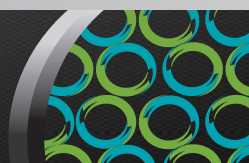




GPU Computing Platforms



World Class Server Platforms





**Industry leading hardware manufacturer,
providing servers, technical workstations,
and supercomputing clusters through
worldwide distribution channels.**



◆ About TYAN

TYAN is a world class provider of server motherboards and server platforms. Founded in California's Silicon Valley in 1989, TYAN has been bringing innovation and reliability to the server industry for nearly 30 years. As a leading server manufacturer owned by MiTAC Computing Technology Corporation, TYAN is a core business unit of the MiTAC Group.

As a leading manufacturer, TYAN provides systems integrators and value added resellers with market leading products to build and customize their servers worldwide. By offering a full range of server products and accessories, TYAN enables customers to apply their expertise and bring value to their solutions. TYAN prides itself in supplying the channel with building block products.

Many customers have had their TYAN-based products recognized within their industries, covering a wide range of markets such as HPC, hyper-scale/data center, server storage and security appliances.

TYAN has locations spanning the globe, from North America to Asia Pacific and Europe, including R&D, distribution, local support, inventory and sales.

◆ TYAN Brand Lines

TYAN has a number of server product lines designed to suit a wide range of applications specially tailored to meet the needs of our channel and system integration partners.

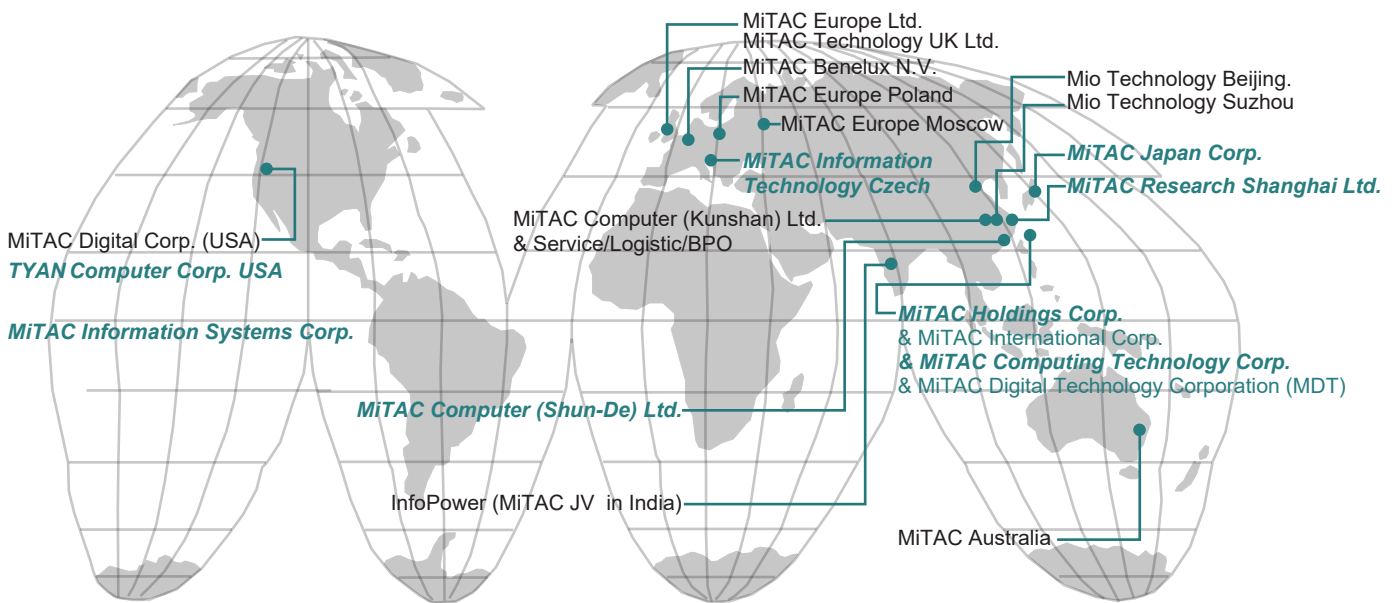
TYAN's Thunder 、Tempest 、Transport and Tomcat products span the following four segments:

- SX** – Storage
- HX** – HPC
- CX** – Cloud
- EX** – Embedded

TYAN is continually developing new servers. Check our website at www.tyan.com to stay up to date with our latest product offerings.



