



## RM 208/316/420 8 bay SAS/SATA backplane specification

1. PCB 尺寸 : 432.0 mm X 49.5 mm X 2.4 mm
2. Drive interface : SAS III / SATA III (6G), backward compatible
3. MINISAS CONNECTOR : 2
4. DEVICE : 8 (29PIN) SAS/SATA
5. DC POWER SUPPLY : 3
6. SIGNAL INPUT CONNECTOR : 1
  - (A) ACCESS SIGNAL INPUT (FROM HOST)
  - (B) HDD FAIL SIGNAL INPUT (FROM HOST)
7. HDD ACCESS SIGNAL DETECTING : AUTO
  - (A) USE SAS HDD
  - (B) USE SATA HDD
8. ACCESS SIGNAL SETTING : BY JUMPER
  - (A) ACCESS SIGNAL FROM HOST
  - (B) ACCESS SIGNAL FROM DEVICE
9. HDD POWER / ACCESS /FAIL LED : 8
  - (A) WHEN HDD INSERT ----- ACTIVE (BLUE)
  - (B) WHEN HDD R/W ----- FLASH (BLUE)
  - (C) WHEN HDD FAIL ----- ACTIVE (RED)
10. SGPIO SETTING : BY JUMPER
  - (A) ENABLE
  - (B) DISABLE
11. Current protection: AUTO

