GT24-B7067

Service Engineer's Manual



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Notice for the USA
Compliance Information Statement (Declaration of Conformity Procedure) DoC FCC Part 15: This device complies with part 15 of the FCC Rules

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- This device must not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesirable operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice for Canada

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.



Notice for Europe (CE Mark)
This product is in conformity with the Council Directive 2004/108/EC.

CAUTION: Lithium battery included with this board. Do not puncture, mutilate, or dispose of battery in fire. There will be danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by manufacturer. Dispose of used battery according to manufacturer instructions and in accordance with your local regulations.

About this Manual

This manual provides you with instructions on installing your TYAN GT24-B7067. This Manual is intended for experienced users and integrators with hardware knowledge of personal computers.

This manual consists of the following parts:

Chapter1: Provides an introduction to the TYAN GT24-B7067 barebones, standard parts list, describes the external components, gives a table of key components, and provides the block diagram of the system.

Chapter2: Covers procedures on installing the processor, memory modules and hard drives.

Chapter3: Covers the removal and replacement procedures for pre-installed components.

Appendix: List the cable connection and FRU part tables for reference of system setup, and technical support in case a problem arises with your system.

Safety and Compliance Information

Before installing and using TYAN GT24-B7067, take note of the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Do not block the slots and opening on the unit, which are provided for ventilation.
- Only use the power source indicated on the marking label. If you are not sure, contact the power company.
- The unit uses a three-wire ground cable, which is equipped with a third pin to ground the unit and prevent electric shock. Do not defeat the purpose of this pin. If your outlet does not support this kind of plug, contact your electrician to replace your obsolete outlet.
- Do not place anything on the power cord. Place the power cord where it will not be in the way of foot traffic.
- Follow all warnings and cautions in this manual and on the unit case.
- Do not push objects in the ventilation slots as they may touch high voltage components and result in shock and damage to the components.
- When replacing parts, ensure that you use parts specified by the manufacturer.
- When service or repairs have been done, perform routine safety checks to verify that the system is operating correctly.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- Cover the unit when not in use.

Safety Information

Retain and follow all product safety and operating instructions provided with your equipment. In the event of a conflict between the instructions in this guide and the instructions in equipment documentation, follow the guidelines in the equipment documentation.

Observe all warnings on the product and in the operating instructions. To reduce the risk of bodily injury, electric shock, fire and damage to the equipment, observe all precautions included in this guide.

You must become familiar with the safety information in this guide before you install, operate, or service TYAN products.

Symbols on Equipment

	**Caution**. This symbol indicates a potential hazard. The potential for injury exists if cautions are not observed. Consult equipment documentation for specific details.
	**Caution.** Slide-mounted equipment is not to be used as a shelf or a work space.
	**Warning.** This symbol indicates the presence of hazardous energy circuits or electric shock hazards. Refer all servicing to qualified personnel.
	**Warning**. This symbol indicates the presence of a hot surface or hot component. If this surface is contacted, the potential for injury exists. To reduce risk of injury from a hot component, allow the surface to cool before touching.

General Precautions

- Follow all caution and warning instructions marked on the equipment and explained in the accompanying equipment documentation.

Machine Room Environment

- This device is for use only in a machine room or IT room.
- Make sure that the area in which you install the system is properly ventilated and climate-controlled.

- Ensure that the voltage and frequency of your power source match the voltage and frequency inscribed on the electrical rating label of the equipment.
- Do not install the system in or near a plenum, air duct, radiator, or heat register.
- Never use the product in a wet location.

Equipment Chassis

- Do not block or cover the openings to the system.
- Never push objects of any kind through openings in the equipment. Dangerous voltages might be present.
- Conductive foreign objects can produce a short circuit and cause fire, electric shock, or damage to your equipment.
- Lift equipment using both hands and with your knees bent.

Equipment Racks

To avoid injury or damage to the equipment:

- Observe local occupational health and safety requirements and guidelines for manual materials handling.
- Do not attempt to move a rack by yourself; a minimum of two people are needed to move a rack.
- Do not attempt to move a fully loaded rack. Remove equipment from the rack before moving it.
- Do not attempt to move a rack on an incline that is greater than 10 degrees from the horizontal.
- Make sure the rack is properly secured to the floor or ceiling.
- Make sure the stabilizing feet are attached to the rack if it is a single-rack installation.
- Make sure racks are coupled together if it is a multiple-rack installation.
- Make sure the rack is level and stable before installing an appliance in the rack.
- Make sure the leveling jacks are extended to the floor.

- Make sure the full weight of the rack rests on the leveling jacks.
- Always load the rack from the bottom up. Load the heaviest component in the rack first.
- Make sure the rack is level and stable before pulling a component out of the rack.
- Make sure only one component is extended at a time. A rack might become unstable if more than one component is extended.

To avoid damage to the equipment:

- The rack width and depth must allow for proper serviceability and cable management.
- Ensure that there is adequate airflow in the rack. Improper installation or restricted airflow can damage the equipment.
- The rack cannot have solid or restricted airflow doors. You must use a mesh door on the front and back of the rack or remove the doors to ensure adequate air flow to the system.
- If you install the Model in a rack, do not place equipment on top of the unit. It will cause restricted airflow and might cause damage to the equipment.
- Make sure the product is properly matted with the rails. Products that are improperly matted with the rails might be unstable.
- Verify that the AC power supply branch circuit that provides power to the rack is not overloaded. This will reduce the risk of personal injury, fire, or damage to the equipment. The total rack load should not exceed 80 percent of the branch circuit rating. Consult the electrical authority having jurisdiction over your facility wiring and installation requirements.
- Verify that the AC power supply branch circuit that provides power to the rack is not overloaded. This will reduce the risk of personal injury, fire, or damage to the equipment. The total rack load should not exceed 80 percent of the branch circuit rating. Consult the electrical authority having jurisdiction over your facility wiring and installation requirements.
- Verify that the AC power supply branch circuit that provides power to the rack is not overloaded. This will reduce the risk of personal injury, fire, or damage to the equipment. The total rack load should not exceed 80 percent of the branch circuit rating. Consult the electrical authority having jurisdiction over your facility wiring and installation requirements.

Equipment Power Cords

- Use only the power cords and power supply units provided with your system. The system might have one or more power cords.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- In all European electrical environments, you must ground the Green/Yellow tab on the power cord. If you do not ground the Green/Yellow tab, it can cause an electrical shock due to high leakage currents.
- Do not place objects on AC power cords or cables. Arrange them so that no one might accidentally step on or trip over them.
- Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.
- To reduce the risk of electrical shock, disconnect all power cords before servicing the appliance.



Equipment Batteries

- The system battery contains lithium manganese dioxide. If the battery pack is not handled properly, there is risk of fire and burns.
- Do not disassemble, crush, puncture, short external contacts, or dispose of the battery in fire or water.
- Do not expose the battery to temperatures higher than 60°C (140°F).
- The system battery is not replaceable. If the battery is replaced by an incorrect type, there is danger of explosion. Replace the battery only with a spare designated for your product.
- Do not attempt to recharge the battery.
- Dispose of used batteries according to the instructions of the manufacturer. Do not dispose of batteries with the general household waste. To forward them to recycling or proper disposal, use the public collection system or return them to TYAN, your authorized TYAN partner, or their agents.

Equipment Modifications

• Do not make mechanical modifications to the system. TYAN is not responsible for the regulatory compliance of TYAN equipment that has been modified.

Equipment Repairs and Servicing

• The installation of internal options and routine maintenance and service of this product should be performed by individuals who are knowledgeable about the procedures, precautions, and hazards associated with equipment containing hazardous energy levels.

• Do not exceed the level of repair specified in the procedures in the product documentation. Improper repairs can create a safety hazard.

• Allow the product to cool before removing covers and touching internal components.

• Remove all watches, rings, or loose jewelry when working before removing covers and touching internal components.

• Do not use conductive tools that could bridge live parts.

• Use gloves when you remove or replace system components; they can become hot to the touch.

• If the product sustains damage requiring service, disconnect the product from the AC electrical outlet and refer servicing to an authorized service provider. Examples of damage requiring service include:

– The power cord, extension cord, or plug has been damaged.

– Liquid has been spilled on the product or an object has fallen into the product.

– The product has been exposed to rain or water.

– The product has been dropped or damaged.

– The product does not operate normally when you follow the operating instructions.

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Chapter 1: Overview

1.1 About the TYAN GT24-B7067

Congratulations on your purchase of the TYAN® GT24-B7067, a highly optimized rack-mountable barebone system. The GT24-B7067 is designed to support dual Intel® Xeon E5-2600/E5-2600 v2 series processors, and up to 128GB UDIMM / 256GB RDIMM / 512GB LRDIMM DDR3 memory, providing a rich feature set and incredible performance. Leveraging advanced technology from Intel®, the GT24-B7067 server system is capable of offering scalable 32 and 64-bit computing, high bandwidth memory design, and lightning-fast PCI-E bus implementation. The GT24-B7067 not only empowers your company in nowadays IT demand but also offers a smooth path for future application usage.

TYAN® also offers the GT24-B7067 in a version that can support up to four 2.5" or 3.5" hot-swap hard drives. The GT24-B7067 uses TYAN's latest chassis featuring a robust structure and a solid mechanical enclosure. All of this provides GT24-B7067 the power and flexibility to meet the needs of nowadays server application.



1.2 Product Models

The system board within the Tyan Barebone contains different skus, which are defined by the following models:

- **B7067G24V4H-2T**: Intel-based platform
- **B7067G24W4H-2T**: Intel-based platform

1.3 Features

TYAN GT24B7067 (B7067G24V4H-2T)

System	Form Factor		1U Rackmount
	Gross Weight		17 kg
	Chassis Model		GT24
	Dimension (D x W x H)		25.4" x 17.2" x 1.72" (645 x 436 x 43.6mm)
	Motherboard		S7067GM3NR-2T
Front Panel	Buttons		(1) RST / (1) NMI / (1) ID / (1) PWR w/ LED
	LEDs		(1) HDD / (1) ID / (1) Warning / (3) LAN
	I/O Ports		(2) USB ports
External Drive Bay	Type / Q'ty		2.5" or 3.5" Hot-Swap / (4)
	HDD backplane support		SAS / SATA 6.0Gb/s
System Cooling Configuration	FAN		(6) 4cm fans
Power Supply	Type		EPS1U
	Efficiency		80 plus gold
	Input Range		100-127V AC/8A / 200-240V AC/4A
	Output Watts		500 Watts
Processor	Supported CPU Series		Intel Xeon Processor E5-2600/E5-2600 v2 series processors
	Socket Type / Q'ty		LGA2011 / (2)
	Thermal Design Power (TDP) wattage		Max up to 130W
	System Bus		Up to 8.0/ 7.2/ 6.4 GT/s with Intel QuickPath Interconnect (QPI) support
Chipset	PCH		Intel C602
Memory	Supported DIMM Qty		(8)+(8) DIMM slots
	DIMM Type / Speed		RDIMM ECC 1866/1600/1333/1066 / UDIMM/LRDIMM ECC 1866/1600/1333/1066
	Capacity		up to 128GB UDIMM / 256GB RDIMM / 512GB LRDIMM
	Memory channel		4 Channels per CPU
	Memory voltage		1.5V or 1.35V
Expansion Slots	PCI-E		(1) PCI-E Gen3 x16 slot (w/ x8 link)
	Pre-install TYAN Riser Card		M2091, PCI-E x16 1U riser card (left)
LAN	Port Q'ty		(2) 10GbE SFP+ + (1) GbE RJ45 shared with IPMI
	Controller		Intel 82574L / Broadcom BCM57810S
Storage	SATA	Connector	(4) SATA
		Controller	Intel C602