◆ MiTAC Global Presence & TYAN Branch Offices



Thunder



- Server barebones based on Intel's latest technology including Intel® Xeon® Scalable Processors
- Designed to offer best-in-class server technology with remote management capability
- Built to inventory
- Warehoused in US, EU, and China

Tempest



- Motherboards based on Intel's latest world-class server technology
- Fits off-the-shelf (OTS), industry standard chassis
- Tested with the highest standards for design and quality
- Built to inventory
- Warehoused in US, EU, and China

Transport



- Server barebones based on the AMD ZEN 2 architecture including the AMD EPYC processor
- Designed to offer best-in-class server technology with remote management capability
- Built to inventory
- Warehoused in US, EU, and China

Tomcat



- Motherboards based on AMD's latest ZEN 2 server architecture
- Fits off-the-shelf (OTS), industry standard chassis
- Tested with the highest standards for design and quality
- Built to inventory
- Warehoused in US, EU, and China

TYAN GPU SERVER PLATFORMS



GPU COMPUTING PLATFORMS

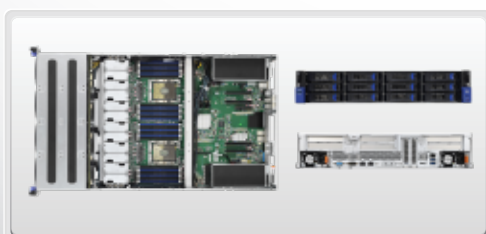
TYAN offers a wide range of GPU (graphics processing unit) computing platforms that are designed for High Performance Computing (HPC) and massive parallel computing environments. TYAN's GPU platforms range from 1 GPU up to 10 GPUs inside traditional 1U, 2U and 4U rackmount chassis, which help reduce the rack space requirements, required for high performance applications. With the right workload, these platforms can offer higher performance and reduce power consumption when compared to traditional CPU centric platforms.

Target Applications:

- High Performance GPU frameworks
- Cryptography
- Oil & Gas Discovery
- Particle Physics
- Genetic Sequencing
- Cryptocurrency Mining
- Large Scale Facial Recognition
- Machine Learning and Artificial Intelligence

	TN76-B7102	TS75-B8252	FT48T-B7105	TN83-B8251	FT77D-B7109	FT83-B7119
Form Factor / Chassis Depth (mm)	2U / 760mm	2U / 751mm	Tower / 700mm	2U / 831mm	4U / 770mm	4U / 830mm
# of Processor	2	2	2	2	2	2
# of DIMM slot	24	32	12	16	24	24
Memory Type / Max. Speed	Registered DDR4 2933/2666	Registered DDR4 3200/2933	Registered DDR4 2933/2666	Registered DDR4 3200/2933	Registered DDR4 2933/2666	Registered DDR4 2933/2666
Max. DW GPU	2	2 (Active-Cooled)	5	4	8	10
Extra PCIe slot (after Max. DW GPU deployed)	Up to 4 PCIe 3.0 x8	Up to 2 PCIe 4.0 x16 + 1 PCIe 4.0 x8	1 PCIe 3.0 x16	2 PCIe 4.0 x16	1 PCIe 3.0 x16	1 PCIe 3.0 x16
# of LAN port	2 10GBase-T (RJ-45)	2 10GBase-T (RJ-45)	2 10GBase-T (RJ-45)	2 10GBase-T (RJ-45)	2 10GBase-T (RJ-45)	2 10GBase-T (RJ-45)
# of LAN mezz. slot	1 (PCIe 3.0 x8; OCP 0.5)	1 (PCIe 4.0 x16; OCP 3.0)	-	-	1 (PCIe 3.0 x8; proprietary)	-
# of M.2 slot	2 (2280)	2 (22110/2280)	2 (22110/2280)	Opt. Tyan P2111-2M	Opt. Tyan P2111-2M	Opt. Tyan P2111-2M
# of drive	12 hot-swap 3.5"/2.5"	12 hot-swap 3.5"/2.5"	4/8 hot-swap 3.5"/2.5"	8 hot-swap 3.5"/2.5"	14 hot-swap 2.5"	12 hot-swap 3.5"/2.5"
Supported drive interface	12 SAS 12G (opt.) 12 SATA 6G (default) 4 NVMe U.2 (opt.)	12 SAS 12G (opt.) 12 SATA 6G (default) 4 NVMe U.2 (default)	4/8 SAS 12G (opt.) 4/8 SATA 6G (default)	8 SAS 12G (opt.) 8 SATA 6G (Default) 8 NVMe U.2 (default)	12 SAS 12G (opt.) 14 SATA 6G (default) 4 NVMe U.2 (opt.)	12 SAS 12G (opt.) 12 SATA 6G (default) 4 NVMe U.2 (default)
Remote Management	IPMI 2.0 + Redfish	IPMI 2.0 + Redfish	IPMI 2.0 + Redfish	IPMI 2.0 + Redfish	IPMI 2.0 + Redfish	IPMI 2.0 + Redfish
System Power	(1+1) 1,200W RPSU @ 220-240V _{AC}	(1+1) 1,600W RPSU @ 220-240V _{AC}	(1+1) 1,968W RPSU @ 220-240V _{AC}	(1+1) 2,200W RPSU @ 220-240V _{AC}	(2+1) 4,400W RPSU @ 220-240V _{AC}	(3+1) 4,800W RPSU @ 220-240V _{AC}

