin D-type connector for DC power input
6. Support 2 X 3 pin header for Hard disk insert power LED shown and Hard disk access LED or Hard disk fail LED shown
7. Support 2 X 4 pin header HBA card hard disk access LED in-put
8. Support 1 X 4 pin header HBA card hard disk fail LED in-put
9. Support function setting DIP switch for hard disk LED out-put select.(default setting ON is for hard disk LED out put shown)

PD-BSA304

3U 4-PORT Raid serial ATA Backplane Specification:

1. Support HBA SATA 7 pin and HDD SATA 22 pin (7+15 pin) connectors
2. Support two big 4P DC power in connectors
3. Support 4 SATA hard disk drive inrush current control for Hot-swapping
4. Support 4 on board 3mm blue LED for HDD inserts power shown and 4 3mm dual orange/red

color for HDD access/fail shown
5. Support HBA ARECA and 3 WARE raid card HDD access input pin header
6. Support HBA ARECA HDD fail input 4 pin header
7. Support 2 pcs 3 pin wafers for FAN speed monitoring, when FAN failure the LED active and buzzer alarm
8. Minimum Fan Speed Detection: The FAN IC asserts LED1, LED2 if the fan frequency is below 79 Hz, which corresponds to a fan speed of approximately 2370 rpm. The fan remains powered during a locked rotor or an under-speed failure condition
9. Support fan install or not install setting. (default is fan install)
10. Support one point temperature overheating sensor and temperature overheating setting for 50℃ or 60℃, when temperature overheating the LED active and buzzer alarm
11. Support 2 pin wafer for supply power fail in put, when power supply fail LED active and buzzer alarm
12. Support one 2 pin wafer supply power mute in put
13. Support SATA HDD 3.3V (option)
14. The PCB PB free

PD-BSC101
1U 1-PORT Backplane Specification: 1. Support SCSI interface: Ultra 320/160 backward compatibility 2. Support hard disk drive 80pin SCA2 Ultra 320/160 backward compatibility 3. Support SCSI-IN connector. (68 pin female) 4. Support 1-bay hard disk drive inrush current control for Hot-swapping 5. Support hard disk drive Delay_Start or Remote_Start function 6. Support 1 x power connectors in big 4-pin D-type 7. Support 1 external LED’s monitoring for HDD installation, HDD access LED pin 8. Support Dip switch ID setting function, default ID is ID0

PD-BSC102
1U 2-PORT Raid Back-plane Specification: 1. Support SCSI interface: Ultra 320/160 backward compatibility 2. Support hard disk drive 80pin SCA2 Ultra 320/160 backward compatibility 3. Support SCSI-IN connector. (68 pin female) 4. Support 2-bay hard disk drive inrush current control for Hot-swapping 5. Support 5pcs external fan speed monitoring, fan failure buzzer alarm and red led active function. (Buzzer on board) 6. Support temperature monitor for 50℃ or 60℃ 7. Support 5P DIP switch for FAN monitor disable and temperature select for 50℃ or 60℃ function 8. Support 3P DIP switch for HDD motor spin mode select to Delay Start or Remote Start and

terminator enable or disable function
9. Support 2 x power 90 deg connectors in big 4-pin D-type
10. Support external pin header LED's monitoring for HDD access and mute and fail LED
11. Active terminator on board with auto detection for Ultra-320/160 backward compatibility
12. Support HDD ID setting function default is ID0, ID1

PD-BSC104

1U 4-PORT Backplane Specification:
1. Support SCSI interface: Ultra 320/160 backward compatibility
2. Support hard disk drive 80pin SCA2 Ultra 320/160 backward compatibility
3. Support SCSI-IN connector. (68 pin female)
4. Support 4-bay hard disk drive inrush current control for Hot-swapping
5. Support hard disk drive Delay Start or Remote Start function
6. Support 1 x power connectors in big 4-pin D-type
7. Support 1 external LED's monitoring for HDD installation, HDD access LED pin
8. Support Dip switch ID setting function, default ID is ID0~ID3