	Speed	3.0 Gb/s
	RAID	RAID 0/1/10/5 (Intel RST)
Graphic	**Connector type**	D-Sub 15-pin
	Chipset	Aspeed AST2300
I/O Ports	**USB**	(4) ports (2 at front, 2 at rear)
	COM	(1) DB-9 COM port
	VGA	(1) D-Sub 15-pin port
	RJ-45	(1) port
	SFP+	(2) 10GbE SFP+ ports
System Monitoring	**Chipset**	Aspeed AST2300
	Voltage	Monitors voltage for CPU, memory, chipset & power supply
	Temperature	Monitors temperature for CPU & memory
	LED	Over temperature warning indicator / Fan & PSU fail LED indicator
	Others	Chassis intrusion detection / Watchdog timer support
Server Management	**Onboard Chipset**	Onboard Aspeed AST2300
	AST2300 IPMI Feature	IPMI 2.0 compliant baseboard management controller (BMC) / Supports storage over IP and remote platform-flash / USB 2.0 virtual hub
	AST2300 iKVM Feature	24-bit high quality video compression / 10/100 Mb/s MAC interface
BIOS	**Brand / ROM size**	AMI / 8MB
	Feature	Plug and Play (PnP) /PCI2.3 /WfM2.0 /SMBIOS2.3 /PXE boot / User-configurable H/W monitoring / ACPI 3.0/ACPI sleeping states S1,S4,S5
Operating System	**OS supported list**	Please refer to our Intel OS supported list.
Regulation	**FCC (DoC)**	Class A
	CE (DoC)	Yes
Operating Environment	**Operating Temp.**	10° C ~ 35° C (50° F~ 95° F)
	Non-operating Temp.	- 40° C ~ 70° C (-40° F ~ 158° F)
	In/Non-operating Humidity	90%, non-condensing at 35° C
RoHS	**RoHS 6/6 Compliant**	Yes
Package Contains	**Barebone**	(1) GT24-B7067 Barebone
	Manual	(1) Quick Installation Guide
	Installation CD	(1) TYAN installation CD

TYAN GT24B7067 (B7067G24W4H-2T)

System	Form Factor		1U Rackmount
	Gross Weight		17 kg
	Chassis Model		GT24
	Dimension (D x W x H)		25.4" x 17.2" x 1.72" (645 x 436 x 43.6mm)
	Motherboard		S7067WGM3NR-2T
Front Panel	Buttons		(1) RST / (1) NMI / (1) ID / (1) PWR w/ LED
	LEDs		(1) HDD / (1) ID / (1) Warning / (3) LAN
	I/O Ports		(2) USB ports
External Drive Bay	Type / Q'ty		2.5" or 3.5" Hot-Swap / (4)
	HDD backplane support		SAS / SATA 6.0Gb/s
System Cooling Configuration	FAN		(6) 4cm fans
Power Supply	Type		EPS1U
	Efficiency		80 plus gold
	Input Range		100-127V AC/8A / 200-240V AC/4A
	Output Watts		500 Watts
Processor	Supported CPU Series		Intel Xeon Processor E5-2600/E5-2600 v2 series processors
	Socket Type / Q'ty		LGA2011 / (2)
	Thermal Design Power (TDP) wattage		Max up to 130W
	System Bus		Up to 8.0/ 7.2/ 6.4 GT/s with Intel QuickPath Interconnect (QPI) support
Chipset	PCH		Intel C602
Memory	Supported DIMM Qty		(8)+(8) DIMM slots
	DIMM Type / Speed		RDIMM ECC 1866/1600/1333/1066 / UDIMM/LRDIMM ECC 1866/1600/1333/1066
	Capacity		up to 128GB UDIMM / 256GB RDIMM / 512GB LRDIMM
	Memory channel		4 Channels per CPU
	Memory voltage		1.5V or 1.35V
Expansion Slots	PCI-E		(1) PCI-E Gen3 x16 slot (w/ x8 link)
	Pre-install TYAN Riser Card		M2091, PCI-E x16 1U riser card (left)
LAN	Port Q'ty		(2) 10GbE SFP+ + (1) GbE RJ45 shared with IPMI
	Controller		Intel 82574L / Broadcom BCM57810S
Storage	SAS	Connector	(4) SAS
		Controller	LSI SAS2308
		Speed	6.0 Gb/s

	RAID	RAID 0/1/1E/10 (LSI Integrated RAID)
Graphic	**Connector type**	D-Sub 15-pin
	Chipset	Aspeed AST2300
I/O Ports	**USB**	(4) ports (2 at front, 2 at rear)
	COM	(1) DB-9 COM port
	VGA	(1) D-Sub 15-pin port
	RJ-45	(1) port
	SFP+	(2) 10GbE SFP+ ports
System Monitoring	**Chipset**	Aspeed AST2300
	Voltage	Monitors voltage for CPU, memory, chipset & power supply
	Temperature	Monitors temperature for CPU & memory
	LED	Over temperature warning indicator / Fan & PSU fail LED indicator
	Others	Chassis intrusion detection / Watchdog timer support
Server Management	**Onboard Chipset**	Onboard Aspeed AST2300
	AST2300 IPMI Feature	IPMI 2.0 compliant baseboard management controller (BMC) / Supports storage over IP and remote platform-flash / USB 2.0 virtual hub
	AST2300 iKVM Feature	24-bit high quality video compression / 10/100 Mb/s MAC interface
BIOS	**Brand / ROM size**	AMI / 8MB
	Feature	Plug and Play (PnP) /PCI2.3 /WfM2.0 /SMBIOS2.3 /PXE boot / User-configurable H/W monitoring / ACPI 3.0/ACPI sleeping states S1,S4,S5
Operating System	**OS supported list**	Please refer to our Intel OS supported list.
Regulation	**FCC (DoC)**	Class A
	CE (DoC)	Yes
Operating Environment	**Operating Temp.**	10° C ~ 35° C (50° F~ 95° F)
	Non-operating Temp.	- 40° C ~ 70° C (-40° F ~ 158° F)
	In/Non-operating Humidity	90%, non-condensing at 35° C
RoHS	**RoHS 6/6 Compliant**	Yes
Package Contains	**Barebone**	(1) GT24-B7067 Barebone
	Manual	(1) Quick Installation Guide
	Installation CD	(1) TYAN installation CD

1.4 Standard Parts List

This section describes GT24-B7067 package contents and accessories. Open the box carefully and ensure that all components are present and undamaged. The product should arrive packaged as illustrated below.

1.4.1 Box Contents

Component	Description
	(1) 1U Barebone, (4) hot swap HDD bays
	TYAN® S7067 System Board (pre-installed)
	(1) 500W Power Supply Unit (B7067G24V4H-2T and B7067G24W4H-2T)
	(1) M1008-FPB Front Panel Board (pre-installed)
	(6) System Fans
	(1) M2091 Riser Card (pre-installed)
	(1) M1235 HDD Backplane Board

1.4.2 Accessories

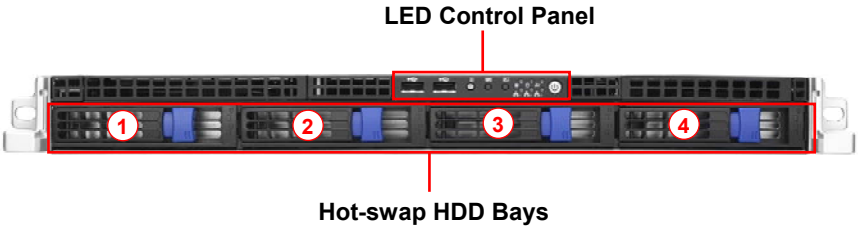
If any items are missing or appear damaged, contact your retailer or browse to TYAN®'s website for service: http://www.tyan.com
The web site also provides information of other TYAN® products, as well as FAQs, compatibility lists, BIOS settings, etc.

	
CPU Heatsink x 2	Sliding Rail x 1 and Screw Pack x 1
	
Quick Installation Guide x 1	Drivers and Utility CD x 1
	
AC Power Cord (US) x 1	AC Power Cord (EU) x 1
	
Screw Packs x 3	Mounting Ears Kit x 1

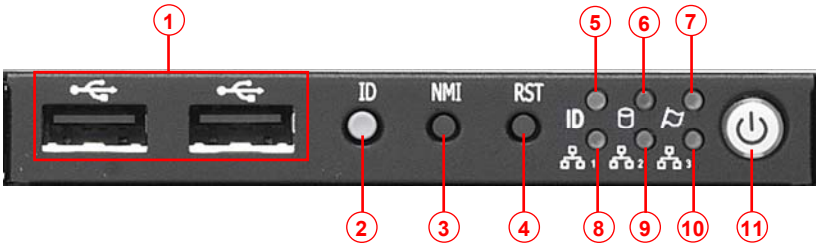
1.5 About the Product

The following views show you the product.

1.5.1 System Front View

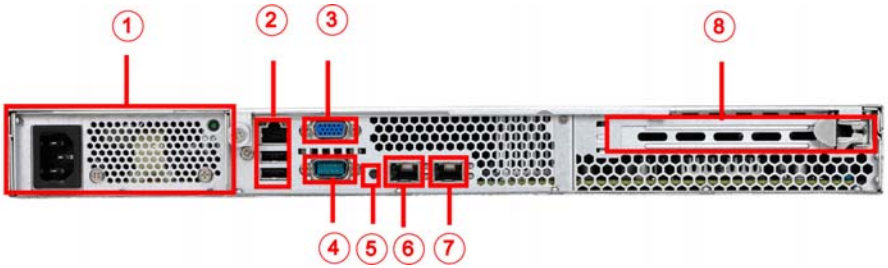


M1008 FPB (Front Panel LED Control Board)



1	USB Ports
2	ID Button
3	NMI Button
4	Reset Button
5	ID LED
6	HDD LED
7	Warning LED
8	LAN1 LED
9	LAN2 LED
10	LAN3 LED
11	Power on/off Button with LED

1.5.2 System Rear View



1	Power Supply
2	LAN1 (shared with IPMI) + 2 USB Ports
3	VGA Port
4	Serial Port
5	ID LED
6	LAN3
7	LAN2
8	PCI-E Slot

1.5.3 LED Definitions

M1008 Front Panel LED Control Board

Item	State	Color	Description	Note
5. ID	Located	Blue	Solid On	Local and Remote
	Free		Off	
6. HDD	Access	Green	Blinking	
	Ready		Off	
7. Warning	Normal	Amber	Off	＊H/W monitor & BMC alert event ＊PSU alert event
	Alert		Solid On	
8. LAN1	Access	Green	Blinking	
	Link		Solid On	
9. LAN2	Access	Green	Blinking	
	Link		Solid On	
10. LAN3	Access	Green	Blinking	
	Link		Solid On	
11. Power on/off	Power On	Green	Solid On	
	Power Off		Off	
＊H/W monitor & BMC alert event: system fan fails, system OTP ＊PSU alert event: OTP, OCP, AC lose, PSU fan fail				

ID LED

LED	State	Color	Description
ID LED	On	Blue	System identified
	Off	Off	System not identified

NOTE: Press the ID button when the system AC (Alternating Current) is on, then the ID LED will light blue if the system is identified. Users from remote sites can also activate the ID LED by entering a few commands in IPMI. For detailed software support, please visit http://www.tyan.com for the latest AST2300 user guide.

