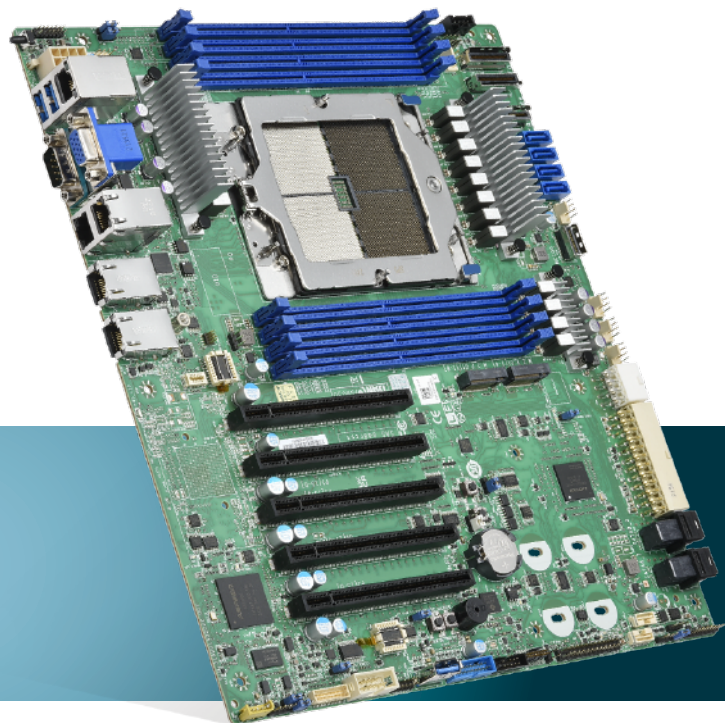


# AMD EPYC 9004 SERVER MOTHERBOARD

## Tomcat CX S8050

S8056GMNE, S8056GM2NE-2T



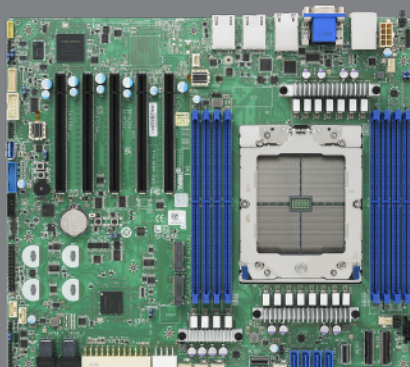
AMD  
**EPYC**



**nvm**  
EXPRESS

**DDR5**

**PCIe 5.0**



■ **AMD EPYC™ 9004  
Series Processors**

### Single-socket HPC server board for multiple GPU cards deployment

- Single SP5 Socket, supporting (1) AMD EPYC 9004 Processor
- (8) RDIMM/3DS RDIMM DDR5 4800, Up to 2048GB RDIMM/3DS RDIMM
- (5) PCI-E Gen5 x16 slots
- CEB 12" x 10.5"

#### ■ Summary Table

SKU	Storage	Networking
S8050GM2NE	(12) SATA + (4) NVMe + (2) M.2	(2) GbE + (1) IPMI
S8050GM4NE-2T	(12) SATA + (4) NVMe + (2) M.2	(2) 10GbE + (2) GbE + (1) IPMI