Thunder SX TN76-B7102

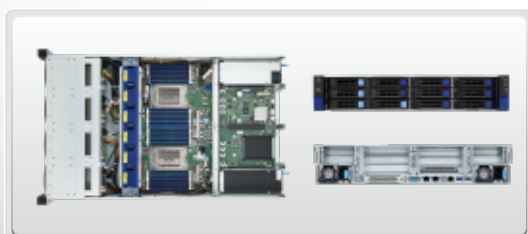


2U2S server platform with maximum memory support for virtualization applications

Model Number	TN76-B7102
Enclosure Form Factor	2U (30.1" in depth)
Supported CPU	(2) 2nd Gen. Intel® Xeon® Scalable Processor
Chipset	Intel® C621 PCH (SATA 6Gb/s)
CPU Interconnect	(2) Intel® UPI 10.4/9.6 GT/s
Number of DIMM Slot	24/ (12+12)
Memory Type (max. capacity)	Follow latest 2nd Gen. Intel® Xeon® Scalable Platform DDR4 Memory POR* *: Actual memory speed depends on populated CPU models
Storage Controller	Intel® C621 PCH (SATA 6Gb/s)
RAID Support	RAID 0, 1, 5, 10 (Intel® RSTe) (Opt.) RAID 0, 1, 10 (Intel® VROC) for NVMe
Networking	(2) 10GbE + (1) IPMI
PCI Expansion Slots	(2) FH/10.5" L PCIe x16 + (4) PCIe x8 + (1) PCIe x8 OCP LAN mezzanine + (1) PCIe x8 Tyan storage mezzanine + (2) NVMe M.2 (2280) slots
Power Supply	(1+1) 1,200W RPSU

Standard Model	# Storage Bay	# PCIe slots	Networking
B7102T76V12HR-2T-N	(12) hot-swap 3.5" (SAS/SATA only)	(2) PCIe x16 + (4) PCIe x8 + (1) OCP Mezz. + (1) Storage Mezz. + (2) M.2	(2) 10GbE-T + (1) 1000Base-T (IPMI)
B7102T76V8E4HR-2T-N	(12) hot-swap 3.5" (up to 4x NVMe U.2)	(2) PCIe x16 + (2) PCIe x8 + (1) OCP Mezz. + (1) Storage Mezz. + (2) M.2	(2) 10GbE-T + (1) 1000Base-T (IPMI)
B7102T76V12HR-2T-G	(12) hot-swap 3.5" (SAS/SATA only)	(2) PCIe x16 + (2) PCIe x8 + (1) OCP Mezz. + (1) Storage Mezz. + (2) M.2	(2) 10GbE-T + (1) 1000Base-T (IPMI)

Transport HX TS75-B8252



2U2S server platform with maximum memory support for virtualization applications

Model Number	TS75-B8252
Enclosure Form Factor	2U (29.53" in depth)
Supported CPU	(2) AMD EPYC™ 7002 Processor
Chipset	-
CPU Interconnect	Infinity Fabric
Number of DIMM Slot	32/ (16+16)
Memory Type (max. capacity)	Follow latest AMD EPYC™ 7002 Platform DDR4 Memory POR* *: Actual memory speed depends on populated CPU models
Storage Controller	AMD EPYC™ 7002 Processor
Networking	(2) 10GbE + (1) IPMI
PCI Expansion Slots	(2) FH/10.5" L/DW + (2) HH/HL PCIe 4.0 x16 + (1) HH/HL PCIe 4.0 x8 + (2) NVMe M.2 (22110/2280) slots (B8252T75V8E4HR-2T); (4) FH/10.5" L + (5) HH/HL PCIe 4.0 x8 + (2) NVMe M.2 (22110/2280) slots (B8252T75V8E4HR-8X-2T)
Power Supply	(1+1) 1,600W RPSU