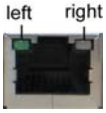
HDD LED



LED	State	Color	Description
Activity LED	Solid On	Green	Drive present, no activity
	Blinking		Drive present, with activity
Status LED	Solid On	Red	HDD Failed
	Blinking @1Hz		Identify
	Blinking @4Hz		Rebuild

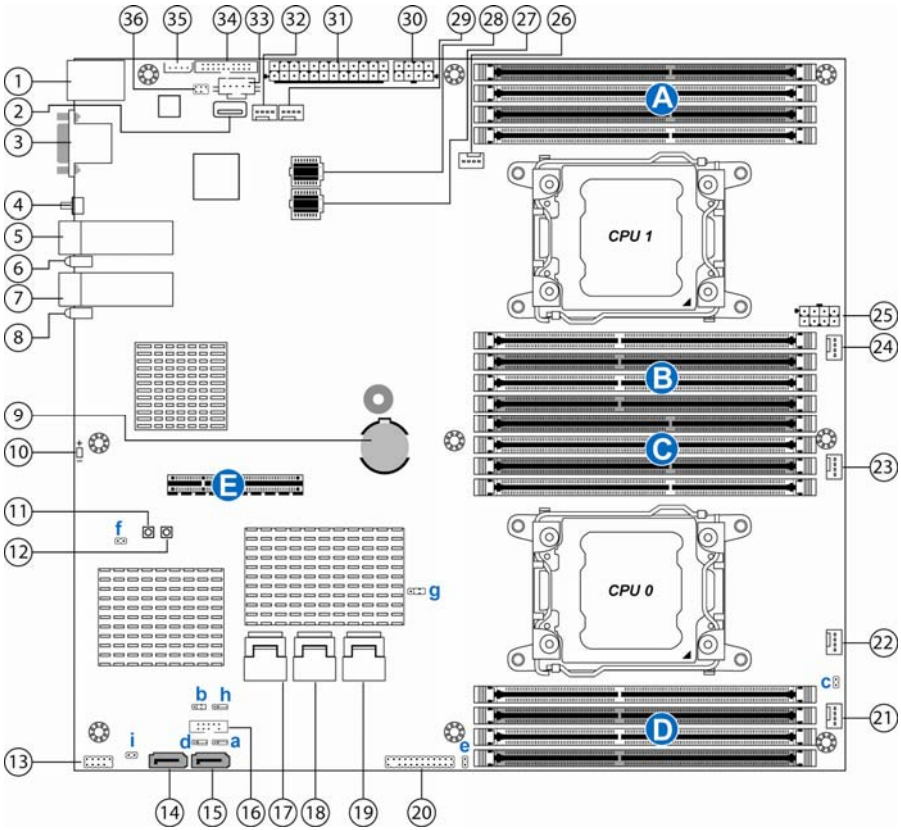
Rear I/O: Onboard LAN LED Color Definition

The **three (3)** onboard Ethernet ports have green and yellow LEDs to indicate LAN status. The chart below illustrates the different LED states.



Description		Left LED(LED2) Link/Activity	Right LED(LED1) Speed
No Link		OFF	OFF
Linked at 10 Mbps	Link	Green	OFF
	Active	Blinking Green	OFF
Linked at 100 Mbps	Link	Green	Solid Green
	Active	Blinking Green	Solid Green
Linked at 1 Gbps	Link	Green	Solid Yellow
	Active	Blinking Green	Solid Yellow
Linked at 10 Gbps	Link	Yellow	Solid Yellow
	Active	Blinking Yellow	Solid Yellow

1.5.4 Motherboard (S7067) Layout



This diagram represents the latest board revision available at the time of publishing this manual. The board you have received may not look exactly like the above diagram. The DIMM slot numbers shown above can be used as a reference when reviewing the DIMM population guidelines shown later in the manual. For the latest board revision, please visit our web site at http://www.tyan.com.

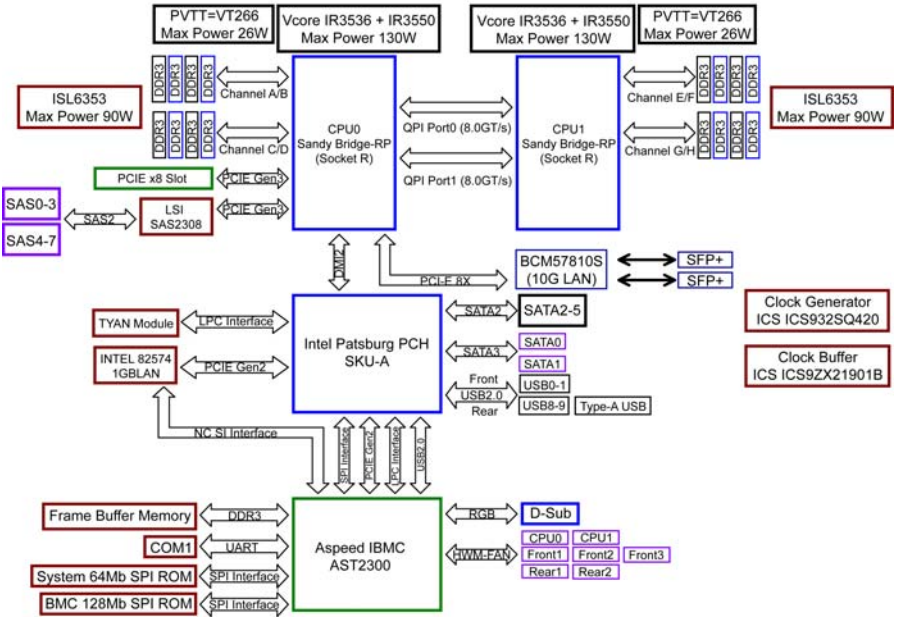
1.5.5 Jumpers & Connectors

Connectors	
1 USB2.0 ports and LAN Port #1 (LAN1, shared with IPMI port)	19 SAS0~3 (J73)
2 Type-A USB Connector	20 Front Panel Header (J39)
3 COM Port/VGA Port	21 CPU0 Fan Power Connector (J63)
4 ID LED Button	22 SYS_FAN3 (J64)
5 LAN Port #3 (LAN3)	23 SYS_FAN2 (J65)
6 LED For Port #3	24 SYS_FAN1 (J66)
7 LAN Port #2 (LAN2)	25 8-pin Power Connector (PW3)
8 LED For Port #2	26 CPU1 FAN Power Connector (J45)
9 Battery	27 BMC
10 ID_LED	28 BIOS
11 Reset Button (J18)	29 SYS_FAN5 (J19)
12 Power Button (J13)	30 8-pin Power Connector (PW2)
13 USB Front Panel Header (blue, J26)	31 24-pin Power Connector (PW1)
14 Serial ATA Connector (J31)	32 SYS_FAN4 (J20)
15 Serial ATA Connector (J36)	33 PSMI Connector (J34)
16 SATA SGPIO Header (J30)	34 Front Fan Connector (J14)
17 SATA2~5 (J12)	35 IPMB Connector (J29)
18 SAS4~7 (J74)	36 SAS SMB Header (J33)
Headers	**Slots**
a BIOS Recovery Pin Header (J2)	A CPU1 DIMM SLOT [Channel A/B]
b Clear CMOS Header (J3)	B CPU1 DIMM SLOT [Channel C/D]
c Chassis Intrusion Header (J4)	C CPU0 DIMM SLOT [Channel A/B]
d SPI Write Protect Pin Header (J38)	D CPU0 DIMM SLOT [Channel C/D]
e LAN3 LED Pin Header (J44)	E PCIE slot (x8)
f Flash Security Override Pin Header (J68)	**Jumpers**
h ME Recovery Pin Header (J69)	g LSI 2308 Enable/Disable Jumper (J75)
i LAN2 LED Pin Header (J5012)	

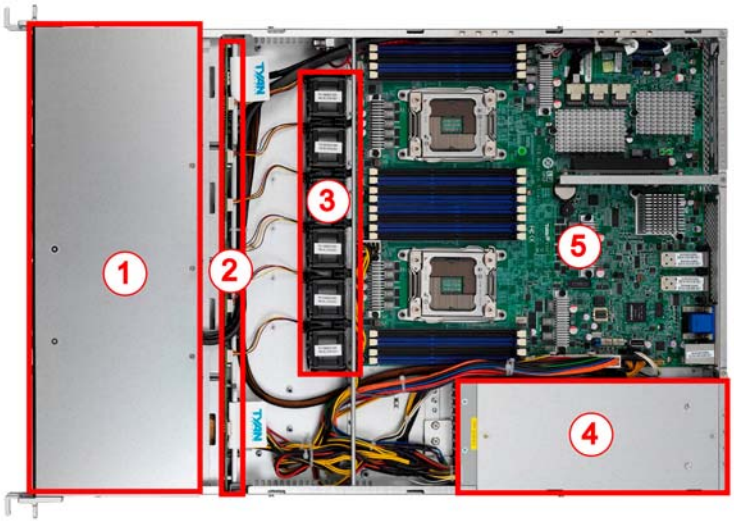
Jumper Legend

	**OPEN - Jumper OFF**	**Without jumper cover**
	**CLOSED - Jumper ON**	**With jumper cover**

1.5.6 System Block Diagram (S7067)



1.5.7 System Top View



1	(4) HDD trays (1) M1008-FPB Front Panel Board (pre-installed)
2	(1) M1235 HDD Backplane Board (pre-installed)
3	(6) hot-swap system fans (pre-installed)
4	Power Supply Module
5	System Motherboard

NOTE

2.1 Before you Begin

This chapter explains how to install the CPUs, CPU heatsinks, memory modules, and hard drives. Instructions on inserting add on cards are also given.

2.1.1 Work Area

Make sure you have a stable, clean working environment. Dust and dirt can get into components and cause malfunctions. Use containers to keep small components separated. Putting all small components in separate containers prevents them from becoming lost. Adequate lighting and proper tools can prevent you from accidentally damaging the internal components.

2.1.2 Tools

The following procedures require only a few tools, including the following:

- A cross head (Phillips) screwdriver
- A grounding strap or an anti-static pad

Most of the electrical and mechanical connections can be disconnected with your hands. It is recommended that you do not use pliers to remove connectors as it may damage the soft metal or plastic parts of the connectors.



Caution!

1. To avoid damaging the motherboard and the associated components, do not use torque force greater than 7kgf/cm (6.09 lb/in) on each mounting screw for motherboard installation.
2. Do not apply power to the board if it has been damaged.

2.1.3 Precautions

Components and electronic circuit boards can be damaged by discharges of static electricity. Working on a system that is connected to a power supply can be extremely dangerous. Follow the guidelines below to avoid damage to GT24-B7067 or injury to yourself.

- Ground yourself properly before removing the top cover of the system. Unplug the power from the power supply and then touch a safely grounded object to release static charge (i.e. power supply case). If available, wear a grounded wrist strap. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.
- Avoid touching motherboard components, IC chips, connectors, memory modules, and leads.
- The motherboard is pre-installed in the system. When removing the motherboard, always place it on a grounded anti-static surface until you are ready to reinstall it.
- Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Do not flex or stress circuit boards.
- Leave all components inside the static-proof packaging that they ship with until they are ready for installation.
- After replacing optional devices, make sure all screws, springs, or other small parts are in place and are not left loose inside the case. Metallic parts or metal flakes can cause electrical shorts.



CAUTION: Please note that the following illustrations may not look exactly like the rackmount server you purchased. Therefore, the illustrations should be used for your reference only.

2.2 Removing and Installing the Chassis Cover

Follow these instructions to remove the GT24-B7067 chassis cover.

1. Unless you are installing a hot-swappable component, be sure to turn off the system, disconnect all attached peripherals and disconnect the system from the electrical source.
2. Unscrew the thumb screw and remove the side screw securing the top cover.



3. From the front side, slide the top cover off.



4. To install the chassis cover, follow the above steps in reverse order.

2.3 Installing Motherboard Components

This section describes how to install components on to the motherboard, including CPUs, memory modules, HDDs and expansion card.

Before you begin, refer to ***2.2 Removing and Installing the Chassis Cover on page 33*** for instructions on how to remove and reinstall the chassis cover.