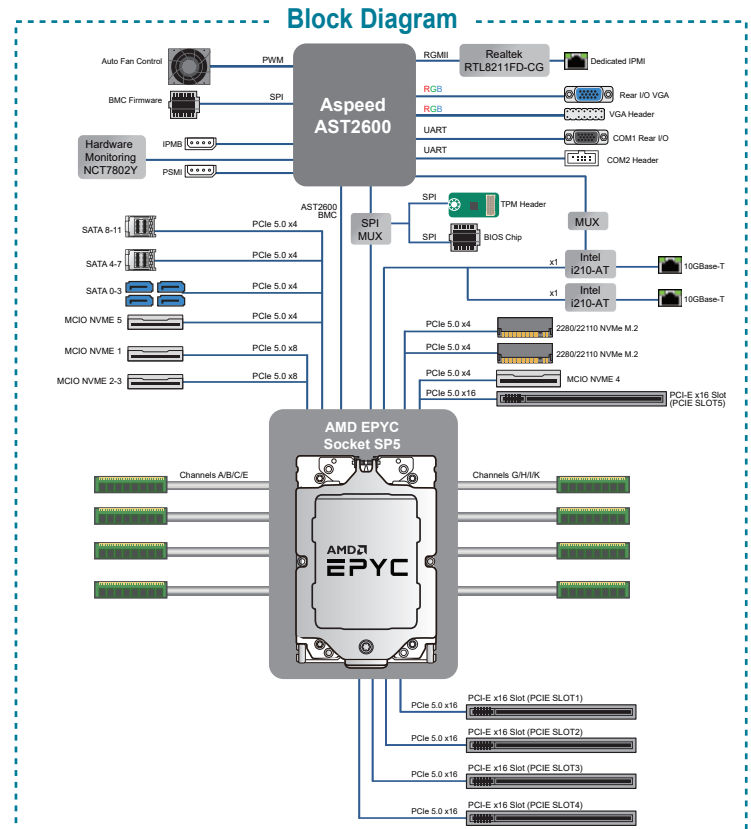
# Tomcat CX S8050

S8056GMNE

# TYAN

## Specifications

Processor	Q'ty / Socket Type	(1) AMD Socket SP5
	Supported CPU Series	(1) AMD EPYC™ 9004 Series Processor
	Configurable Thermal Design Power (cTDP) Wattage	Max up to 400W (cTDP)
Memory	Supported DIMM Q'ty	(8) DIMM slots
	DIMM Type / Speed	RDDR5 4800 w/ ECC (1.1V) when 2DPC/1DPC / LRDDR5 4800 w/ ECC (1.1V) when 2DPC/1DPC
	Capacity	Up to 2,048GB RDIMM / 3DS RDIMM DDR5 4800
	Memory channel	8 Channels per CPU
Expansion Slots	PCI-E	(5) PCIe Gen.5 x16 slot
	Port Q'ty	(2) GbE ports + (1) GbE dedicated for IPMI
	Controller	Intel I210-AT
LAN	PHY	Realtek RTL8211F
	Connector	(12) SATA
	Controller	Direct from AMD EPYC CPU
Storage	Speed	6Gb/s
	RAID	N/A
	NVMe	Connector (U.2) (2) MCIO x4 / (2) MCIO x8 Connector (M.2) (2) 22110/2280 (by PCIe Gen.4 interface)
Graphic	Connector type	D-Sub 15-pin
	Resolution	Up to 1920X1080 @60Hz
	Chipset	Aspeed AST2600
Input /Output	NVMe	(2) MCIO x4 / (2) MCIO x8
	USB	(2) USB3.2 Gen.1 ports
	COM	(1) DB-9 COM Connector
	VGA	(1) D-Sub 15-pin port
	Power	(2) 2x4 Power input connectors (1) 2x12 Power input connectors
	RJ-45	(2) GbE ports + (1) GbE dedicated for IPMI
	Front Panel	(1) 2x12-pin SSI front panel header
TPM (Optional)	SATA	(2) Mini-SAS HD (SFF-8643) connectors / (4) 7-pin SATA connectors
	TPM Support	Please refer to our TPM supported list.
	Interface	SPI
System Monitoring	Chipset	Aspeed AST2600
	Fan	Total (6) 4-pin headers
	Voltage	Monitors voltage for CPU, memory, chipset & power supply
	Temperature	Monitors temperature for CPU & system environment
Server Management	LED	Fan fail LED indicator / Over temperature warning indicator
	Others	Watchdog timer support
	Onboard Chipset	Onboard Aspeed AST2600
BIOS	AST2600 iKVM Feature	24-bit high quality video compression / Supports storage over IP and remote platform-flash / USB 2.0 virtual hub
	AST2600 IPMI Feature	IPMI 2.0 compliant baseboard management controller (BMC) / 10/100/1000 Mb/s MAC interface
Physical Dimension	Brand / ROM size	AMI / 256MB
	Feature	Hardware Monitor / FAN speed control automatic / Boot from USB device/PXE via LAN/Storage / Console Redirection / SMBIOS 3.0/PnP/Wake on LAN / ACPI sleeping states S0, S5
Operating System	Form Factor	CEB
	Board Dimension	12" x 10.5" (305 x 267mm)
OS supported list	OS supported list	Please refer to our Intel OS supported list.



Regulation	FCC (SDoC)	Class A
	CE (DoC)	Class A
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 Non-operating Relative Humidity: 10% to 95% (non-condensing)
RoHS	RoHS 6/6 Compliant	Yes

(Specifications are subject to change without notice. Items pictured may only be representative.)