12. FAN DETECT : 4 (PWM TYPE)

(A) RPM = 30%  $\leq$  25°C

RPM =100%  $\geq$  45°C

13. TEMPERATURE DETECT : ON BOARD SENSOR

(A) Setting FAIL = 45°C

\* 48°C alarm warning , 44°C reset

(B) Setting FAIL = 55°C

\*58°C alarm warning , 54°C reset

14. SIGNAL OUTPUT :

(A) FAN FAIL LED

\* WHEN FAN FAIL ---- ACTIVE

(B) TEMPERATURE FAIL LED

\* WHEN TEMPERATURE FAIL ---- ACTIVE

(C) ALARM RESET

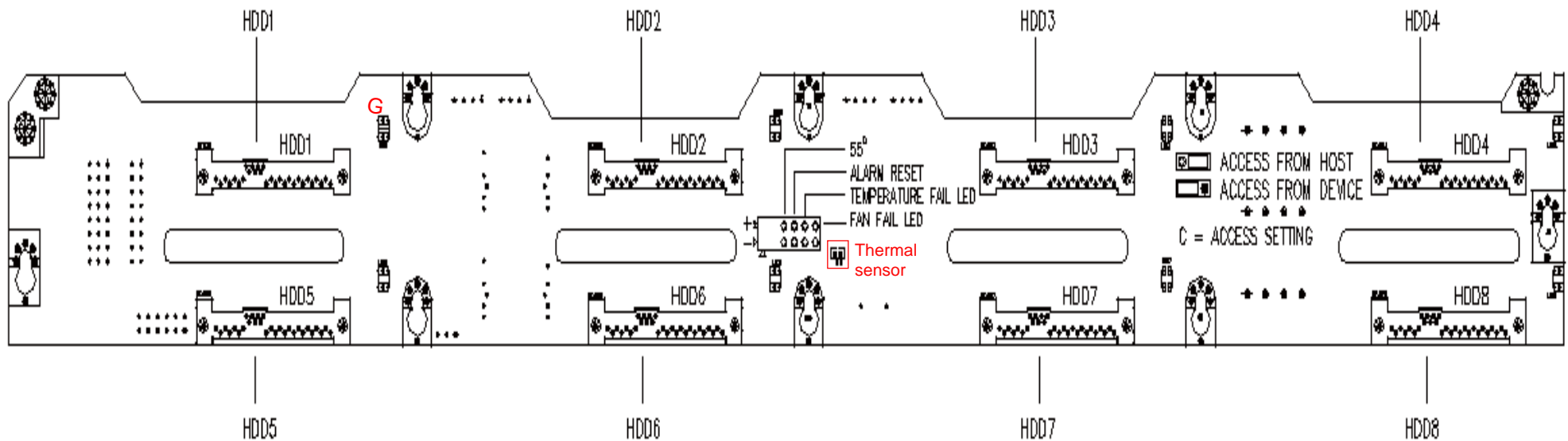
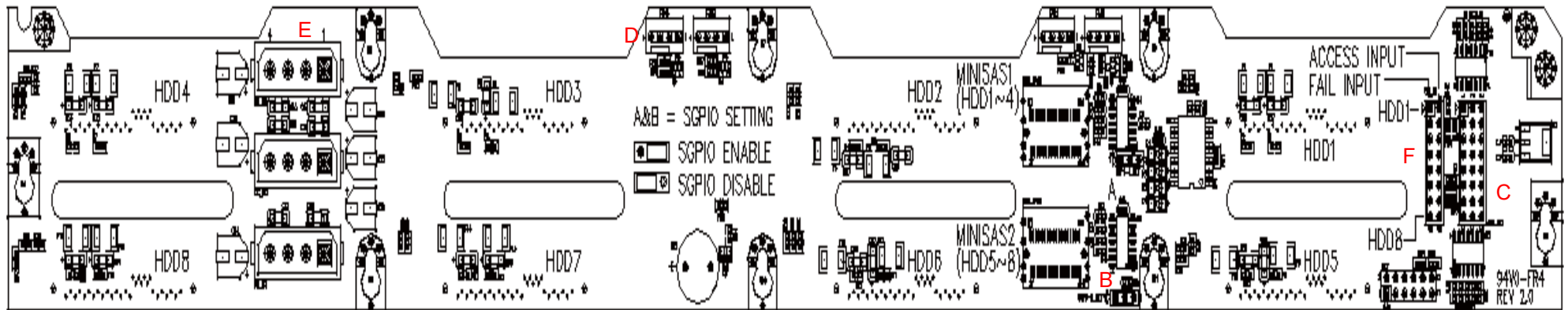