2.3.1 Installing the CPU and Heatsink

Follow the steps below to install CPUs and CPU heatsinks.

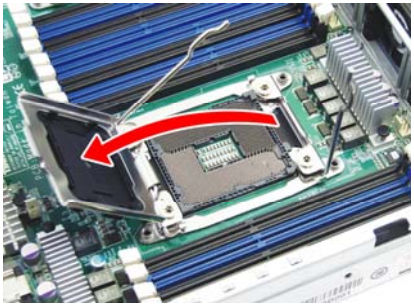
1. Locate the CPU sockets. Always start with CPU0 first.

2. Push down the lever (1) and slightly pull away from the socket (2) to release the latch, and then lift up the lever to a fully open position (3). Do the same procedures to release the other lever.

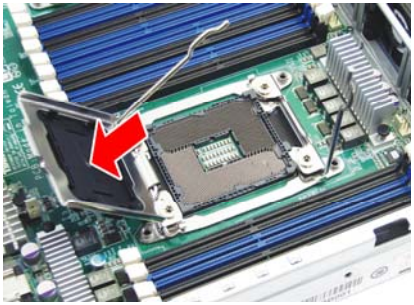




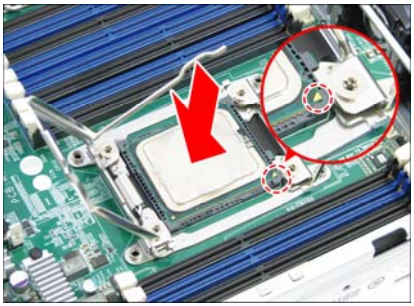
3. Lift the CPU socket cover to a fully open position.



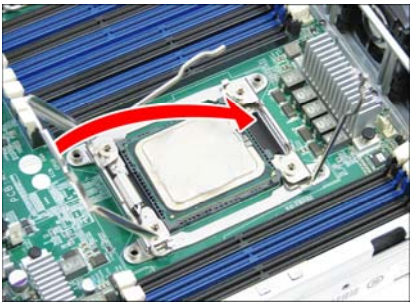
4. Remove the protection cap from the CPU socket.



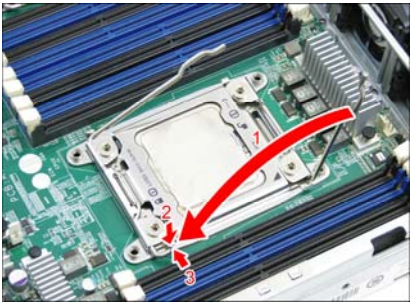
5. Place the CPU into the socket making sure that the gold arrow is located in the right direction.

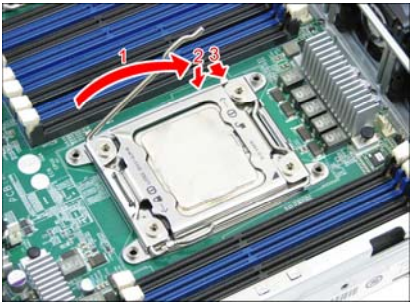


6. Close the CPU socket cover.

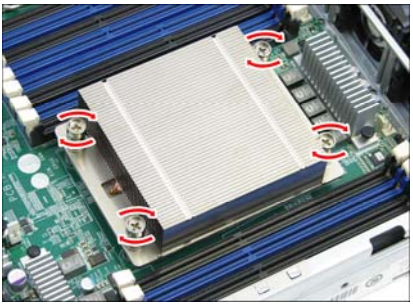


7. Pull down the lever (1), press down (2) and hook towards the latch (3). Repeat the same procedures to hook the other lever.





8. Position the heatsink on top of the CPU and secure it with 4 screws.



9. Repeat steps 2 to 8 to install the second CPU and heatsink.

2.3.2 Installing the Expansion Card

Follow these instructions to install the expansion card.

1. Pull open the tab of the PCI-E slot to release the PCI dummy bracket.

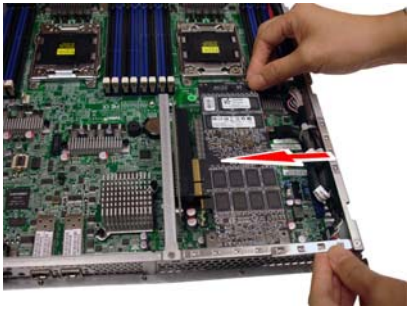




2. Slide to remove the PCI dummy bracket.



3. Insert the expansion card to the riser bracket. Make sure the expansion card is connected to the PCI-E slot.





4. Close the tab of the PCI-E slot.

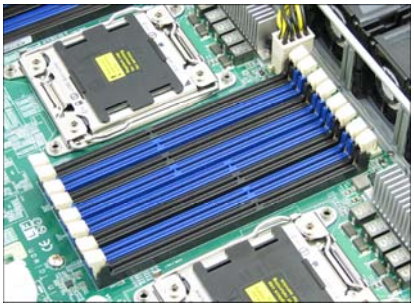




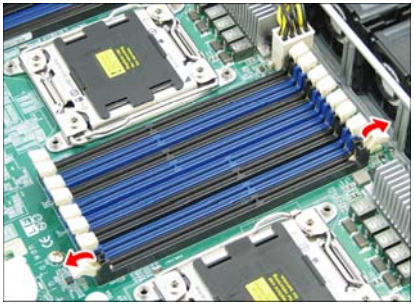
2.3.3 Installing the Memory

Follow these instructions to install the memory modules onto the motherboard.

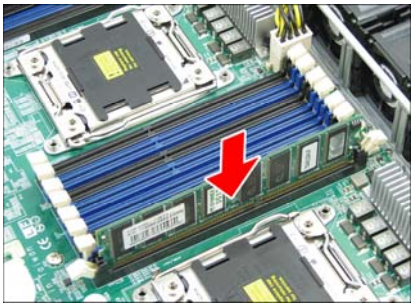
1. Locate the memory slots on the motherboard.

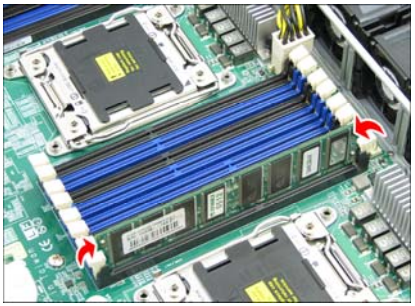


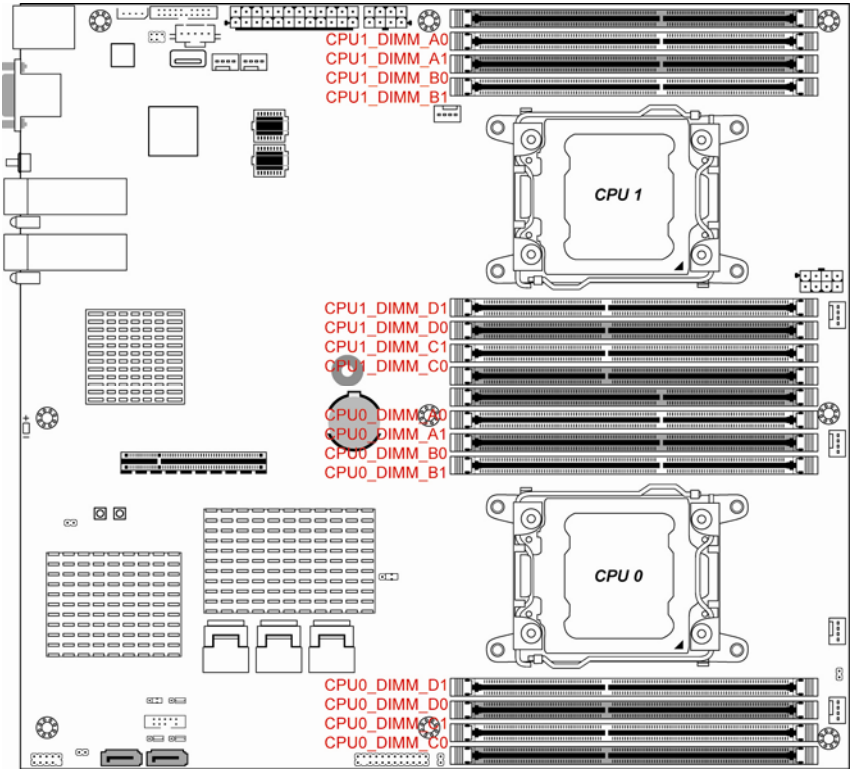
2. Press the memory slot locking levers in the direction of the arrows as shown in the following illustration.



3. Align and insert the memory module down onto the slot. When inserted properly, the memory slot locking levers lock automatically on the indentations at the ends of the module. Follow the recommended memory population table to install the other memory modules.






CPU1_DIMM_A0
CPU1_DIMM_A1
CPU1_DIMM_B0
CPU1_DIMM_B1
CPU 1
CPU1_DIMM_D1
CPU1_DIMM_D0
CPU1_DIMM_C1
CPU1_DIMM_C0
CPU0_DIMM_A0
CPU0_DIMM_A1
CPU0_DIMM_B0
CPU0_DIMM_B1
CPU 0
CPU0_DIMM_D1
CPU0_DIMM_D0
CPU0_DIMM_C1
CPU0_DIMM_C0

Recommended Memory Population Table

	Single CPU Installed (CPU0 only)					
Quantity of memory installed	**1**	**2**	**3**	**4**	**8**	**12**
CPU0_DIMM_A0	√	√	√	√	√	√
CPU0_DIMM_A1					√	√
CPU0_DIMM_A2						√
CPU0_DIMM_B0		√	√	√	√	√
CPU0_DIMM_B1					√	√
CPU0_DIMM_B2						√
CPU0_DIMM_C0			√	√	√	√
CPU0_DIMM_C1					√	√
CPU0_DIMM_C2						√
CPU0_DIMM_D0				√	√	√
CPU0_DIMM_D1					√	√
CPU0_DIMM_D2						√

NOTE:

1. √ indicates a populated DIMM slot.
2. Use paired memory installation for max performance.
3. Populate the same DIMM type in each channel, specifically
   - Use the same DIMM size
   - Use the same # of ranks per DIMM
4. Dual-rank DIMMs are recommended over single-rank DIMMs.
5. Un-buffered DIMM can offer slightly better performance than registerd DIMM if populating only a single DIMM per channel.
6. Always install with CPU0 Socket and DIMM_0 Slot first, following the alphabetical order.

	Dual CPU installed (CPU0 and CPU1)									
Quantity of memory installed	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**10**	**18**	**24**
CPU0_DIMM_A0	√	√	√	√	√	√	√	√	√	√
CPU0_DIMM_A1								√	√	√
CPU0_DIMM_A2										√
CPU0_DIMM_B0		√	√	√	√	√	√	√	√	√
CPU0_DIMM_B1									√	√
CPU0_DIMM_B2										√
CPU0_DIMM_C0				√	√	√	√	√	√	√
CPU0_DIMM_C1									√	√
CPU0_DIMM_C2										√
CPU0_DIMM_D0						√	√	√	√	√
CPU0_DIMM_D1									√	√
CPU0_DIMM_D2										√
CPU1_DIMM_A0	√	√	√	√	√	√	√	√	√	√
CPU1_DIMM_A1								√	√	√
CPU1_DIMM_A2										√
CPU1_DIMM_B0			√	√	√	√	√	√	√	√
CPU1_DIMM_B1									√	√
CPU1_DIMM_B2										√
CPU1_DIMM_C0					√	√	√	√	√	√
CPU1_DIMM_C1									√	√
CPU1_DIMM_C2										√
CPU1_DIMM_D0							√	√	√	√
CPU1_DIMM_D1									√	√
CPU1_DIMM_D2										√

2.3.4 Installing Hard Drives

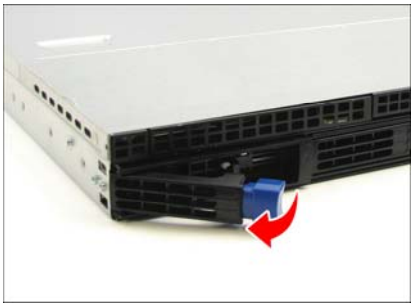
The GT24-B7067 can support up to four (4) 3.5” / 2.5” hard drives.

