

# ? Tenstorrent TT-LoudBox™ (Wormhole)



This document synthesizes the comprehensive hardware, software, and technical specifications of the **Tenstorrent TT-LoudBox™ (Wormhole)** AI workstation/server based on official product documentation.

## 1. Product Overview

- **Product Name:** TT-LoudBox™ (Wormhole) – 4U Workstation / Rackmount Server (Internal code: T3000)[cite: 1].
- **Target Audience:** Designed for developers looking to run, test, and build AI models, or port and develop High-Performance Computing (HPC) libraries[cite: 1].
- **Starting Price:** From **\$12,000 USD**[cite: 1].
- **Form Factor:** Air-cooled, versatile 4U chassis that can be deployed as a quiet office desktop workstation or mounted into a standard data center server rack[cite: 1].





## 2. AI Model Capacity

Utilizing a highly flexible Ethernet-based mesh topology, the TT-LoudBox scales and pools memory resources efficiently to handle large-scale models locally:

- **Single User / Single Model:** Capable of locally running models up to approximately **80 Billion parameters (80B)**[cite: 1].
- **Multiple Users / Multiple Models:** Supports concurrent users or multiple models running simultaneously with capacities up to approximately **20 Billion parameters (20B)**[cite: 1].

# 3. Technical Specifications

The system is available in two primary product configurations: **TW-02001** and **TW-02002**[cite: 1].

| Component                           | TT-LoudBox Configuration (TW-02001)                                                                                                                                                                                                                          | TT-LoudBox Configuration (TW-02002)                                                                                                                                                                                                                          |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Base System                         | SuperMicro SuperServer SYS-740GP-TNRT[cite: 1]                                                                                                                                                                                                               | SuperMicro SuperServer SYS-740GP-TNRT[cite: 1]                                                                                                                                                                                                               |
| Processor (CPU)                     | 2x Intel® Xeon® Silver 4309Y (8 Cores/16 Threads per CPU, up to 2.8 GHz, 105W TDP)[cite: 1]                                                                                                                                                                  | 2x Intel® Xeon® Silver 4309Y (8 Cores/16 Threads per CPU, up to 2.8 GHz, 105W TDP)[cite: 1]                                                                                                                                                                  |
| System Memory (Host RAM)            | 256GB (8x 32 GB) DDR4-3200 ECC RDIMM (12 slots remaining open for upgrades)[cite: 1]                                                                                                                                                                         | 512GB (16x 32 GB) DDR4-3200 ECC RDIMM (12 slots remaining open for upgrades)[cite: 1]                                                                                                                                                                        |
| Storage                             | 3.8 TB U.2 NVMe PCIe 4.0 x4[cite: 1]                                                                                                                                                                                                                         | 3.8 TB U.2 NVMe PCIe 4.0 x4[cite: 1]                                                                                                                                                                                                                         |
| AI Accelerators (Tenstorrent ASICs) | 4x Tenstorrent Wormhole™ n150 Tensix Processor Cards[cite: 1]                                                                                                                                                                                                | 4x Tenstorrent Wormhole™ n300s Tensix Processor Cards (Dual-chip cards, totaling 8 Wormhole ASICs) [cite: 1]                                                                                                                                                 |
| Total Accelerator Memory            | 48GB GDDR6 / 96MB SRAM[cite: 1]                                                                                                                                                                                                                              | 96GB GDDR6 / 192MB SRAM[cite: 1]                                                                                                                                                                                                                             |
| Included Cabling                    | External QSFP-DD cables not included by default[cite: 1]                                                                                                                                                                                                     | 2x QSFP-DD 400GbE Cables (0.6m / 2ft) & 4x Warp 100 Bridges[cite: 1]                                                                                                                                                                                         |
| Host Connectivity                   | <ul style="list-style-type: none"><li>• 2x RJ45 10GBase-T ports (Intel® X550-AT)</li><li>• 5x USB 3.1 Gen 1 Type-A (2 front, 3 rear)</li><li>• 1x USB 3.1 Gen 1 Type-C</li><li>• 1x COM, 1x VGA, 1x dedicated IPMI remote management port[cite: 1]</li></ul> | <ul style="list-style-type: none"><li>• 2x RJ45 10GBase-T ports (Intel® X550-AT)</li><li>• 5x USB 3.1 Gen 1 Type-A (2 front, 3 rear)</li><li>• 1x USB 3.1 Gen 1 Type-C</li><li>• 1x COM, 1x VGA, 1x dedicated IPMI remote management port[cite: 1]</li></ul> |
| Processor Interconnect              | 8x Active 200G QSFP-DD ports (2 per card) forming an internal interconnect mesh[cite: 1]                                                                                                                                                                     | 8x Active 200G QSFP-DD ports (2 per card) forming an internal interconnect mesh[cite: 1]                                                                                                                                                                     |
| Power Supply Unit (PSU)             | Redundant 1+1 Hot-swap Titanium Level power supplies: <ul style="list-style-type: none"><li>• 1200W @ 100-127Vac</li><li>• 1800W - 2090W @ 200-240Vac</li><li>• 2220W @ 220-240Vac[cite: 1]</li></ul>                                                        | Redundant 1+1 Hot-swap Titanium Level power supplies: <ul style="list-style-type: none"><li>• 1200W @ 100-127Vac</li><li>• 1800W - 2090W @ 200-240Vac</li><li>• 2220W @ 220-240Vac[cite: 1]</li></ul>                                                        |
| Operating System                    | Not pre-installed (Developers install preferred Linux distributions)[cite: 1]                                                                                                                                                                                | Not pre-installed (Developers install preferred Linux distributions)[cite: 1]                                                                                                                                                                                |

## 4. Software Stack & Open Source Ecosystem

Consistent with Tenstorrent's philosophy, the TT-LoudBox features a fully open-source software ecosystem optimizing two key developer entry points (SDKs):

### 1. **TT-Forge™ (High-level SDK):**

- An open-source, MLIR-based compiler framework[cite: 1].
- Currently in Public Beta[cite: 1].
- Tailored for model developers and application builders to compile and execute directly from native frameworks like **PyTorch, JAX, and ONNX** without micro-managing the underlying hardware architectures[cite: 1].

### 2. **TT-Metalium™ (Low-level SDK):**

- A bare-metal programming toolkit built for systems engineers and performance optimization specialists[cite: 1].
  - Allows direct hardware orchestration and custom kernel development via the **TT-LLK** kernel library, unlocking the full potential of computing grids for specialized math operations[cite: 1].
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## 5. Package Contents

Each TT-LoudBox (Wormhole) shipment includes the following components:

- 1x Tenstorrent TT-LoudBox (Wormhole) 4U System[cite: 1].
  - 1x C13 Power Cord (1.8m / 6ft)[cite: 1].
  - 1x 4U Rack-Mounting Rail Kit[cite: 1].
  - 2x QSFP-DD 400GbE Cables, 0.6m (Included *only* with the **TW-02002** SKU)[cite: 1].
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*Reference: Tenstorrent Hardware Products & Systems Documentation (Updated 2026).*[cite: 1]

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