# UNLOCKING THE POWER OF AI FOR BALLARAT BUSINESSES

## AI HARDWARE SETUP GUIDE 2025

A Practical Guide to Bringing AI Into Your Business – *On Your Terms*

Developed in partnership with **Federation University Australia** — *Published by* **BRAIN** – *Ballarat Region Artificial Intelligence Network*

A comprehensive guide helping businesses choose the right AI hardware setup without needing technical expertise. This practical resource breaks down AI infrastructure into five budget tiers (from $2K to $50K+), providing detailed hardware specifications, use cases, and decision-making frameworks. The guide addresses key questions about model requirements, inference vs. training needs, and helps organizations understand what's possible at each investment level - from simple chatbots to full-scale language model training capabilities.

**Dear Regional Business Leaders**,

Artificial Intelligence is no longer just a tool for tech giants — it's a **competitive advantage** now within reach of **every business** in our region.

At **BRAIN**, we believe Ballarat's businesses deserve the **knowledge, tools,** and **confidence** to adopt A.I. meaningfully — without technical barriers or excessive costs.

This guide was developed in partnership with **Federation University** to:

- Remove the confusion surrounding AI hardware,
- Provide clear, non-technical guidance, and
- Offer practical, scalable pathways to get started.

Whether you're exploring AI to:

- Improve customer support,
- Automate compliance or admin,
- Or drive innovation within your industry —

—you'll find **actionable recommendations** in this guide for building the right AI infrastructure — from entry-level setups to enterprise-grade systems.

Our goal is simple:

❙ **Help Ballarat businesses lead,** *not lag,* **in the AI economy.**

By investing wisely in local AI capability, your organisation can reduce costs, boost productivity, and unlock new opportunities — all while keeping data and decision-making *in your hands*.

We invite you to use this resource as a starting point — and to connect with **BRAIN** for advisory, implementation partnerships, or ongoing support tailored to your goals.

Warm regards,

*Rob Layton*

# FOREWORD

# DR. ROBERT LAYTON

Co-founder & Director (Research & Innovation)
**BRAIN** – *Ballarat Region Artificial Intelligence Network*
Director, Federation University AI Research Group

**" THE AI ERA WON'T WAIT. NEITHER WILL BALLARAT."**

# WHY SHOULD YOU CARE ABOUT AI?

## AI ISN'T THE FUTURE — IT'S HAPPENING *NOW.*

Across Australia, businesses are using artificial intelligence to:

- Answer customer enquiries 24/7 💬
- Automate repetitive admin tasks 📋
- Speed up hiring and onboarding processes 👨‍💼
- Analyse reports, feedback, and emails in seconds 📊
- Translate content for diverse teams and clients 🌐

**But here's the catch:**

| YOU DON'T NEED TO BE A TECH EXPERT OR SPEND HUNDREDS OF THOUSANDS OF DOLLARS, TO GET STARTED.

# SO WHAT CAN AI *ACTUALLY* DO?

## HERE ARE REAL EXAMPLES OF AI IN ACTION — ALL POSSIBLE WITH YOUR OWN HARDWARE:

| TASK | AI CAN... |
|------|-----------|
| Customer service | Run a smart chatbot that replies instantly |
| Admin | Summarise long documents, legal texts, or reports |
| HR | Auto-generate policies, draft emails, or sort CVs |
| Operations | Translate emails and automate workflows |
| Product | Help train tools that match your brand's voice |

| **AND IT'S PRIVATE** . NO CLOUD SUBSCRIPTIONS. NO EXTERNAL SERVERS.

# THE TIERED APPROACH – START SMALL, GROW SMART

## WE'VE BROKEN DOWN THE AI JOURNEY INTO FIVE SIMPLE TIERS, FROM $2K TO $50K+.

Each tier answers the question:
💡 **"What can I actually do with this?"**

| TIER | IDEAL FOR | WHAT YOU CAN DO |
|------|-----------|-----------------|
| $2K | First-timers | Add a chatbot, summarise docs |
| $5K | Growing teams | Train small models, automate tasks |
| $10K | Product dev | Build and run custom tools |
| $20K | Enterprises | Run AI across multiple departments |
| $50K+ | Labs & leaders | Full-scale language model training |

### THE SWEET SPOT FOR MOST BALLARAT BUSINESSES?
## $5K–$10K SETUPS — POWERFUL, PRIVATE, AND PRACTICAL.

**Disclaimer:** Price levels are indicative, *i.e.* "approximately $2,000", not hard limits. Prices for components can and do vary over times and regions, but were accurate at the time of this research.

# $2K TIER – SMART START FOR SMALL BUSINESS

Perfect For:

- Local business owners, consultants, solo traders
- Teams beginning to explore AI tools like chatbots or auto-summary
- Those looking to reduce cloud spend while keeping data private

# WHAT YOU CAN ACHIEVE ON $2K TIER:

- Use a chatbot to automatically reply to FAQs
- Quickly summarise lengthy documents or customer feedback
- Run AI models locally, without ongoing subscription fees

# WHY THIS $2K TIER WORKS:

- Affordable, low-risk starting point
- Quiet and compact – suits home offices or shop counters
- Scalable if you grow into more complex AI needs

**| EXAMPLE:** A BALLARAT RETAILER COULD USE THIS TIER TO REDUCE EMAIL HANDLING TIME BY 10+ HOURS MONTHLY WITH A SIMPLE IN-HOUSE CHATBOT.