Installing 3.5” Hard Drives

Follow these instructions to install a 3.5” HDD.

Warning!!! Always install the hard disk drive to the chassis after the chassis has been secured on the rack.

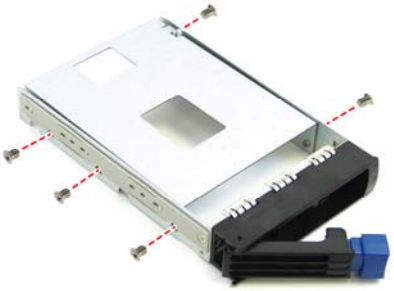
1. Press the locking lever latch and pull the locking lever open.



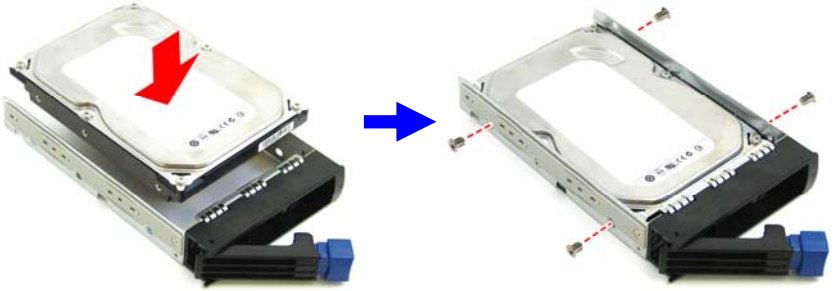
2. Slide the HDD tray out.



3. Unscrew the 5 screws securing the HDD bracket to the HDD tray.



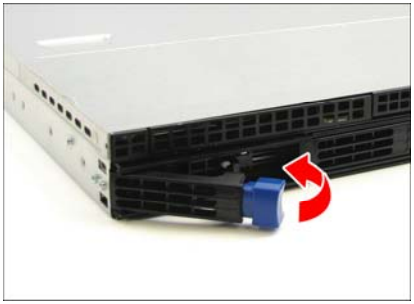
4. Place the 3.5” hard disk drive into the HDD tray and secure the HDD to the HDD tray using 4 screws.



5. Reinsert the HDD tray into the chassis.



6. Push to secure the locking lever until it clicks into place.

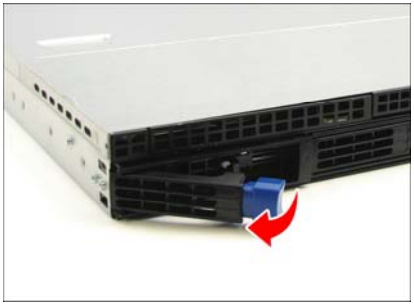


Installing 2.5” Hard Drives

Follow these instructions to install a 2.5” HDD.

Warning!!! Always install the hard disk drive to the chassis after the chassis has been secured on the rack.

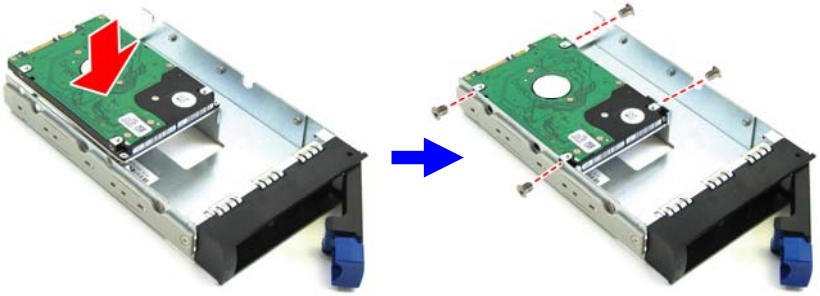
1. Press the locking lever latch and pull the locking lever open.



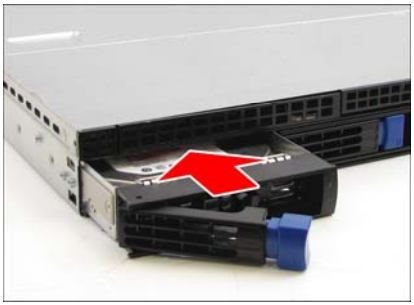
2. Slide the HDD tray out.



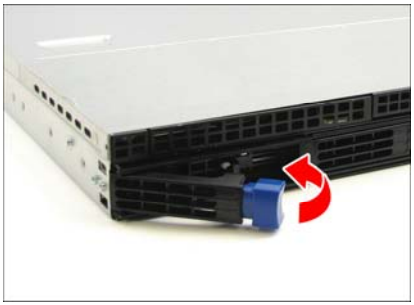
3. Turn the HDD tray over and place the 2.5” HDD on its bay. Secure the HDD to the tray using 4 screws.



4. Reinsert the HDD tray into the chassis.



5. Push to secure the locking lever until it clicks into place.



2.4 Rack Mounting

After installing the necessary components, the TYAN GT24-B7067 can be mounted in a rack using the supplied rack mounting kits:

Sliding Rail Kit

- Sliding Rails x 2
- Rail Screw Pack x 1

A	B	C
		
M5 x 20L screw (2 pcs)	M5 screw + Washer (8 pairs)	M4 x 4L screw (2 pcs)

Mounting Ears Kit

- Mounting Ears x 2
- Mounting Ears Screw Pack x 1

2.4.1 Installing the Server in a Rack

Follow these instructions to mount the TYAN GT24-B7067 into an industry standard 19" rack.

NOTE: Before mounting the TYAN GT24-B7067 in a rack, ensure that all internal components have been installed and that the unit has been fully tested. However, to make the installation easier, we suggest that you remove all HDD trays before you insert the chassis into the rack.

Installing the Inner Rails to the Unit

1. Screw the mounting ears to each side of the GT24-B7067 as shown using four screws from the supplied mounting ears screw pack.



2. Draw out the inner rail from the rail assembly. When the rail comes to a stop, pull the tab to release the latch and completely draw the inner rail out.



3. Align the inner sliding rail (1) on the side of the server, and pull towards the arrow (2) to secure the three hooks.



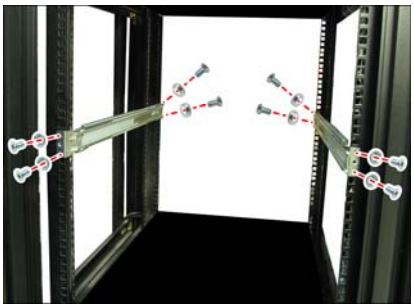
4. Secure the inner sliding rail to the server using one M4 x 4L screw (C).



5. Repeat steps 2 to 4 to secure the sliding rail to the other side of the server.

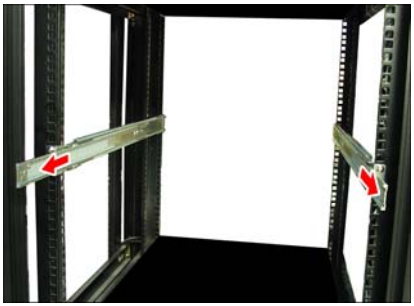
Installing the Outer Rails to the Unit

Secure the outer rails to the rack using four M5 screws and four washers (B) on each side.

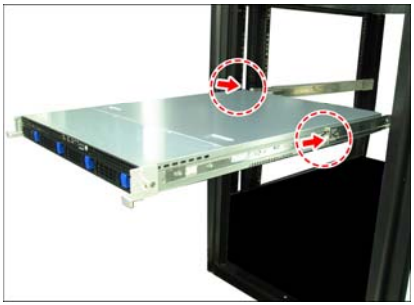


Rack Mounting the Server

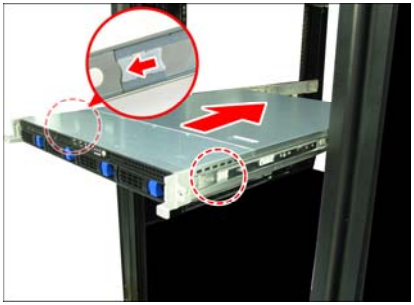
1. Pull out the middle rail to the latch position.



2. Lift the unit and then insert the inner slide rails into the middle rails.



3. When the inner rails come to a stop, pull the tab to release the latch and push the whole system in.



4. Secure the mounting ears of the unit to the rack using two M5 x 20L screws (A).

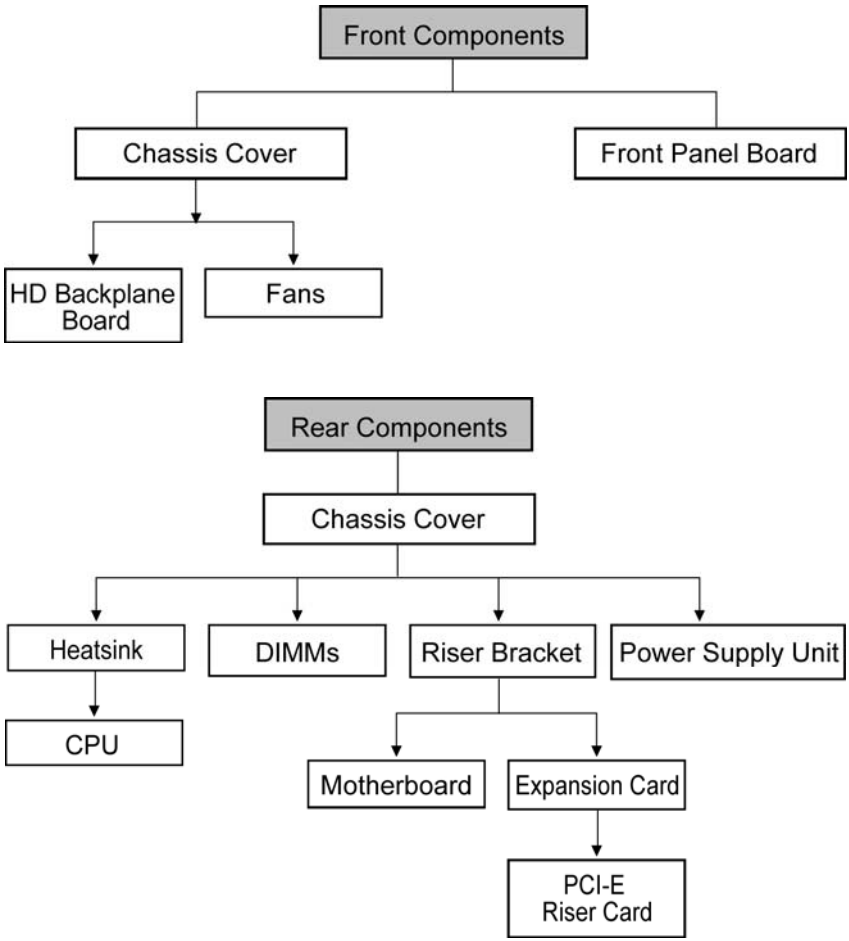


Chapter 3: Replacing Pre-Installed Components

This chapter explains how to replace the pre-installed components, including the S7067 Motherboard, M1008-FPB Front Panel Board, M1235-HDD BP HDD Backplane Board, PCI-E Riser Card, System Fan and Power Supply Unit etc.

3.1 Disassembly Flowchart

The following flowchart outlines the disassembly procedures.