Standard Model	# Storage Bay	# PCIe slots	Networking
B8252T75V8E4HR-2T	(12) hot-swap 3.5" (up to 4x NVMe U.2)	(4) PCIe 4.0 x16 + (1) PCIe 4.0 x8	(2) 10GbE-T + (1) 1000Base-T (IPMI)
B8252T75V8E4HR-8X-2T	(12) hot-swap 3.5" (up to 4x NVMe U.2)	(9) PCIe 4.0 x8	(2) 10GbE-T + (1) 1000Base-T (IPMI)

Thunder HX FT48T-B7105

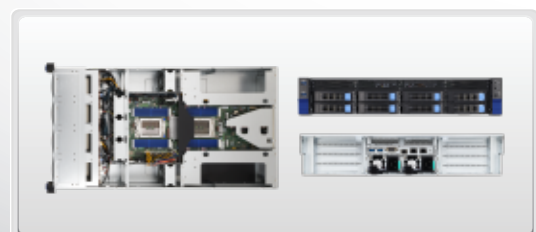


80 PLUS PLATINUM Pedestal/4U 2S 5-GPU workstation platform designed for GPU accelerated technical computing applications

Model Number	FT48T-B7105
Enclosure Form Factor	Pedestal/4U (27.5" in depth)
Supported CPU	(2) 2nd Gen. Intel® Xeon® Scalable Processor
Chipset	Intel® C621 PCH (SATA 6Gb/s)
CPU Interconnect	(2) Intel® UPI 10.4/9.6 GT/s
Number of DIMM Slot	12/ (6+6)
Memory Type (max. capacity)	Follow latest 2nd Gen. Intel® Xeon® Scalable Platform DDR4 Memory POR* *: Actual memory speed depends on populated CPU models
Storage Controller	Intel® C621 PCH (SATA 6Gb/s)
RAID Support	RAID 0, 1, 5, 10 (Intel® RSTe) (Opt.) RAID 0, 1, 10 (Intel® VROC) for NVMe
Networking	(2) 10GbE + (1) IPMI
PCI Expansion Slots	(5) FH/FL/DW+ (1) FH/FL PCIe x16 + (2) NVMe M.2 (22110/2280) slots
Power Supply	(1+1) 2,000W RPSU

Standard Model	# Storage Bay	# PCIe slots	Networking
B7105F48TV4HR-2T-N (6 system fans)	(4) hot-swap 3.5" (SAS/SATA only)	(5) DW PCIe x16 + (1) PCIe x16 + (2) M.2	(2) 10GbBase-T + (1) 1000Base-T (IPMI)
B7105F48TV8HR-2T-G (3 system fans; active GPU only)	(8) hot-swap 3.5" (SAS/SATA only)	(5) DW PCIe x16 + (1) PCIe x16 + (2) M.2	(2) 10GbBase-T + (1) 1000Base-T (IPMI)

Transport HX TN83-B8251



80 PLUS PLATINUM 2U2S GPGPU server platform for AI training/inference applications

Model Number	TN83-B8251
Enclosure Form Factor	2U (32.68" in depth)
Supported CPU	(2) AMD EPYC™ 7002 Processor
Chipset	-
CPU Interconnect	Infinity Fabric
Number of DIMM Slot	16/ (8+8)
Memory Type (max. capacity)	Follow latest AMD EPYC™ 7002 Platform DDR4 Memory POR* *: Actual memory speed depends on populated CPU models
Storage Controller	AMD EPYC™ 7002 Processor
Networking	(2) 10GbE + (1) IPMI
PCI Expansion Slots	(4) FH/10.5"L/DW PCIe 4.0 x16 or (8) FH/10.5"L PCIe 4.0 x8 + (2) HH/HL PCIe 4.0 x16 slots
Power Supply	(1+1) 2,200W RPSU

Standard Model	# Storage Bay	# PCIe slots	Networking
B8251T83E8HR-2T-N	(8) hot-swap 3.5" (NVMe/SATA only)	(6) PCIe 4.0 x16	(2) 10GbBase-T + (1) 1000Base-T (IPMI)