PD-BSC203

2U 3-PORT Raid Back-plane Specification:
1. Support SCSI interface: Ultra 320/160 backward compatibility
2. Support hard disk drive 80pin SCA2 Ultra 320/160 backward compatibility
3. Support SCSI-IN and SCSI-OUT connector. (68 pin female)
4. Support 3-solt hard disk drive inrush current control for Hot-swapping
5. Support 2pcs external FAN speed monitoring and FAN failure buzzer alarm and red led active pin header. (Buzzer on board)
6. Minimum Fan Speed Detection: The FAN IC asserts LED1, LED2 if the fan frequency is below 79 Hz, which corresponds to a fan speed of approximately 2370 rpm. The fan remains powered during a locked rotor or an under-speed failure condition
7. Support one point temperature sensor and temperature overheating setting for 50 or 60 (DS4 sw6 OFF default set is 60)
8. Support FAN install or not install set for DIP switch. (Default set DS6 sw4,sw5 OFF for FAN install)
9. Support hard disk drive motor spin mode for Delay_Start or Remote_Start setting. (Default set DS4 sw3 ON,sw2 OFF)
10. Support 2 pcs big 4P D-type DC power connectors
11. Support external pin headers for HDD installation LED and HDD access and one overheating LED and mute switch
12. Active terminator on board with auto detection for Ultra-320/160 backward compatibility
13. Support terminators enable or disable set. (Default set DS4 sw1 ON for terminator enable)
14. Support SCA2 ID setting function default is ID0, ID1, and ID2

15. Default DIP SW4 setting is sw1 on, sw2 off, sw3 on, sw4 off, sw5 off, sw6 off

PD-BSC208

2U 8-PORT Raid Back-plane Specification:

1. SCSI interface: Ultra 320/160 backward compatibility
2. Hard disk interface: SCA2 80pin 320/160 backward compatibility
3. Support 2 pcs SCSI-IN and SCSI out connector. (68 pin female)
4. Support 8 pcs SCA2 80 pin female connector
5. Hard disk ID default setting is channel 1 is ID0, ID1, ID2, ID3 and channel 2 is ID4, ID5, ID6 and ID8
6. Support 8 port hard disk drive inrush current control for Hot-swapping
7. Support 8 port hard disk power mosfet control
8. Support 3 pcs 4 pin wafer for FAN
9. Support 2 X 5 pin header for PWM in put
10. Support two pcs 2 x 7 pin headers and one pcs 2 x 5 pin header for hard disk power insert LED and hard disk access LED shown
11. Support DS1 dip-switch hard disk motor spin up Delay Start or Remote Start for DIP switch setting.(default setting is for Delay Start)
12. Active terminator on board with auto detection for Ultra-320/160 backward compatibility.(terminator IC is DALLAS 2119M)
13. Support DS1 DIP switch setting for terminator 1 disable or enable function.(If use daisy chain must turn disable, the default is for channel 1 terminator enable)
14. Support SCSI channels 1 4 port and SCSI channel 2 4 port in put or SCSI one channel 8 port
15. Support 3 pcs DC white power connectors in big 4-pin D-type and 1 pcs small DC 4 pin
16. Support one slim CD-ROM connector and one CD-ROM box header
17. Support in and out 2 X 5 box header for USB
18. Support 2 X 12 box header for system LED and LAN LED and system switch

PD-BSC304

3U 4-PORT SCSI Back-plane Specification:

1. Support SCSI interface: Ultra 320/160 backward compatibility
2. Support 4 pcs hard disk 80pin SCA2 Ultra 320/160 backward compatibility
3. Support 2 pcs SCSI-in and SCSI-out connector. (68 pin female)
4. Support 4 port hard disk drive inrush current controls for Hot-swapping
5. Support HDD Delay Start or Remote Start select for DIP-switch.(default set for DLY Start)
6. Support 2 pcs DC power connector’s big 4-pin D-type
7. Support 5 external pin header for HDD installation, HDD access LED
8. Support HDD ID setting for dipsw 2 x 4 P, default is ID0, ID1, ID2, ID3 and ID4. If use daisy chain the other backplane must ADJ ID dipsw by you need
9. Support 2 pcs FAN 3-pin connector