\* KEEP FAIL LED.

15 . ALARM BUZZER :

(A) FAN FAIL ----- B ---- B----B----B

(B) TEMPERATURE FAIL ----BB----BB----BB----BB

## 2. Function explains



## A&B = SPIO SETTING



 SGPIO ENABLE

 SGPIO DISABLE

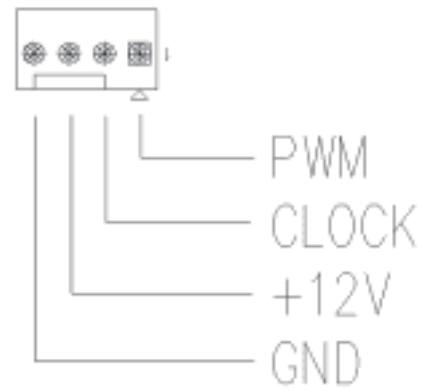
## C = ACCESS SETTING



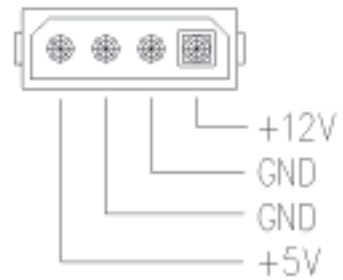
 ACCESS FROM HOST

 ACCESS FROM DEVICE

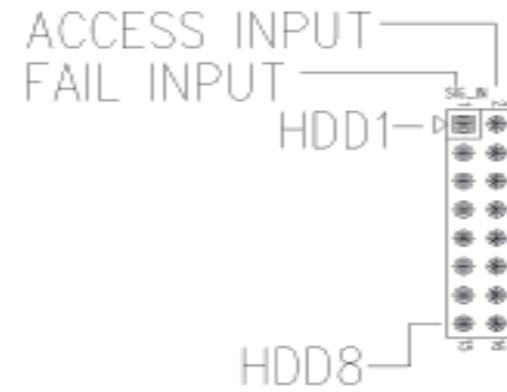
## D= FAN CONNECTOR



## E = DC POWER CONNECTOR



F = SIGNAL INPUT (FROM HOST)