Thunder HX FT77D-B7109



**8
GPU**

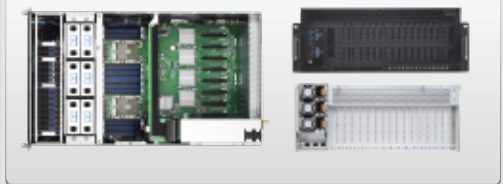


**80
PLUS
PLATINUM**

**4U2S 8-GPU server platform
designed for embarrassingly parallel
workloads**

Model Number	FT77D-B7109
Enclosure Form Factor	4U (30.3" in depth)
Supported CPU	(2) 2nd Gen. Intel® Xeon® Scalable Processor
Chipset	Intel® C621 PCH + (4) PLX PEX8747 PCIe switches
CPU Interconnect	(2) Intel® UPI 10.4/9.6 GT/s
Number of DIMM Slot	24/ (12+12)
Memory Type (max. capacity)	Follow latest 2nd Gen. Intel® Xeon® Scalable Platform DDR4 Memory POR* *: Actual memory speed depends on populated CPU models
Storage Controller	Intel® C621 PCH (SATA 6Gb/s)
RAID Support	RAID 0, 1, 5, 10 (Intel® RSTe) (Opt.) RAID 0, 1, 10 (Intel® VROC) for NVMe
Networking	(2) 10GbE + (1) IPMI
PCI Expansion Slots	(8) FH/FL/DW + (1) FH/FL PCIe x16 + (2) PCIe x8 Tyan mezzanine slots
Power Supply	(2+1) 4,400W RPSU

Standard Model	# Storage Bay	# PCIe slots	Networking
B7109F77DV14HR-2T-NFZ	(14) hot-swap 2.5" (SAS/SATA only)	(8) DW PCIe x16 + (1) PCIe x16 + (2) Tyan Mezz.	(2) 10GbBase-T + (1) 1000Base-T (IPMI)
B7109F77DV10E4HR-2T-NFZ	(14) hot-swap 2.5" (up to 4x NVMe U.2)	(8) DW PCIe x16 + (2) Tyan Mezz.	(2) 10GbBase-T + (1) 1000Base-T (IPMI)



Thunder HX FT83-B7119



**10
GPU**



**80
PLUS
PLATINUM**

**4U2S 10-GPU server platform designed
for AI/Deep Learning applications**

Model Number	FT83-B7119
Enclosure Form Factor	4U (32.68" in depth)
Supported CPU	(2) 2nd Gen. Intel® Xeon® Scalable Processor
Chipset	Intel® C621 PCH + (2) PLX PEX8796 PCIe switches
CPU Interconnect	(2) Intel® UPI 10.4/9.6 GT/s
Number of DIMM Slot	24/ (12+12)
Memory Type (max. capacity)	Follow latest 2nd Gen. Intel® Xeon® Scalable Platform DDR4 Memory POR* *: Actual memory speed depends on populated CPU models
Storage Controller	Intel® C621 PCH (SATA 6Gb/s)
RAID Support	RAID 0, 1, 5, 10 (Intel® RSTe) (Opt.) RAID 0, 1, 10 (Intel® VROC) for NVMe
Networking	(2) 10GbE + (1) IPMI
PCI Expansion Slots	(10) FH/10.5"L/DW + (1) FH/10.5"L PCIe x16 + (1) PCIe x16 Tyan storage mezzanine slots
Power Supply	(3+1) 4,800W RPSU

Standard Model	# Storage Bay	# PCIe slots	Networking
B7119F83V12HR-2T-N (GPU from 2 CPU evenly)	(12) hot-swap 3.5" (SAS/SATA only)	(10) DW PCIe x16 + (1) PCIe x16 + (1) Storage Mezz.	(2) 10GbBase-T + (1) 1000Base-T (IPMI)
B7119F83V12HR-2T-NS (GPU from 1 CPU only)	(12) hot-swap 3.5" (SAS/SATA only)	(10) DW PCIe x16 + (1) PCIe x16 + (1) Storage Mezz.	(2) 10GbBase-T + (1) 1000Base-T (IPMI)
B7119F83V8E4HR-2T-N (GPU from 2 CPU evenly)	(12) hot-swap 3.5" (up to 4x NVMe U.2)	(10) DW PCIe x16 + (1) PCIe x16 + (1) Storage Mezz.	(2) 10GbBase-T + (1) 1000Base-T (IPMI)
B7119F83V8E4HR-2T-NS (GPU from 1 CPU only)	(12) hot-swap 3.5" (up to 4x NVMe U.2)	(10) DW PCIe x16 + (1) PCIe x16 + (1) Storage Mezz.	(2) 10GbBase-T + (1) 1000Base-T (IPMI)





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