ADVANTECH

SAB-2000: Intelligent System Alarm Board
Startup Manual

Getting Started

Configuring the SAB-2000

SAB-2000 comes pre-installed inside your system chassis. The hardware switch will be fine tuned according to your system layout. Please refer to your user manual for its location. With different system layouts, we can configure SAB-2000 by H/W switch. Please refer to "Switch Setting" section for detailed information. For remote management functions, you will need to install SUSIAccess then you will be able to monitor system fan speed, system temperature, CPU temperature and voltage. You can also set your own alarm settings under SUSIAccess according to your requirements. For detailed information, please refer to user the guide of SUSIAccess.

Specifications

Hardware Specifications

- 1 x 10-pin hardware switch to configure alarm settings
- 1 x SM bus interface for system and main board healthy status monitoring
- Up to 4 x external temperature sensors
- 7 x Fan tachometer inputs
- 1 x External IPMI module connector
- 1 x Built-in buzzer for system health status notice
- Automatic smart fan control
- Reserved PCB layout for gravity and humidity sensor

Dimensions

- **Kernel module (9692S20000E):** 115 mm x 55 mm

Sensor Input Specifications

- **Voltage Inputs:** +5 VDC, -5 VDC, 5 VSB, +3.3 VDC, +12 VDC, -12 VDC
- **Temperature Sensors:** LM75 digital temperature sensor, I2C interface, -30 ~ +125°C (-22 ~ 257°F)
- **Fan Speed Monitor:** Up to 7 fans, 0 ~ 20000 RPM
- **Power Monitoring:**
  Detect Redundant power Get
  IPMI & SUSI Command

System Status Monitoring & Management

- **Real-time healthy status monitoring:** Real-time system/main board FAN speed, temperature monitor.
- Remote system monitor through SUSIAccess
- Alarm through on-board buzzer and LED signal

Management Functions

- Web-based remote configure, control and monitor
- Remote reset, power down and power up.
- Remote digital output signal control

This manual is for the SAB-2000.

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Alarm Notification

LED & Beep				
Item	Status	Criteria	LED	Beep
PWR	Normal	-	Normal	-
	Redundant power module fail	-	Warn	Keep beep
	Get IPMI & SUSI Command to search	-	Blinking Warn	Keep beep
HDD	Normal	-	Normal	-
	Data transferring	-	Blinking	-
FAN	Normal	> 500 rpm	Normal	-
	CPU FAN fail	< 500 rpm	Warn	Keep beep
	System fan fail	< 500 rpm	Blinking Warn	Keep beep
TEMP.	Normal	-	Normal	-
	CPU thermal fail	> 70 deg.	Warn	Keep beep
	System thermal fail (Thermistor)	> 55 deg.	Blinking Warn	Keep beep
Alarm Reset	Close alarm beep 3 min	Push	-	-
Other	Power off when system fail (ATX only)	LED of fail part	Warn	-

Note: LED color might be different in each chassis.

Power Consumption

- 12 V @ 5.25 A

Connectors and Switch Setting

Hardware Switch	
Label	**Function**
SW1 ~ 10	Hardware Switch

Connectors	
Label	**Function**
TR1	Thermistor Connector
TR2	Thermistor Connector
TR3	Thermistor Connector
TR4	Thermistor Connector
ALMRST1	Alarm Reset Connector
IPMB1	IPMI module connector
PMBUS1	PMBUS Connector
LEBOARD1	LED Board Connector
SMB_3V_1	SMBus Device Connector
SMB_3V_2	SMBus Device Connector
BZ1	External Buzzer Connector
HDD1	HDD LED connector
PWR1	PSU Power Connector
SMB_MB1	Main Board SMBus Connector
RDUPG1	Power Good Input Connector
VOLT1	Backplane VOLT1 Connector
FAN1	FAN Connector
FAN2	FAN Connector
FAN3	FAN Connector
FAN4	FAN Connector
FAN5	FAN Connector
FAN6	FAN Connector
FAN7	FAN Connector

Note: Please connect the fan connectors in the correct sequence: If two fans are being connected. The correct method is to connect them into FAN1 and FAN2. If fans are connected out of sequence. Alarm will not function correctly.

SW1 ~ 3					
SW1. Pin1	SW1. Pin2	SW1. Pin3	Cable Status	MB FAN	CPU TEMP
OFF	OFF	OFF	No Connect	Disable	Disable
OFF	OFF	ON	Connect	Disable	1
OFF	ON	OFF	Connect	Disable	2
OFF	ON	ON	Connect	1	1
ON	OFF	OFF	Connect	2	1
ON	OFF	ON	Connect	2	2
ON	ON	OFF	Connect	3	1
ON	ON	ON	Connect	3	2

SW4 ~ 6			
SW1.Pin4	**SW1.Pin5**	**SW1.Pin6**	**SYS FAN Qty**
OFF	OFF	OFF	Disable
OFF	OFF	ON	1 (FAN1)
OFF	ON	OFF	2 (FAN1~2)
OFF	ON	ON	3 (FAN1~3)
ON	OFF	OFF	4 (FAN1~4)
ON	OFF	ON	5 (FAN1~5)
ON	ON	OFF	6 (FAN1~6)
ON	ON	ON	7 (FAN1~7)

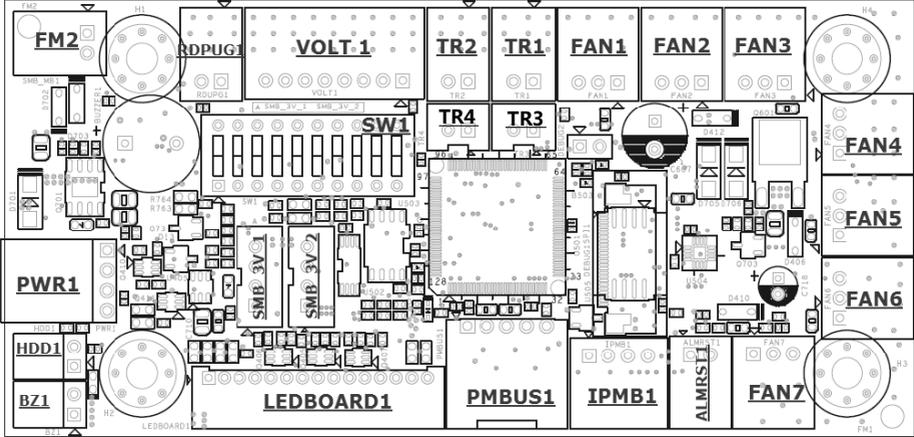| SW7 ~ 9			
SW1.Pin7	**SW1.Pin8**	**SW1.Pin9**	**TEMP Qty**
OFF	OFF	OFF	Disable
OFF	OFF	ON	1 (TR1)
OFF	ON	OFF	2 (TR1~2)
OFF	ON	ON	3 (TR1~3)
ON	OFF	OFF	4 (TR1~4)

SW10	
SW1.Pin10	**Smart FAN**
OFF	Enable
ON	Disable

Figure: Connector locations of SAB-2000