# OPTION 1 ($2K) – "THE SMART START SETUP" (INFERENCE-OPTIMISED)

**01** **MOTHERBOARD:**
MSI B650 Gaming Plus WiFi

**02** **CPU:**
AMD Ryzen 7 7700
(8-Core, 5.3GHz Turbo, 65W)

**03** **RAM:**
32GB DDR5-6000 CL36

**04** **GPU:**
NVIDIA GeForce RTX 4060 Ti 16GB

**05** **STORAGE:**
1TB Samsung 990 Pro NVMe (OS) + 2TB NVMe (Data)

**06** **CASE:**
Corsair 4000D Airflow Mid-Tower

**07** **COOLING:**
Noctua NH-D15 Air Cooler

**08** **PSU:**
MSI A1000G PCIE5 1000W 80+ Gold
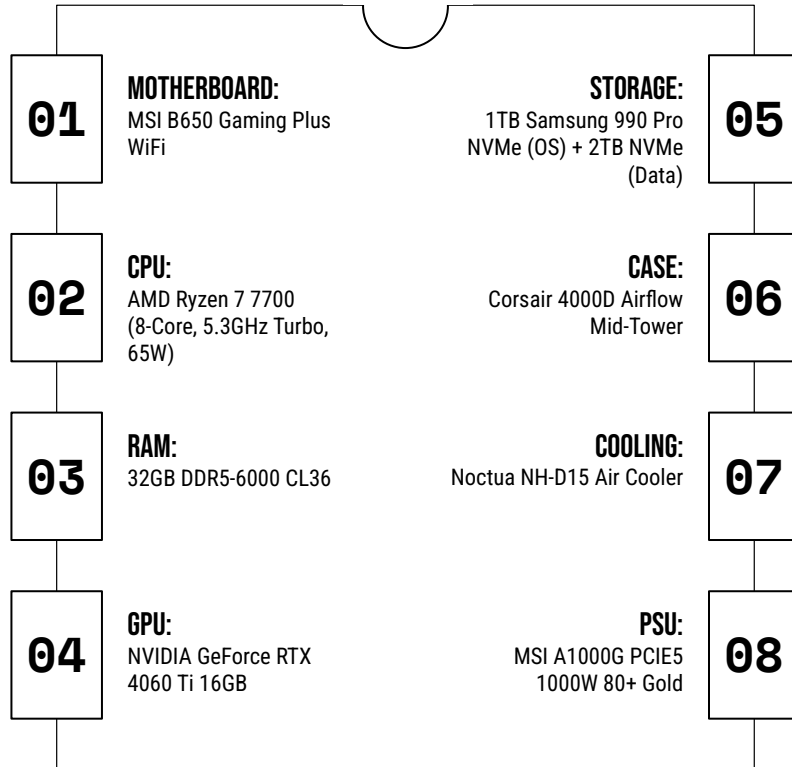
**Use case:**
Running simple AI tasks like chatbots and summaries

**Ideal for:**
Quiet office or shop environments

☑️ No cloud fees
☑️ Runs 24/7
☑️ Simple to maintain

# OPTION 2 ($2K) – "THE FLEX PERFORMER" (BALANCED)

**01** — **MOTHERBOARD:**
ASRock B650 PRO RS

**02** — **CPU:**
AMD Ryzen 9 5900X
(12-Core, 4.8GHz)

**03** — **RAM:**
64GB DDR4-3200

**04** — **GPU:**
NVIDIA GeForce RTX
4070 Ti 16GB

**05** — **STORAGE:**
1TB NVMe (OS) + 4TB
HDD (Data)

**06** — **CASE:**
Phanteks Eclipse P400A
Mid-Tower

**07** — **COOLING:**
Cooler Master Hyper 212
Evo V2

**08** — **PSU:**
Corsair RM850e 850W
80+ Gold
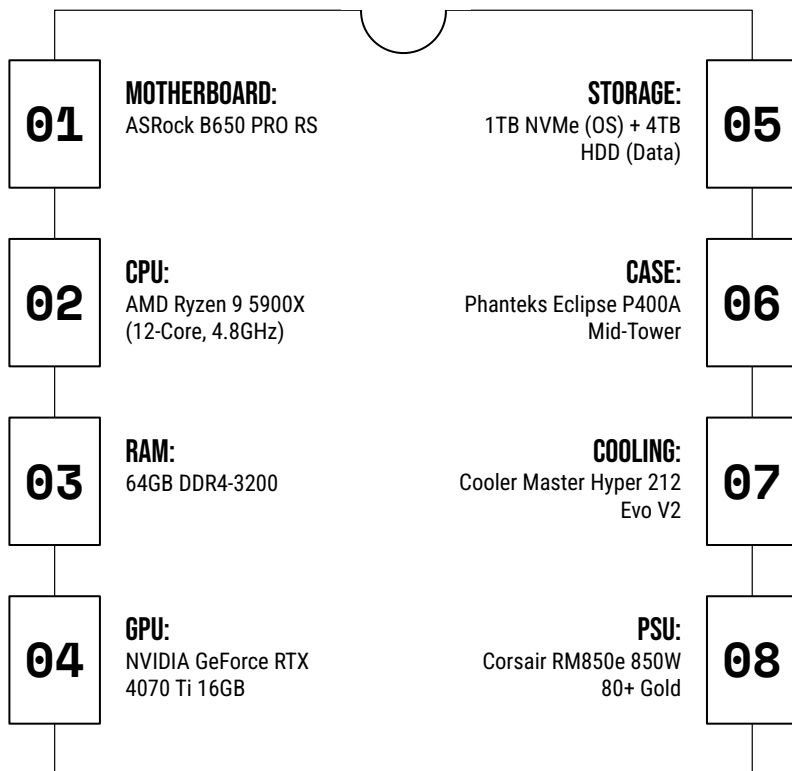
**Use case:**
Starting to experiment with small model training