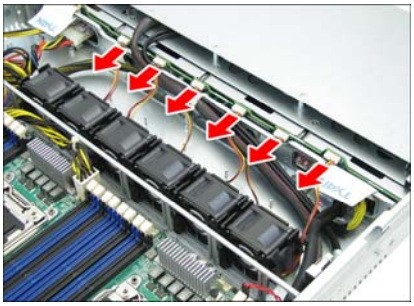


3.1 Replacing the System Fan

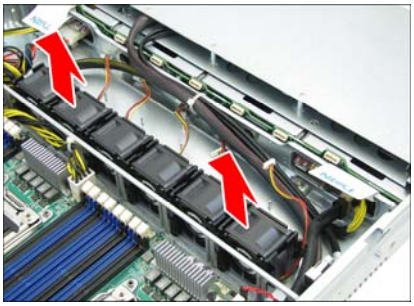
3.1.1 Removing the System Fan

Follow these instructions to remove the system fan.

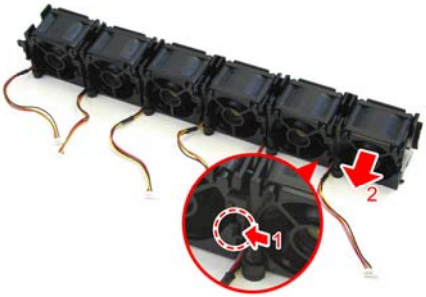
1. Remove the chassis cover (see ***2.2 Removing and Installing the Chassis Cover on page 33***).
2. Disconnect all fan cables from the HDD backplane board.



3. Lift the system fans from the chassis.



4. Press the tab towards the direction of the arrow (1) and pull the fan (2) to detach it from the group.

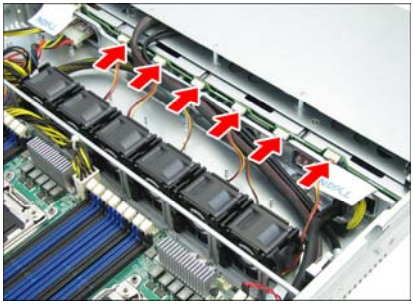


5. While holding the fan with two hands, push the fan downwards with both thumbs to release it from the fan cage.



3.2.2 Installing the System Fan

1. Replace the fan with a new one.
2. Install the fan into the fan cage and connect the fan cage to the group.
3. Align the system fans into the chassis.
4. Connect the fan cables to the HDD backplane board.



5. Install the chassis cover (see ***2.2 Removing and Installing the Chassis Cover on page 33***).

3.3 Replacing the Front Panel Board

3.3.1 Removing the Front Panel Board

Follow these instructions to remove the front panel board.

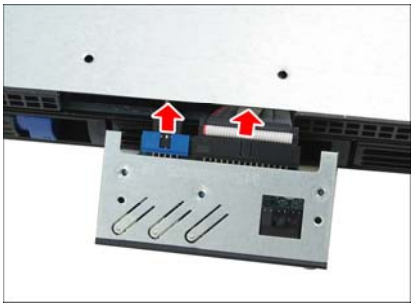
1. Turn off the system, disconnect all attached peripherals and disconnect the system from the electrical source.
2. Remove the two screws securing the front panel board to the chassis.



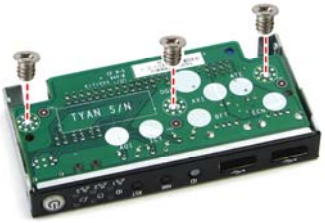
3. Carefully pull out the front panel board.



4. Disconnect the cables from the connectors on the front panel board.



5. Remove the three screws securing the front panel board to the bracket.



6. Slightly pull the front panel board away from the front panel connectors slot and then lift it to remove from the bracket.

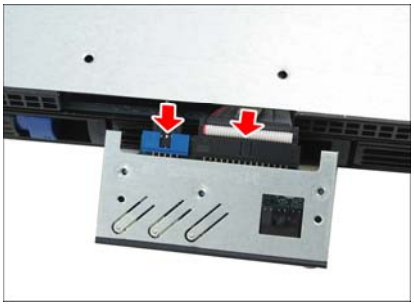


3.3.2 Installing the Front Control Board

1. Replace with a new front panel board and secure it to the bracket with three screws.



2. Connect the cable connectors to the front panel board connectors.



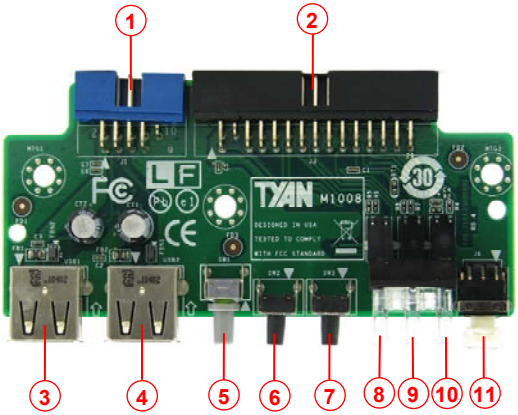
3. Insert the front panel board inside the chassis.



4. Secure the front panel board to the chassis using two screws.



3.3.3 Front Panel Board Features



1	2x5-pin USB Header (J1)	8	Top: ID LED (blue)
2	2x15-pin SSI Header (J3)		Bottom: LAN1 LED (green)
3	USB 1	9	Top: HDD LED (green)
4	USB 2		Bottom: LAN2 LED (green)
5	ID Switch (SW1)	10	Top: Warning LED (amber)
6	NMI Switch (SW2)		Bottom: LAN3 LED (green)
7	Reset Switch (SW3)	11	Power Button (J6)
Form Factor: 97.00 x 45.21mm, 4-layer PCB			

3.3.4 Pin Definitions

J1: 2x5-pin USB Header

Definition	Pin	Pin	Definition
VCC	1	2	VCC
USB1-	3	4	USB2-
USB1+	5	6	USB2+
GND	7	8	GND
KEY	9	10	GND

J3: 2x15-pin SSI Front Panel Header

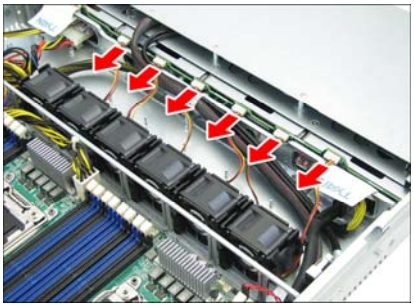
Definition	Pin	Pin	Definition
PWD_LED+	1	2	VCC
KEY	3	4	ID_LED+
PW_LED-	5	6	ID_LED-
HDD LED+	7	8	SYS_FAULT1-
HDD LED-	9	10	SYS_FAULT2-
PWR_SW-	11	12	LAN1_LED+
GND	13	14	LAN1_LED-
RESET-	15	16	ICH_SMBDAT
GND	17	18	ICH_SMBCLK
ID_SW-	19	20	INTRU#
TEMP_SENSOR	21	22	LAN2_LED+
NMI_SW	23	24	LAN2_LED-
-	25	26	-
LAN3_LED+	27	28	LAN3_LED-
-	29	30	-

3.4 Replacing the HDD Backplane Board

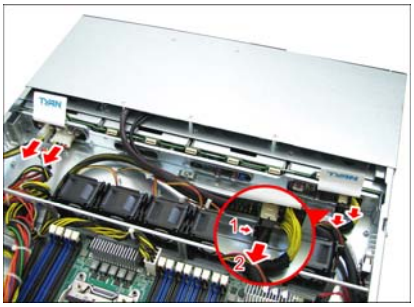
3.4.1 Removing the HDD Backplane Board

Follow these instructions to remove the HDD Backplane Board.

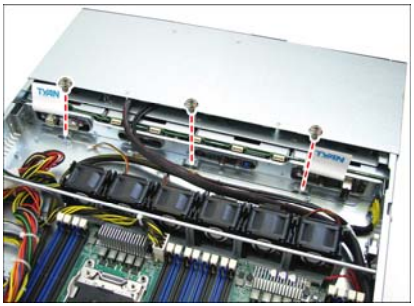
1. Remove the chassis cover (see ***2.2 Removing and Installing the Chassis Cover on page 33***).
2. Disconnect all the system fan cables attached to the HDD backplane board.



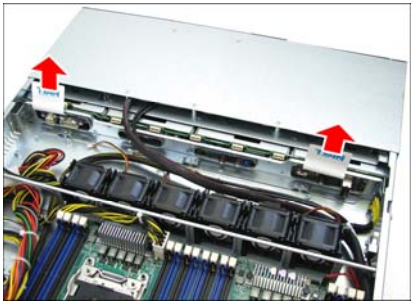
3. Disconnect the power cables, SAS cable, and fan header cable.



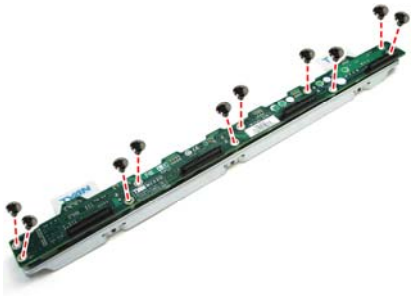
4. Remove the three screws securing the HDD backplane board bracket to the chassis.



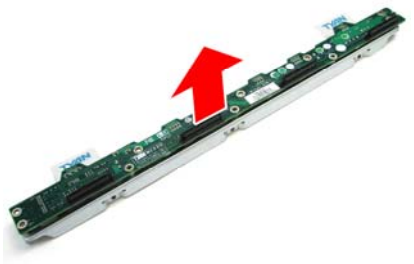
5. Lift the HDD backplane bracket to remove it from the chassis.



6. Remove the ten (10) screws securing the HDD backplane board to the HDD backplane board bracket.

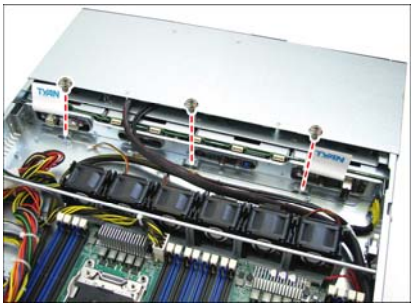


7. Lift the HDD backplane board to remove it from the HDD backplane board bracket.

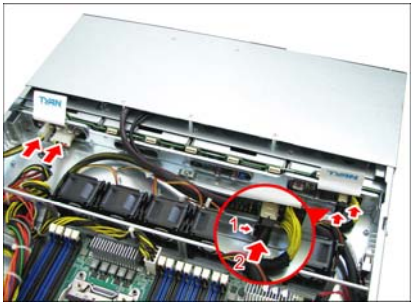


3.4.2 Installing the HDD Backplane Board

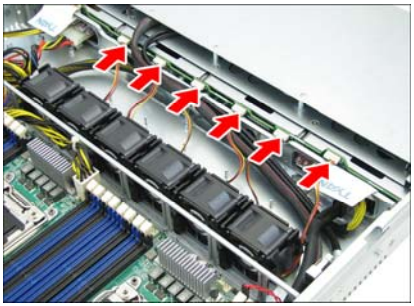
1. Replace and secure the new HDD backplane board to the HDD backplane bracket using ten (10) screws.
2. Align the HDD backplane board bracket to the chassis and secure it with three screws.



3. Connect the power cables, SAS cable, and fan header cable to the connectors on the HDD backplane board.



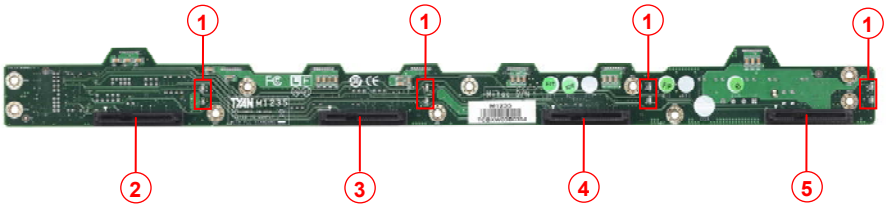
4. Connect all the system fan cables to the connectors on the HDD backplane board.