PD-BSC305
3U 5-PORT SCSI Back-plane Specification: 1. Support SCSI interface: Ultra 320/160 backward compatibility 2. Support 5 pcs hard disk 80pin SCA2 Ultra 320/160 backward compatibility 3. Support 2 pcs SCSI-in and SCSI-out connector. (68 pin female) 4. Support 5 port hard disk drive inrush current controls for Hot-swapping 5. Support HDD Delay Start or Remote Start select for DIP-switch.(default set for DLY Start) 6. Support 2 pcs DC power connector's big 4-pin D-type 7. Support 5 external pin header for HDD installation, HDD access LED 8. Support HDD ID setting for dipsw 2 x 4 P, default is ID0, ID1, ID2, ID3 and ID4. If use daisy chain the other backplane must ADJ ID dipsw by you need 9. Support 2 pcs FAN 3-pin connector

PD-BSC310
3U 10-PORT Raid Back-plane Specification: 1. SCSI interface: Ultra 320/160 backward compatibility 2. Hard disk interface: SCA2 80pin 320/160 backward compatibility 3. Support 2 pcs SCSI-IN and SCSI out connector. (68 pin female) 4. Support 10 pcs SCA2 80 pin female connector 5. Hard disk ID default setting is channel 1 is ID0, ID1, ID2, ID3, ID4 and channel 2 is ID5, ID6, ID8, ID9, ID10 6. Support 10 port hard disk drive inrush current controls for Hot-swapping 7. Support 10 port hard disk power mosfet controls 8. Support 2 pcs 6 pin wafer for FAN hot-swap 9. Support one pcs 2 x 8 pin headers for external LED shown 10. Support hard disk motor spin up Delay Start or Remote Start for DIP switch setting for S4. (Default setting is for Delay-start mode) 11. Active terminator on board with auto detection for Ultra-320/160 backward compatibility.(terminator IC is DALLAS 2119M) 12. Support 2 channels 5 + 5 bays or 1 channel 10 bays detect 13. Support 1 pcs white power connectors in 20-pin D-type

PD-BSC315
3U 15-PORT Raid Back-plane Specification: 1. SCSI interface: Ultra 320/160 backward compatibility 2. Hard disk interface: SCA2 80pin 320/160 backward compatibility 3. Support 2 pcs SCSI-IN and SCSI out connector. (68 pin female) 4. Support 15 pcs SCA2 80 pin female connector 5. Hard disk ID default setting is channel 1 is ID0, ID1, ID2, ID3, ID4, ID5, ID6 and channel 2 is

ID8, ID9, ID10, ID11, ID12, ID13, ID14, ID15

6. Support 15 port hard disk drive inrush current controls for Hot-swapping

7. Support 15 port hard disk power mosfet controls

8. Support 2 pcs 6 pin wafer for FAN hot-swap

9. Support one pcs 2 x 8 pin headers for external LED shown

10. Support hard disk motor spin up Delay Start or Remote Start for DIP switch setting for S4. (Default setting is for Delay-start mode)

11. Active terminator on board with auto detection for Ultra-320/160 backward compatibility.(terminator IC is DALLAS 2119M)

12. Support 2 channels 7 + 8 bays or 1 channel 15 bays detect

13. Support 1 pcs white power connectors in 20-pin D-type

PD-BSC316

3U 16-PORT Raid Back-plane Specification:

1. Support SCSI interface: Ultra 320/160 backward compatibility

2. Support hard disk drive 80pin SCA2 Ultra 320/160 backward compatibility

3. Support two pcs SCSI-IN connector. (68 pin female) Support 16-bay hard disk drive inrush current control for Hot-swapping

4. Hard disk ID default setting, both channel 1 and channel 2 is ID0, ID1, ID2, ID3, ID4, ID5, ID6 ,ID8

5. Active terminator on board with auto detection for Ultra-320/160 backward compatibility

6. Backplane have 4 pcs 80pin SCA2 female connector, connect to 20-3016-CTL board

7. Support insert HDD power blue LED long light(right side), HDD active and fail shown in dual LED(left side)