**Ideal for:**
Startups, developers, or teams building internal AI skills

✅ Good balance of speed and flexibility
✅ Train small models for tone, sentiment, or custom use
✅ Upgrade-ready

# OPTION 3 ($2K) – "THE MINI AI LAB" (TRAINING-OPTIMISED)

**01**

**MOTHERBOARD:**
MSI PRO Z790-P WiFi

**02**

**CPU:**
Intel Core i5-13400F
(10-Core)

**03**

**RAM:**
32GB DDR5-5200

**04**

**GPU:**
2× NVIDIA GeForce RTX
3060 12GB

**05**

**STORAGE:**
500GB NVMe (OS) + 2TB
SATA SSD (Data)

**06**

**CASE:**
Cooler Master TD500

**07**

**COOLING:**
DeepCool AK400

**08**

**PSU:**
SilverStone DA750 750W
80+ Gold
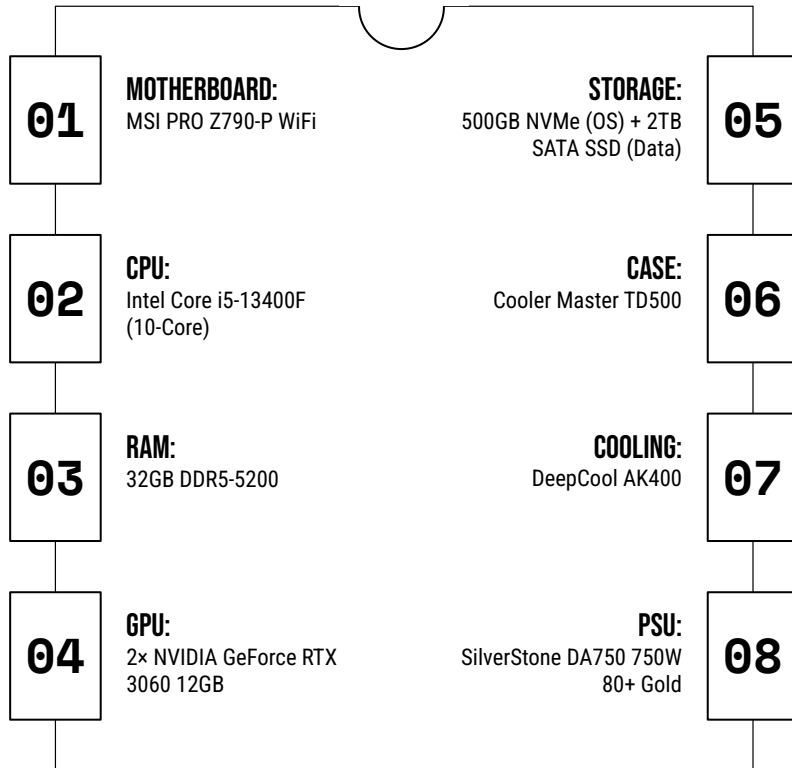
**Use case:**
First hands-on AI training experiments

**Ideal for:**
Students, researchers, or tech-savvy business owners

✅ Dual GPU setup for parallel jobs
✅ Compact lab-like environment
✅ Explore model tuning without large investment

# $5K TIER – AI FOR GROWING TEAMS

Perfect For:

- Small to mid-size teams ready to build or customise their own tools
- Businesses needing to automate reporting or internal support
- Organisations scaling their AI capabilities in-house

# WHAT YOU CAN ACHIEVE ON $5K TIER:

- Fine-tune mid-size models like LLaMA 13B
- Develop internal tools that align with your brand or tone
- Automate HR, legal, or policy responses

# WHY THIS $5K TIER WORKS:

- More power without stepping into full enterprise cost
- Supports multiple workflows at once
- Strong foundation for future AI development

| EXAMPLE:  A BALLARAT MANUFACTURER COULD USE THIS TIER TO BUILD AN INTERNAL AI REPORT GENERATOR — SAVING 60% OF COMPLIANCE TIME.