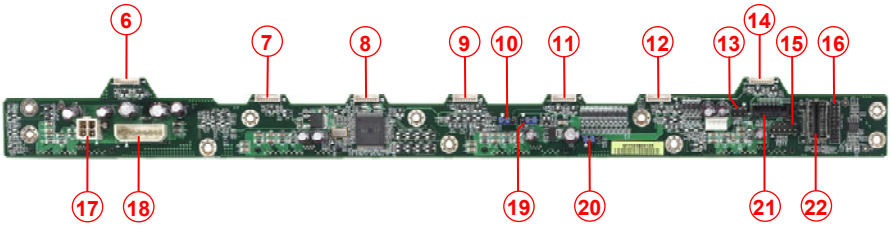
5. Install the chassis cover (see ***2.2 Removing and Installing the Chassis Cover on page 33***).

3.4.1 HDD BP Board Features

Front view:



Rear view:



1	HDD LED (LED1~LED8)	12	Fan Connector (FAN5)
2	SAS HDD Connector (J10)	13	(J45)
3	SAS HDD Connector (J11)	14	Fan Connector (FAN6)
4	SAS HDD Connector (J13)	15	SGPIO JTAG (J15)
5	SAS HDD Connector (J14)	16	Fan Header (J7)
6	Fan Connector (FAN7)	17	2x2P Power Connector (PW2)
7	Fan Connector (FAN1)	18	4-P Power Connector (PW1)
8	Fan Connector (FAN2)	19	(J43)
9	Fan Connector (FAN3)	20	(J42)
10	(J40)	21	SGPIO For IOH (J41)
11	Fan Connector (FAN4)	22	Mini SAS Connector (J39)
Form Factor	422.4 (L) mm x 38.7 (H) mm, 6-layer PCB		

3.4.2 Connector Pin Definitions

J15: SGPIO JTAG

Definition	Pin	Pin	Definition
CPLD_JTAG_TCK	1	2	GND
CPLD_JTAG_TDO	3	4	3.3V
CPLD_JTAG_TMS	5	6	NI
NI	7	8	KEY Pin
CPLD_JTAG_TDI	9	10	GND

J41: SGPIO For IOH

Definition	Pin	Pin	Definition
SM_CLK	1	2	SGPIO_0
SM_DATA	3	4	SGPIO_1
GND	5	6	SGPIO_2
KEY Pin	7	8	SGPIO_3
NI	9	10	HD_ERR_LED

PW1: Big 4-pin Power Connector

Definition	Pin	Pin	Definition
+12V	1	2	GND
GND	3	4	+5V

PW2: 2X2-pin Power Connector

Definition	Pin	Pin	Definition
GND	1	2	GND
+12V	3	4	+12V

3.5 Replacing the Power Supply Unit

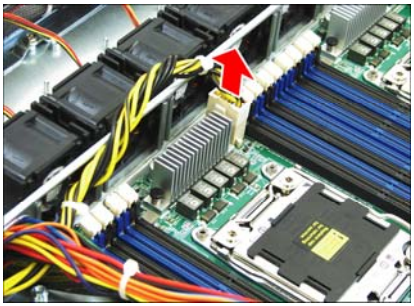
3.5.1 Removing the Power Supply Unit

Follow these instructions to remove the power supply unit.

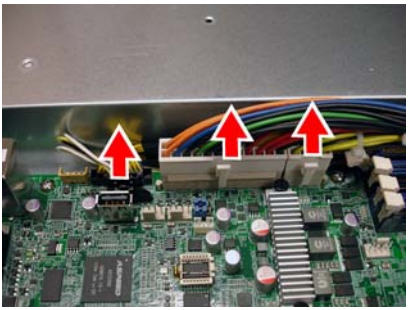
1. Remove the chassis cover (see ***2.2 Removing and Installing the*** Chassis Cover ***on page 33***).
2. Disconnect the power cables from the HDD backplane board.



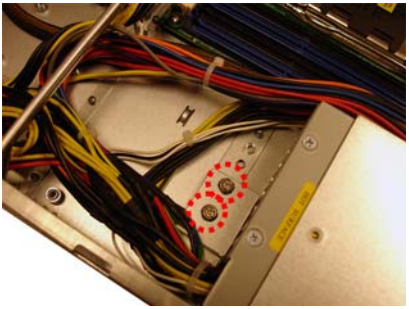
3. Disconnect the power cable from the mainboard connector.



4. Disconnect the power cables from the mainboard connectors.



5. Remove the two screws securing the power supply to the chassis.



6. Remove the five screws securing the power supply to the chassis.



7. Slide the power supply out from the chassis.



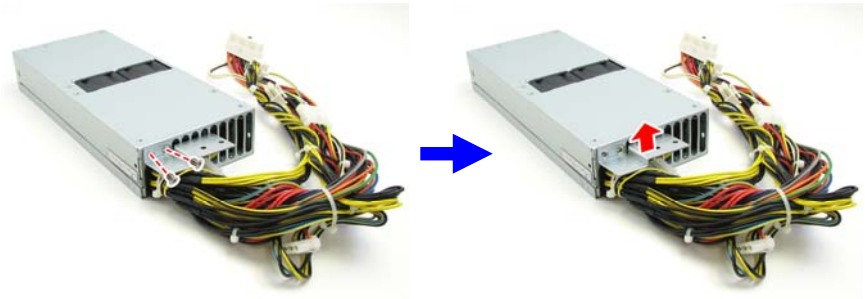
8. Remove the two screws securing the power supply panel bracket to the power supply unit.



9. Detach the power supply panel bracket from the power supply unit.



10. Remove the two screws to detach the bracket from the power supply unit.



3.5.2 Installing the Power Supply Unit

1. On the back of the new power supply unit, attach the bracket using two screws.



2. Align and attach the power supply panel bracket to the front of the power supply unit using two screws.

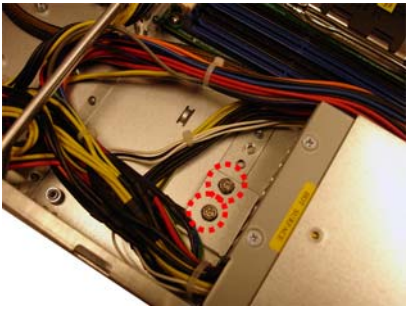


3. Slide the power supply unit into the chassis bay and secure it using five screws.



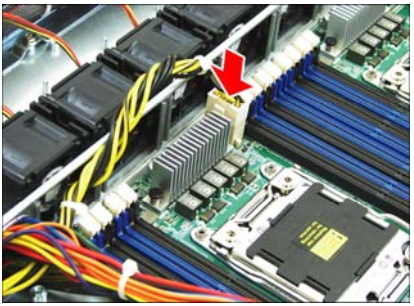


4. Attach the two screws to secure the power supply unit to the chassis.

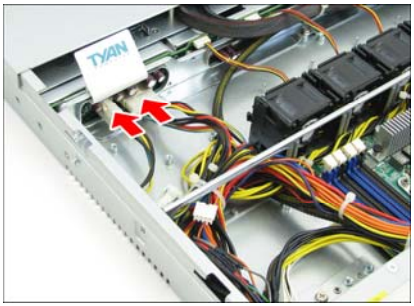


5. Connect the power connectors to the motherboard.





6. Connect the power connectors to the HDD backplane board.

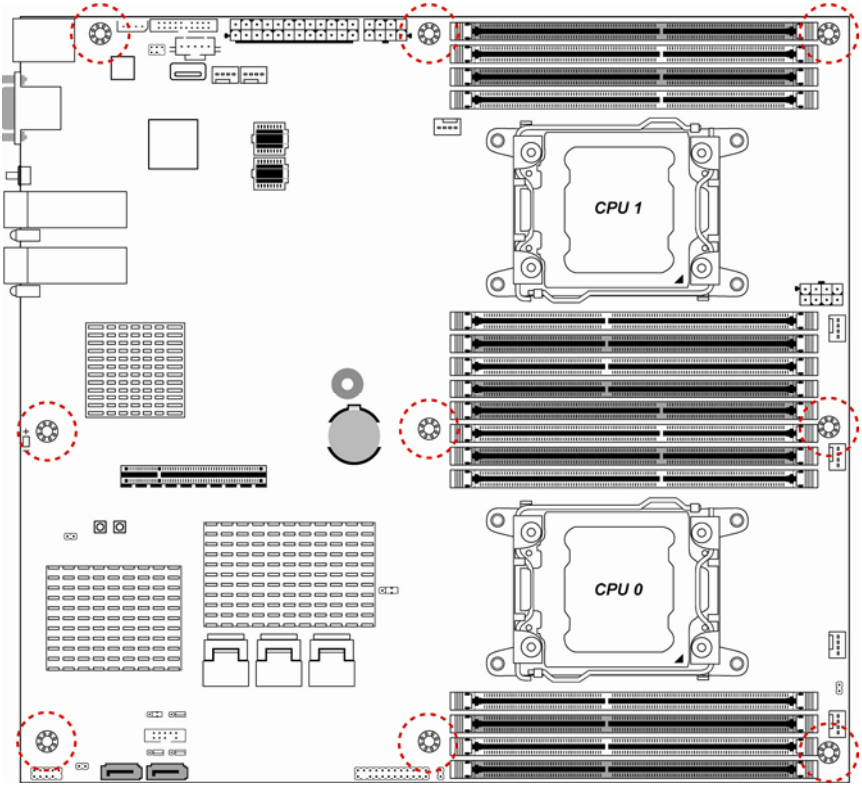


7. Install the chassis cover (see ***2.2 Removing and Installing the Chassis Cover on page 33***).

3.6 Replacing the Motherboard

Follow these instructions to replace the S7067 Motherboard.

1. Remove the chassis cover (see ***2.2 Removing and Installing the*** Chassis Cover ***on page 33***).
2. Disconnect all the cables connected to the motherboard.
3. Unscrew the motherboard.