G = LED

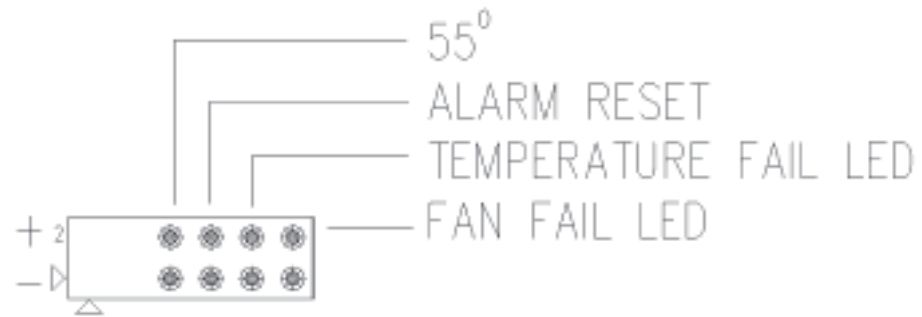


- (A) WHEN HDD INSERT ----- ACTIVE (GREEN)↵
- (B) WHEN HDD R/W ----- FLASH (GREEN)↵
- (C) WHEN HDD FAIL ----- ACTIVE (RED)↵

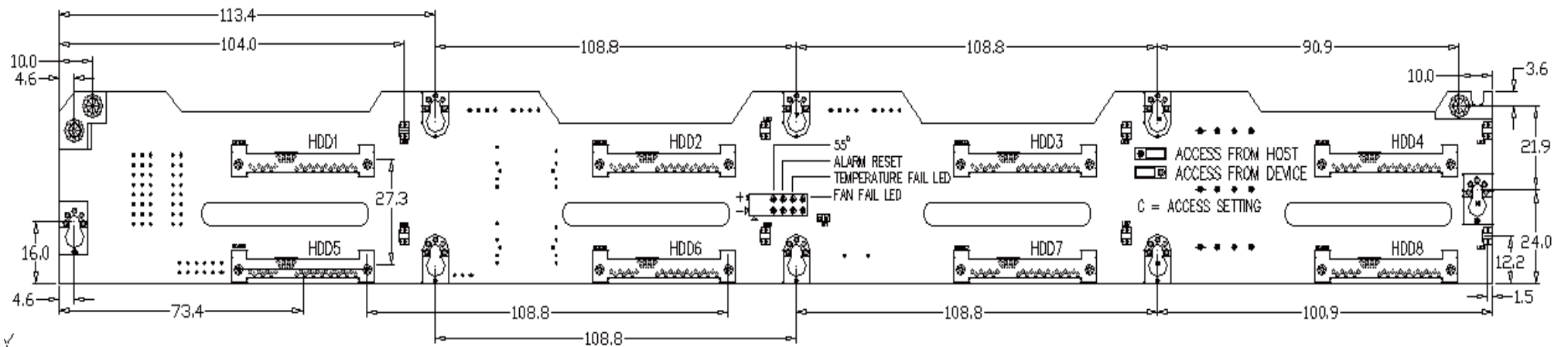
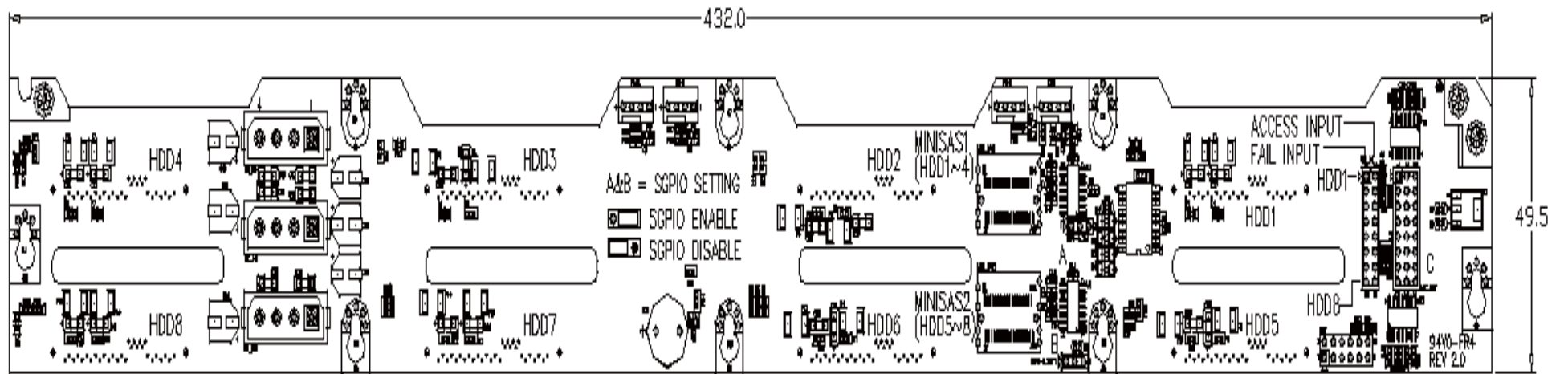
H = HDD CONNECTOR (SATA/SAS)