# OPTION 1 ($5K) – "THE RELIABLE AI WORKHORSE" (INFERENCE-OPTIMISED)

**01** **MOTHERBOARD:**
ASUS Pro WS B650M-SYS

**02** **CPU:**
AMD Ryzen 9 7900
(12-Core)

**03** **RAM:**
64GB DDR5-5200 ECC

**04** **GPU:**
NVIDIA RTX A5000 24GB

**05** **STORAGE:**
2TB NVMe (OS) + 4TB
SATA SSD (Data)

**06** **CASE:**
Fractal Design Define 7

**07** **COOLING:**
Noctua NH-U12A
chromax

**08** **PSU:**
Seasonic Focus PX-850
Platinum
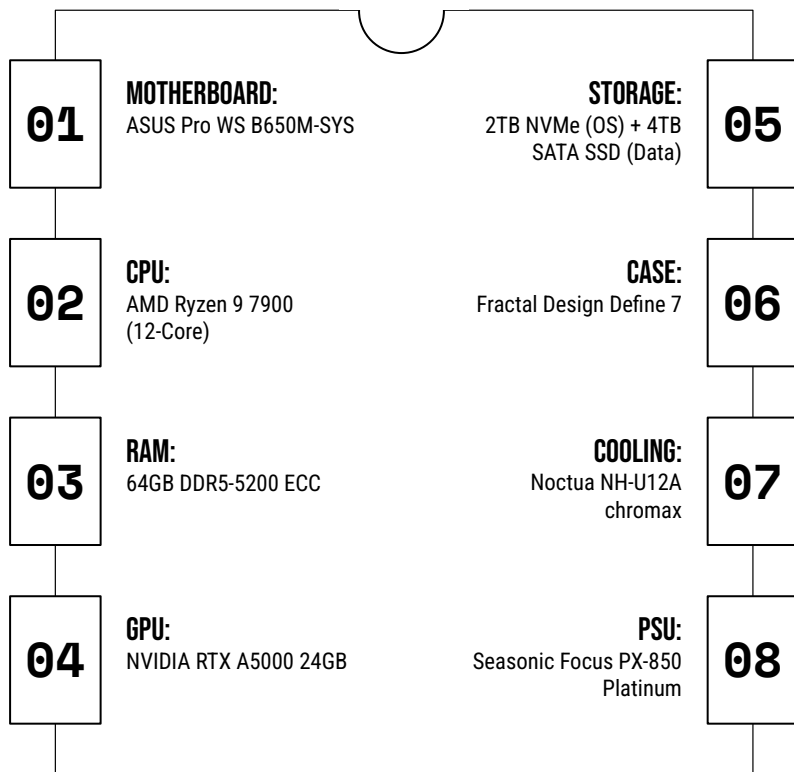
**Use case:**
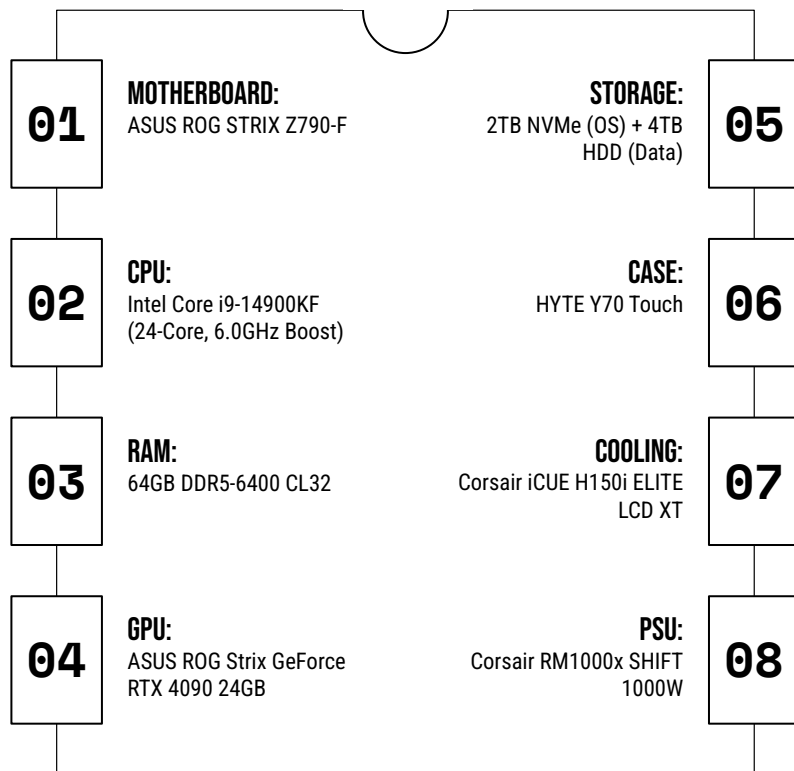Always-on internal tools like chatbots or knowledgebases

**Ideal for:**
Medium-sized teams with privacy or consistency needs

✅ Designed to run nonstop
✅ Whisper-quiet — suitable for shared spaces
✅ Great for shared service or support desks