4. Carefully lift the motherboard from the tray.
5. Follow the procedures in reverse order to reinstall the motherboard.

NOTE

Appendix I: Cable Connection Tables

1. System Fan Connector

System Fan to M1235 SATA/SAS Backplane (BP) Board		
System Fan	Connect to	M1235 BP
Fan1	→	FAN1
Fan2	→	FAN2
Fan3	→	FAN3
Fan4	→	FAN4
Fan5	→	FAN5
Fan6	→	FAN6

2. Mini-SAS Cable & FAN Cable & SGPIO Cable

M1235 SATA/SAS Backplane (BP) Board to S7067GM3NR-2T			
Cable	M1235 BP	Connect to	S7067GM3NR-2T
Mini-SAS Cable	J39	→	J12
Fan Cable	J7	→	J14
SGPIO	J41	→	J30

M1235 SATA/SAS Backplane (BP) Board to S7067WGM3NR-2T			
Cable	M1235 BP	Connect to	S7067WGM3NR-2T
Mini-SAS Cable	J39	→	J73
Fan Cable	J7	→	J14

3. Control Cable and USB Cable

Front Panel Board (FPB) to S7067 MB			
	M1008-G2024	Connect to	S7067 MB
Control Cable	J3	→	J39
USB Cable	J1	→	J26

4. Power Supply Cable

PSU to S7067 MB		
PSU	Connect to	S7067 MB
2x12P P1 Cable	→	PW1
2x4P P2 Cable	→	PW3
2x4P P7 Cable	→	PW2
PSMI P8 Cable	→	J34

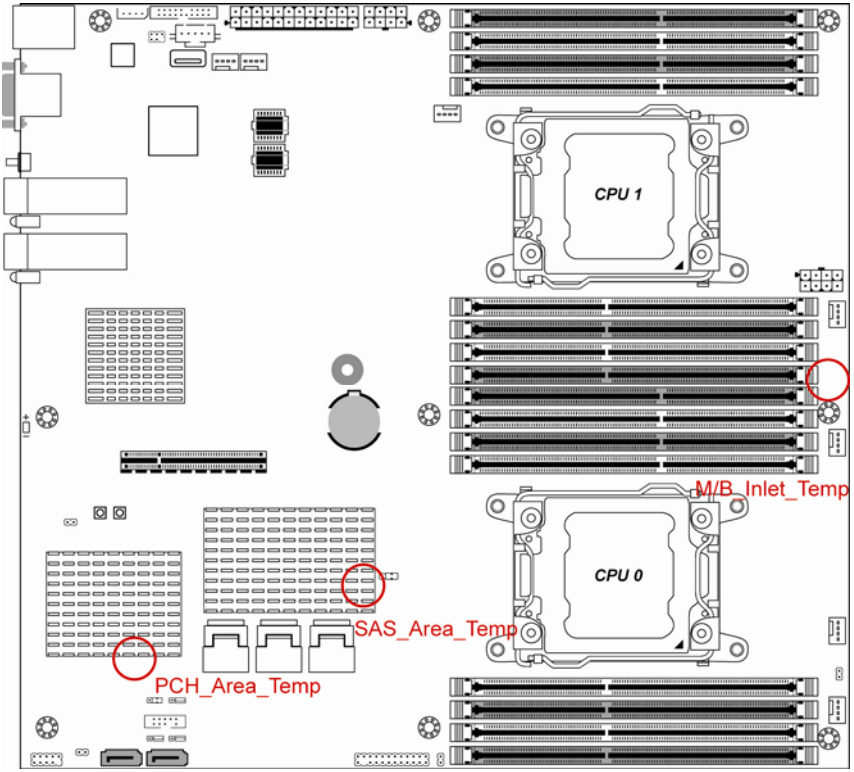
PSU to M1235 SATA/SAS Backplane (BP) Board		
PSU	Connect to	M1235 BP
2x2P P3 Cable	→	PW2
B4P P4 Cable	→	PW1

5. Chassis Intrusion Cable

Chassis Intrusion Cable		
Chassis	Connect to	S7067 MB
Intrusion Cable	→	J4

Appendix II: Fan and Temp Sensors

This section aims to help readers identify the locations of some specific FAN and Temp Sensors on the motherboard. A table of BIOS Temp sensor name explanation is also included for readers' reference.



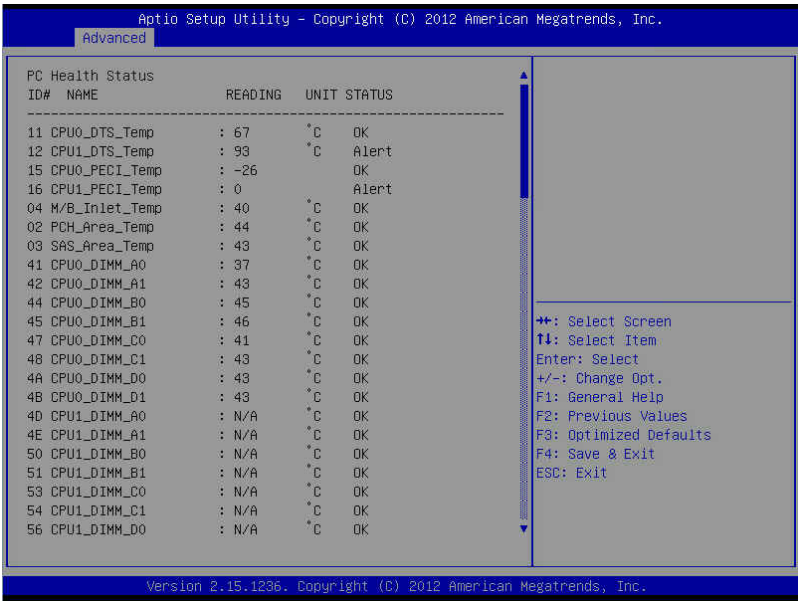
NOTE: The red dot indicates the sensor.

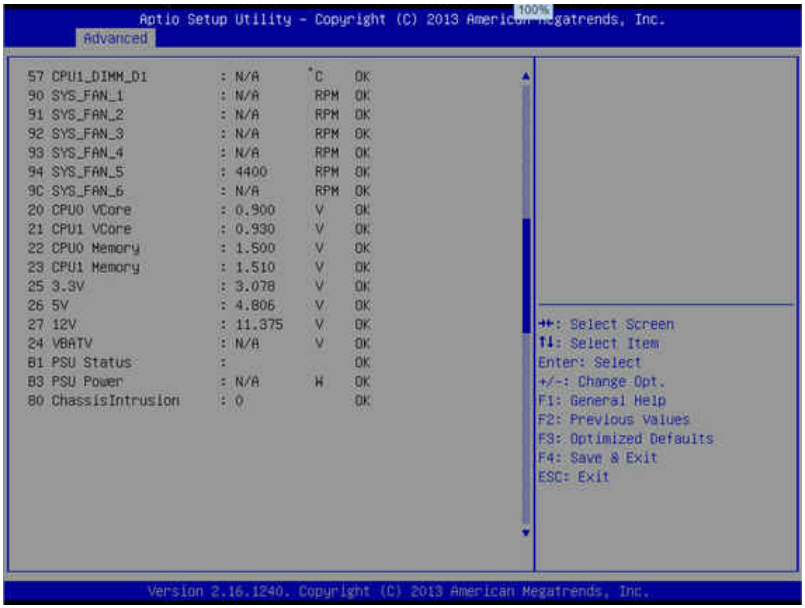
Fan and Temp Sensor Location:

1. Fan Sensor: It is located in the third pin of the fan connector, which detects the fan speed (rpm)
2. Temp Sensor: PCH_Area_Temp, SAS_Area_Temp and M/B_Inlet_Temp. They detect the system temperature around.

   NOTE: The system temperature is measured in a scale defined by **Intel**, not in Fahrenheit or Celsius.

BIOS Temp Sensor Name Explanation:





BIOS Temp Sensor	Name Explanation
CPU0_DTS_Temp	Temperature of the CPU0 Digital Temperature Sensor
CPU1_DTS_Temp	Temperature of the CPU1 Digital Temperature Sensor
CPU0_PECI_Temp	Temperature of the CPU0 Platform Environment Control Interface
CPU1_PECI_Temp	Temperature of the CPU1 Platform Environment Control Interface
M/B_Inlet_Temp	Temperature of the MB Air Inlet Area
PCH_Area_Temp.	Temperature of the PCH Area
SAS_Area_Temp	Temperature of the SAS Area
CPU0_DIMM_A0	Temperature of CPU0_DIMM_A0 Slot
CPU0_DIMM_A1	Temperature of CPU0_DIMM_A1 Slot
CPU0_DIMM_B0	Temperature of CPU0_DIMM_B0 Slot
CPU0_DIMM_B1	Temperature of CPU0_DIMM_B1 Slot
CPU0_DIMM_C0	Temperature of CPU0_DIMM_C0 Slot
CPU0_DIMM_C1	Temperature of CPU0_DIMM_C1 Slot
CPU0_DIMM_D0	Temperature of CPU0_DIMM_D0 Slot
CPU0_DIMM_D1	Temperature of CPU0_DIMM_D1 Slot
CPU1_DIMM_A0	Temperature of CPU1_DIMM_A0 Slot
CPU1_DIMM_A1	Temperature of CPU1_DIMM_A1 Slot
CPU1_DIMM_B0	Temperature of CPU1_DIMM_B0 Slot
CPU1_DIMM_B1	Temperature of CPU1_DIMM_B1 Slot
CPU1_DIMM_C0	Temperature of CPU1_DIMM_C0 Slot
CPU1_DIMM_C1	Temperature of CPU1_DIMM_C1 Slot
CPU1_DIMM_D0	Temperature of CPU1_DIMM_D0 Slot
CPU1_DIMM_D1	Temperature of CPU1_DIMM_D1 Slot
BIOS FAN Sensor	**Name Explanation**
SYS_FAN_1	Fan speed of SYS_FAN_1
SYS_FAN_2	Fan speed of SYS_FAN_2
SYS_FAN_3	Fan speed of SYS_FAN_3
SYS_FAN_4	Fan speed of SYS_FAN_4
SYS_FAN_5	Fan speed of SYS_FAN_5
SYS_FAN_6	Fan speed of SYS_FAN_6

NOTE

Appendix III: FRU Parts Table

GT24-B7067 FRU Parts				
Item	**Model Number**	**Part Number**	**Picture**	**Description**
Riser Card	M2091	411739100498		PCI-E X16 1U Riser Card (Left)
Cable	CCBL-0317	332810000397		A/C Power Cord, L=1800mm, US type
	CCBL-0300	332810000281		A/C Power Cord, L=1830mm, EU type
	CCBL-0689	422797800004		MINI-SAS CABLE, L=500MM
Power Supply	CPSU-0522	471100000059		Delta DPS-500VB B (S3F),1U MODULE, Single Power Supply (B7067G24V4H-2T and B7067G24W4H-2T)
FAN	CFAN-0241	336252012294		14700RPM,40*40*28MM
Rack Mounting Kit	CRAL-0034	452T15200001		Slide Rail Kit
	CEAR-0050	340740900010		Mounting Ear Kit
Heatsink	TH-0090	343T48700001		heatsink;AL/CU+PIPE, SOLDERLING,2011-1U-SPECIAL-NARROW-PASSIVE-HEATSINK, SQ45Q00001,105.5X80X25.5MM, SCREW,

NOTE

Appendix IV: Technical Support

If a problem arises with your system, you should first turn to your dealer for direct support. Your system has most likely been configured or designed by them and they should have the best idea of what hardware and software your system contains. Hence, they should be of the most assistance for you. Furthermore, if you purchased your system from a dealer near you, take the system to them directly to have it serviced instead of attempting to do so yourself (which can have expensive consequences).

If these options are not available for you then MiTAC International Corporation can help. Besides designing innovative and quality products for over a decade, MiTAC has continuously offered customers service beyond their expectations. TYAN's website (http://www.tyan.com) provides easy-to-access resources such as in-depth Linux Online Support sections with downloadable Linux drivers and comprehensive compatibility reports for chassis, memory and much more. With all these convenient resources just a few keystrokes away, users can easily find their latest software and operating system components to keep their systems running as powerful and productive as possible. MiTAC also ranks high for its commitment to fast and friendly customer support through email. By offering plenty of options for users, MiTAC serves multiple market segments with the industry's most competitive services to support them.

Please feel free to contact us directly for this service at tech-support@tyan.com

Help Resources:

1. See the beep codes section of this manual.
2. See the TYAN's website for FAQ's, bulletins, driver updates, and other information: http://www.tyan.com
3. Contact your dealer for help before calling TYAN.

Returning Merchandise for Service

During the warranty period, contact your distributor or system vendor FIRST for any product problems. This warranty only covers normal customer use and does not cover damages incurred during shipping or failure due to the alteration, misuse, abuse, or improper maintenance of products.



NOTE:

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service can be rendered. You may obtain service by calling the manufacturer for a Return Merchandise Authorization (RMA) number. The RMA number should be prominently displayed on the outside of the shipping carton and the package should be mailed prepaid.
TYAN will pay to have the board shipped back to you.

TYAN® GT24-B7067 Service Engineer's Manual V1.0

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