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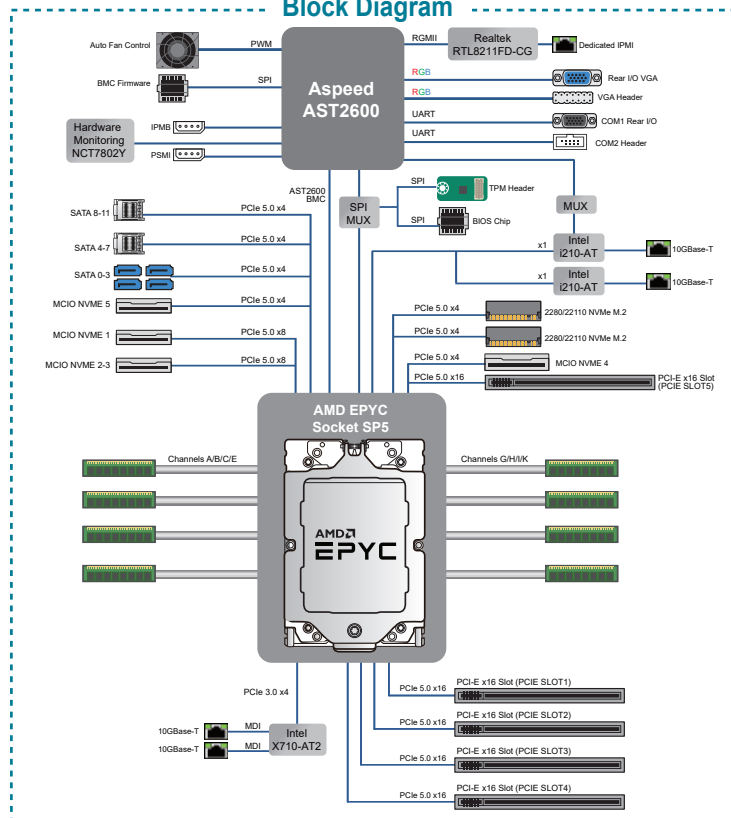
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## S8056GM2NE-2T

# Specifications

Processor	Q'ty / Socket Type		(1) AMD Socket SP5
	Supported CPU Series		(1) AMD EPYC™ 9004 Series Processor
	Configurable Thermal Design Power (cTDP) Wattage		Max up to 400W (cTDP)
Memory	Supported DIMM Q'ty		(8) DIMM slots
	DIMM Type / Speed		RDDR5 4800 w/ ECC (1.1V) when 2DPC/1DPC / LRDDR5 4800 w/ ECC (1.1V) when 2DPC/1DPC
	Capacity		Up to 2,048GB RDIMM / 3DS RDIMM DDR5 4800
	Memory channel		8 Channels per CPU
	Memory voltage		1.1V
Expansion Slots	PCI-E		(5) PCIe Gen.5 x16 slot
LAN	Port Q'ty		(2) 10GbE ports + (2) GbE ports + (1) GbE dedicated for IPMI
	Controller		Intel I210-AT / Intel X710-AT2
	PHY		Realtek RTL8211F
Storage	SATA	Connector	(12) SATA
		Controller	Direct from AMD EPYC CPU
		Speed	6Gb/s
		RAID	N/A
	NVMe	Connector (U.2)	MCIO x4 / (2) MCIO x8
		Connector (M.2)	(2) 22110/2280 (by PCIe Gen.4 interface)
Graphic	Connector type		D-Sub 15-pin
	Resolution		Up to 1920X1080 @60Hz
	Chipset		Aspeed AST2600
Input /Output	NVMe		(2) MCIO x4 / (2) MCIO x8
	USB		(2) USB3.2 Gen.1 ports
	COM		(1) DB-9 COM Connector
	VGA		(1) D-Sub 15-pin port
	Power		(2) 2x4 Power input connectors (1) 2x12 Power input connectors
	RJ-45		(2) 10GbE ports + (2) GbE ports + (1) GbE dedicated for IPMI
	Front Panel		(1) 2x12-pin SSI front panel header
	SATA		(2) Mini-SAS HD (SFF-8643) connectors / (4) 7-pin SATA connectors
TPM (Optional)	TPM Support		Please refer to our TPM supported list.
	Interface		SPI
System Monitoring	Chipset		Aspeed AST2600
	Fan		Total (6) 4-pin headers
	Voltage		Monitors voltage for CPU, memory, chipset & power supply
	Temperature		Monitors temperature for CPU & system environment
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	Others		Watchdog timer support
Server Management	Onboard Chipset		Onboard Aspeed AST2600
	AST2600 iKVM Feature		24-bit high quality video compression / Supports storage over IP and remote platform-flash / USB 2.0 virtual hub
	AST2600 IPMI Feature		IPMI 2.0 compliant baseboard management controller (BMC) / 10/100/1000 Mb/s MAC interface
BIOS	Brand / ROM size		AMI / 256MB
	Feature		Hardware Monitor / FAN speed control automatic / Boot from USB device/PXE via LAN/Storage / Console Redirection / SMBIOS 3.0/PnP/Wake on LAN / ACPI sleeping states S0, S5
Physical Dimension	Form Factor		CEB
	Board Dimension		12" x 10.5" (305 x 267mm)
Operating System	OS supported list		Please refer to our Intel OS supported list.

## Block Diagram



Regulation	FCC (SDoC)	Class A
	CE (DoC)	Class A
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 Non-operating Relative Humidity: 10% to 95% (non-condensing)
RoHS	RoHS 6/6 Compliant	Yes

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