# OPTION 2 ($5K) – "THE ALL-ROUNDER AI STUDIO" (BALANCED)

**01** **MOTHERBOARD:**
ASUS ROG STRIX Z790-F

**02** **CPU:**
Intel Core i9-14900KF
(24-Core, 6.0GHz Boost)

**03** **RAM:**
64GB DDR5-6400 CL32

**04** **GPU:**
ASUS ROG Strix GeForce
RTX 4090 24GB

**STORAGE:** **05**
2TB NVMe (OS) + 4TB
HDD (Data)

**CASE:** **06**
HYTE Y70 Touch

**COOLING:** **07**
Corsair iCUE H150i ELITE
LCD XT

**PSU:** **08**
Corsair RM1000x SHIFT
1000W

**Use case:**
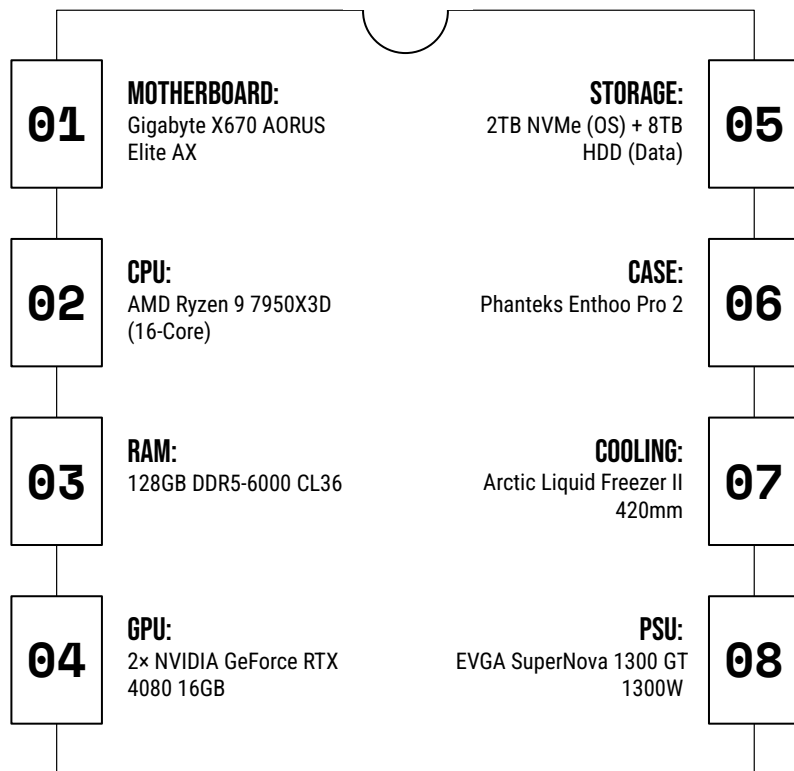Training, testing, and deploying from one machine

**Ideal for:**
Product development teams, early-stage AI startups

✅ Train and serve models up to 13B parameters
✅ Built-in LCD tools for real-time control
✅ Powerful yet manageable system

# OPTION 3 ($5K) – "THE DUAL-ENGINE TRAINER" (TRAINING-OPTIMISED)

**01**

**MOTHERBOARD:**
Gigabyte X670 AORUS Elite AX

**02**

**CPU:**
AMD Ryzen 9 7950X3D (16-Core)

**03**

**RAM:**
128GB DDR5-6000 CL36

**04**

**GPU:**
2× NVIDIA GeForce RTX 4080 16GB

**05**

**STORAGE:**
2TB NVMe (OS) + 8TB HDD (Data)

**06**

**CASE:**
Phanteks Enthoo Pro 2

**07**

**COOLING:**
Arctic Liquid Freezer II 420mm

**08**

**PSU:**
EVGA SuperNova 1300 GT 1300W

**Use case:**
Intensive AI training workloads or experimentation

**Ideal for:**
R&D teams or technical users needing faster iteration

✅ Dual high-end GPUs
✅ Built for parallel model training
✅ Excellent for research or advanced prototyping

# $10K TIER – HIGH-PERFORMANCE AI FOR BUILDERS

Perfect For:

- Startups developing AI products or apps
- Businesses processing large documents or datasets
- Teams wanting control over live and trained AI services
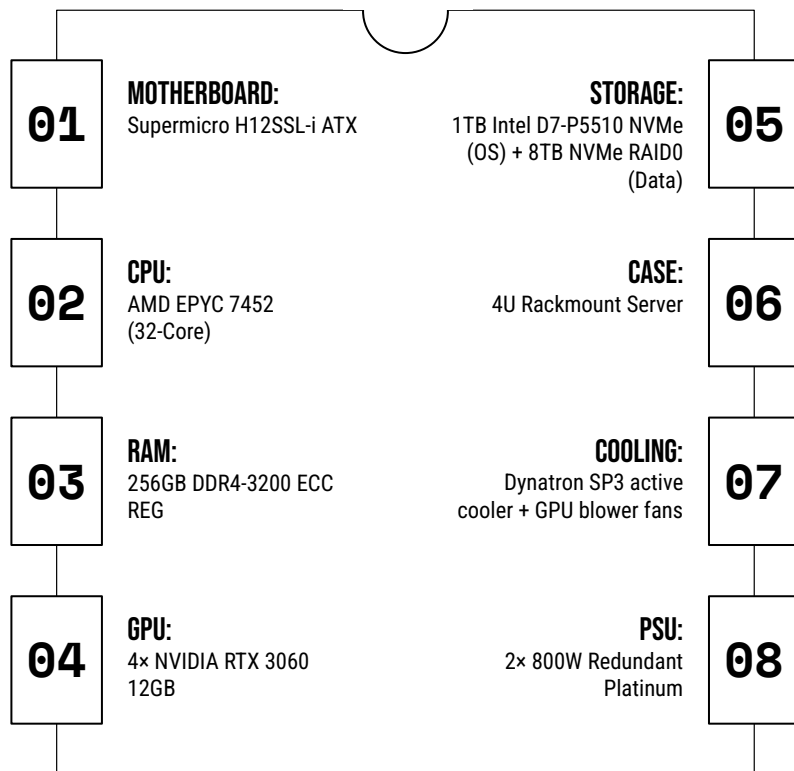
# WHAT YOU CAN ACHIEVE ON $10K TIER:

- Run full document-processing pipelines in-house
- Train larger models (e.g., LLaMA 65B – quantised)
- Serve internal and external AI services without lag

# WHY THIS $10K TIER WORKS:

- Handles serious AI workflows
- Supports simultaneous training and inference
- Great for regulated environments or app builders

**| EXAMPLE:** A BALLARAT LEGAL TECH FIRM COULD USE THIS TIER TO AUTO-SUMMARISE LEGAL CONTRACTS – REDUCING REVIEW HOURS BY 70%.

# OPTION 1 ($10K) – "THE ENTERPRISE AI BASE STATION" (INFERENCE-OPTIMISED)

**01** MOTHERBOARD:
Supermicro H12SSL-i ATX

**02** CPU:
AMD EPYC 7452
(32-Core)

**03** RAM:
256GB DDR4-3200 ECC
REG

**04** GPU:
4× NVIDIA RTX 3060
12GB

**05** STORAGE:
1TB Intel D7-P5510 NVMe
(OS) + 8TB NVMe RAID0
(Data)

**06** CASE:
4U Rackmount Server

**07** COOLING:
Dynatron SP3 active
cooler + GPU blower fans

**08** PSU:
2× 800W Redundant
Platinum

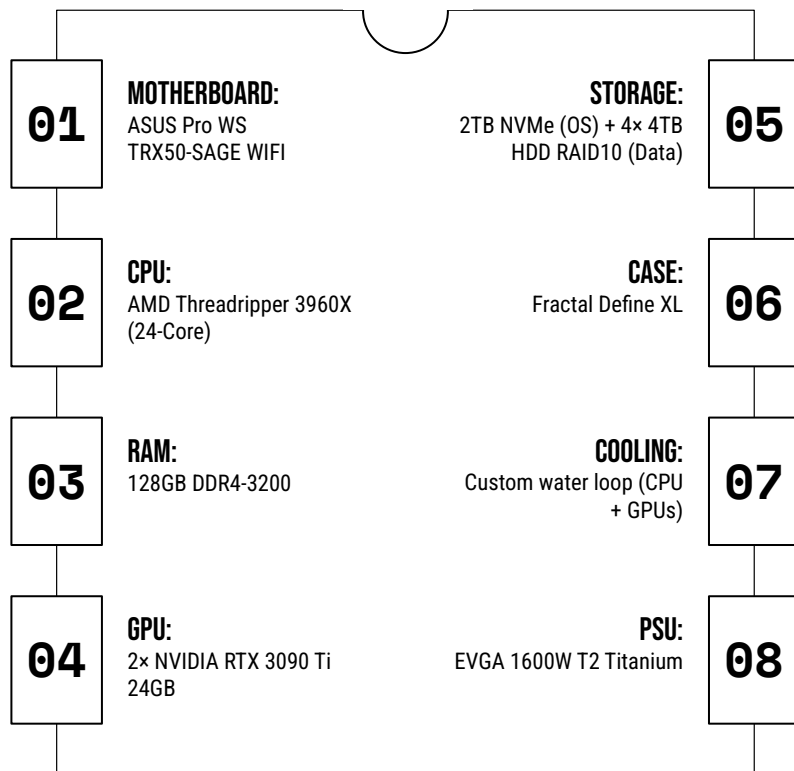**Use case:**
High availability for teams needing 24/7 access

**Ideal for:**
Enterprises running HR, legal, or support AI

✅ Enterprise-grade reliability
✅ Multiple departments can use it simultaneously
✅ Easily integrates into server rooms