I = FAIL SIGNAL OUTPUT



# 3. Organization size





# 4. Others

## PCB MATERIALS

**NAN YA PLASTICS CORPORATION  
COPPER CLAD LAMINATE  
QUALITY TEST REPORT**



2, Chung-Yang Ind. Park,  
Hsin-Yang Hsiang,  
Jiayih, Taiwan  
TEL: (05)3772111 FAX: (05)3773585  
DATE: 2013/04/27  
PALLET NO:

CUSTOMER: 永祥電子  
ORDER NO: HC4F1L71  
LOT NO: S324445M  
MATERIAL SPEC.: NP-140TL 1/1 1.10mm 1240mm x 1020mm WLCFGSH (OVERALL THICKNESS)  
IPC DESIGNATION: L21 040D EXC H1/H1 C/A 48.8" x 40.5" (F x G)  
L21 040D IN H1/H1 C/A 48.8" x 40.5" (F x G)  
REQUIREMENT: IPC-4101C  
UL FILE: E98983  
GLASS FIBER: NAN YA Hsin-Kang Taiwan  
COPPER FOIL: NAN YA Hsin-Kang Taiwan  
EPOXY RESIN: NAN YA Mellino Taiwan

TEST ITEM	UNIT	TEST METHOD	SPECIFICATION	RESULTS
VISUALS	-	IPC-4101C	A	OK
SURFACE & SUBSURFACE	-	IPC-4101C	A	OK
METAL THICKNESS(UP)	µm	IPC-4101C	100:30.0-37.7	33.2
METAL THICKNESS(DOWN)	µm	IPC-4101C	100:30.0-37.7	33.2
POROSITY(100%)	-	C-24/23/50	5.44	4.34
POROSITY(100%)	-	C-24/23/50	5.44	4.03
LOSS TANGENT(100%)	-	C-24/23/50	0.0034	0.018
LOSS TANGENT(100%)	-	C-24/23/50	0.0034	0.011
SURFACE RESISTIVITY	Ω	C-36/35/90	<0.50mm:10 <sup>11</sup> Ω ; ≥0.50mm:—	1.3E7
SURFACE RESISTIVITY	Ω	E-24/125	10 <sup>11</sup> Ω	2.1E9
VOLUME RESISTIVITY	Ω-cm	C-36/35/90	<0.50mm:10 <sup>11</sup> Ω ; ≥0.50mm:—	5.1E9
VOLUME RESISTIVITY	Ω-cm	E-24/125	10 <sup>11</sup> Ω	3.9E5
ARC RESISTANCE	sec	D-48/50-D-0.5/23	60	122
FLEXURAL STRENGTH	N/mm <sup>2</sup>	LENGTHWISE A	415	574
FLEXURAL STRENGTH	N/mm <sup>2</sup>	CROSSWISE A	345	428
THERMAL STRESS	-	248°C x 40sec	NO BLISTER DEFLAMINATION	OK
WARP AND TWIST	%	A	SINGLE DOUBLE 0.5-0.7mm: 2.0 ; 1.0 ; >0.70mm: 1.5 ; 1.0 ;	0.40
FRESHNESS TEST	-	15psi x30min + 248°C x 20sec	IPC-TM-050	OK
MOISTURE ABSORPTION	%	E-1/105-IE5-D-24/23	0.80	0.118
PEEL STRENGTH(UP)	lb/in	AFTER THERMAL STRESS	<0.5mm:4.5 ; ≥0.5mm:6.0	11.76
PEEL STRENGTH(DOWN)	lb/in	AFTER THERMAL STRESS	<0.5mm:4.5 ; ≥0.5mm:6.0	11.76
TG GLASS TRANSITION TEMP	°C	E-2/105	135 (HSC)	136.0/137.8
FLAMMABILITY	sec	C-48/23/50 E-24/125	UL-94-V0 VDE-0860	OK
DIELECTRIC BREAKDOWN	KV	D-48/50-D-0.5/23	40	64
CONSTRUCTION	-	A	#Results	7028*6
THICKNESS(MAX.)	mm	A	≤1.2mm:CLASS C/W ; >1.2mm:CLASS H/L	1.127
THICKNESS(MIX.)	mm	A	≤1.2mm:CLASS C/W ; >1.2mm:CLASS H/L	1.114
THICKNESS(AVG.)	mm	A	≤1.2mm:CLASS C/W ; >1.2mm:CLASS H/L	1.119
COPPER ROUGHNESS(S/S)UP	µm	A	Ra: ≤0.4/Rz: ≤2.5 TYPE:ITE	0.24/1.03
COPPER ROUGHNESS(M/S)UP	µm	A	Ra: ≤1.7/Rz: ≤9.5 TYPE:ITE	1.49/9.08
COPPER ROUGHNESS(S/S)DOWN	µm	A	Ra: ≤0.4/Rz: ≤2.5 TYPE:ITE	0.30/1.03
COPPER ROUGHNESS(M/S)DOWN	µm	A	Ra: ≤1.7/Rz: ≤9.5 TYPE:ITE	1.05/9.87

THIS IS TO CERTIFY THAT THE MATERIAL BEING FURNISHED TO YOU MEETS THE IPC-4101C - RoHS AND SS-00250.  
THE RESULTS OF THIS QUALITY TEST REPORT IS PASS.

APPROVED BY *N. C. Cheng.*



**ZPMV2.E339220**  
**Wiring, Printed - Component**

Enhanced searching capability for this category can be found in UL's IQ Family of Databases (<http://iq.ul.com>).

[Page Bottom](#)

**Wiring, Printed - Component**

[See General Information for Wiring, Printed - Component](#)

BIING CHERN TECHNOLOGY CORP  
 29 BAO'AN ST, 2C 1  
 SHULIN, TAIPEI HSIEN 238 TAIWAN

E339220

Type	Cond Width		Cond	SS/ DS/	Max	Soldar		Max	Flame	Meets	C
	Min	Edge			Area	Temp	Class	DSR			
	mm(in)	mm(in)	thk mic(mil)	DSO	Diam mm(in)	Limit C	sec	C	Class	DSR	I
<b>Multilayer printed wiring boards.</b>											
ML-1	0.1 (0.004)	0.3 (0.012)	17 (0.67) Int: 68	DS	25.4 (1.0)	260	10	130	V-0	All	*
<b>Single layer printed wiring boards.</b>											
DS-1	0.1 (0.004)	0.1 (0.004)	17 (0.67)	DS	25.4 (1.0)	260	10	130	V-0	All	*

\* - CEI PLC is marked on individual board.



Marking: Company name or trademark and type designation. May be followed by a suffix to denote factory identification.

Last Updated on 2010-05-27

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