# OPTION 2 ($10K) – "THE CREATIVE AI STUDIO" (BALANCED)

**01**

**MOTHERBOARD:**
ASUS Pro WS
TRX50-SAGE WIFI

**02**

**CPU:**
AMD Threadripper 3960X
(24-Core)

**03**

**RAM:**
128GB DDR4-3200

**04**

**GPU:**
2× NVIDIA RTX 3090 Ti
24GB

**05**

**STORAGE:**
2TB NVMe (OS) + 4× 4TB
HDD RAID10 (Data)

**06**

**CASE:**
Fractal Define XL

**07**

**COOLING:**
Custom water loop (CPU
+ GPUs)

**08**

**PSU:**
EVGA 1600W T2 Titanium

**Use case:**
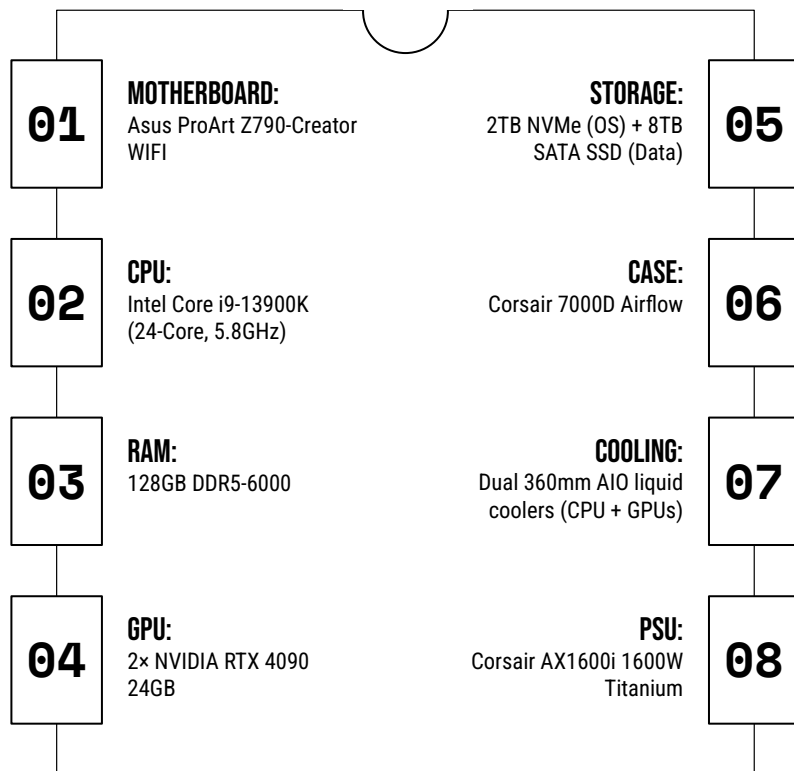Creative teams needing AI support across design, content, and testing

**Ideal for:**
Agencies, marketing teams, innovation offices

☑️ Stylish yet powerful
☑️ Quiet operation for client-facing offices
☑️ Built for multi-purpose use

# OPTION 3 ($10K) – "THE AI POWERHOUSE WORKSTATION" (TRAINING-OPTIMISED)

**01**

**MOTHERBOARD:**
Asus ProArt Z790-Creator WIFI

**02**

**CPU:**
Intel Core i9-13900K (24-Core, 5.8GHz)

**03**

**RAM:**
128GB DDR5-6000

**04**

**GPU:**
2× NVIDIA RTX 4090 24GB

**05**

**STORAGE:**
2TB NVMe (OS) + 8TB SATA SSD (Data)

**06**

**CASE:**
Corsair 7000D Airflow

**07**

**COOLING:**
Dual 360mm AIO liquid coolers (CPU + GPUs)

**08**

**PSU:**
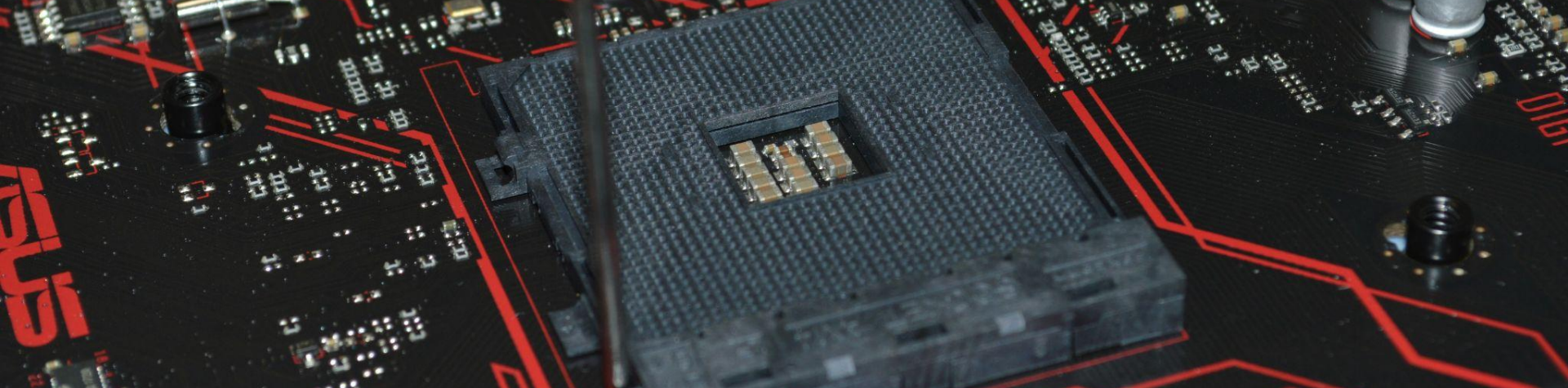Corsair AX1600i 1600W Titanium

**Use case:**
High-end model development for in-house teams

**Ideal for:**
AI teams building proprietary tools

✅ Train large-scale models faster
✅ Advanced cooling and performance
✅ Future-proof investment

# $20K TIER – AI INFRASTRUCTURE FOR ENTERPRISE TEAMS

Perfect For:

- Businesses shifting from cloud to private AI
- Companies operating in regulated sectors
- Teams needing round-the-clock, secure AI capability
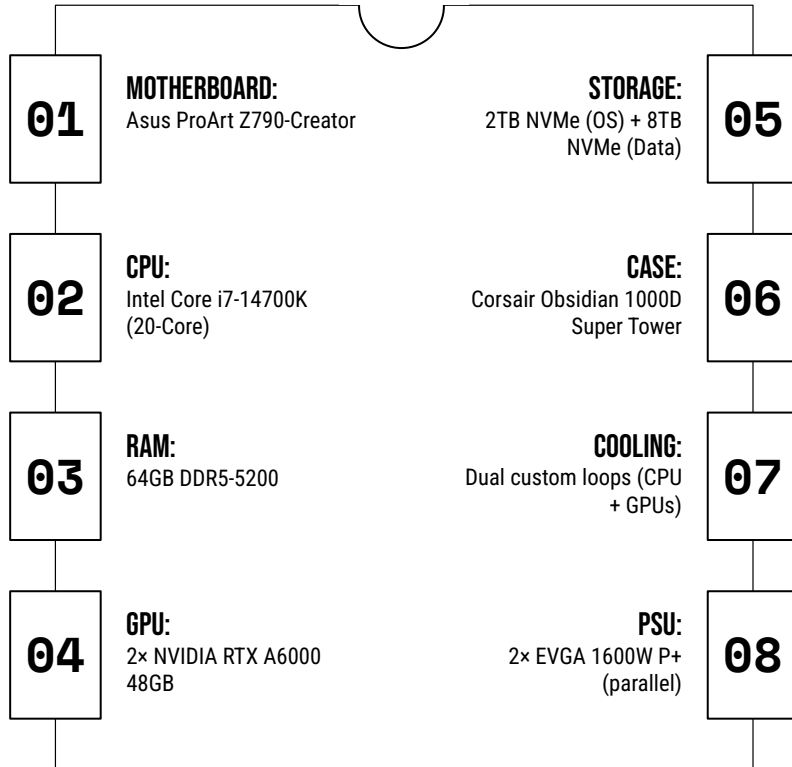
# WHAT YOU CAN ACHIEVE ON $20K TIER:

- Run Falcon 40B or Mistral 7B models
- Serve multiple departments at once
- Host data in-house — no outside reliance

# WHY THIS $20K TIER WORKS:

- Supports multiple users concurrently
- No downtime
- Designed for industries like finance, health, or government

**| EXAMPLE:** A REGIONAL FINANCIAL SERVICES FIRM COULD DEPLOY THIS TIER TO HOST PRIVATE AI TOOLS, REDUCING CLOUD SPEND BY 80%.

# OPTION 1 ($20K) – "THE AI SERVICE HUB" (INFERENCE-OPTIMISED)

**01**
**MOTHERBOARD:**
Asus ProArt Z790-Creator

**02**
**CPU:**
Intel Core i7-14700K
(20-Core)

**03**
**RAM:**
64GB DDR5-5200

**04**
**GPU:**
2× NVIDIA RTX A6000
48GB

**05**
**STORAGE:**
2TB NVMe (OS) + 8TB
NVMe (Data)

**06**
**CASE:**
Corsair Obsidian 1000D
Super Tower

**07**
**COOLING:**
Dual custom loops (CPU
+ GPUs)

**08**
**PSU:**
2× EVGA 1600W P+
(parallel)

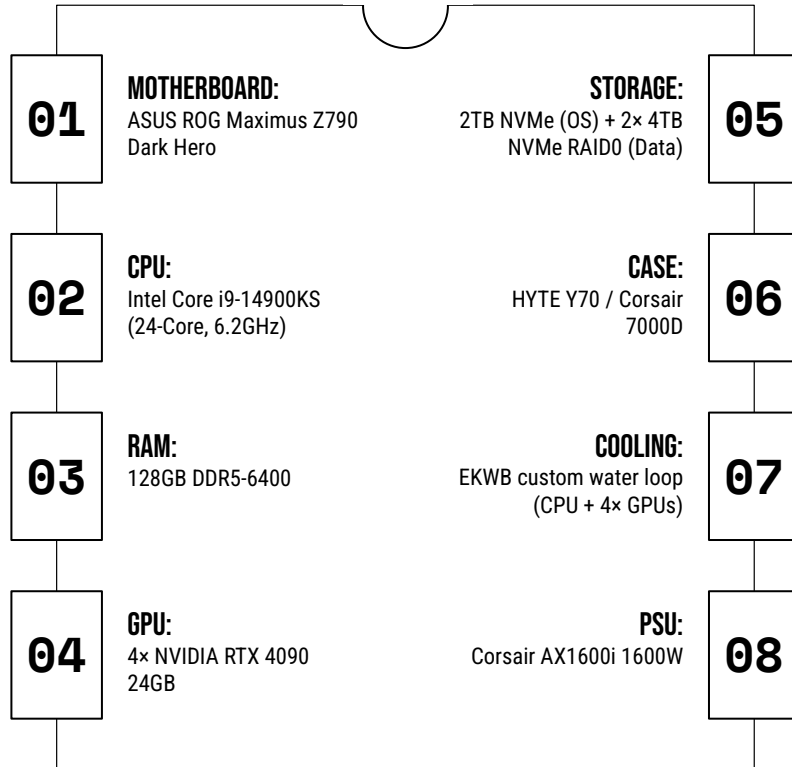**Use case:**
High-reliability, high-security AI services

**Ideal for:**
Mid to large enterprises delivering AI support internally or to clients

☑️ Fast, secure, and private
☑️ Handles sensitive workflows
☑️ Designed for mission-critical use

# OPTION 2 ($20K) – "THE VERSAGRID AI TOWER" (BALANCED)

**01 MOTHERBOARD:**
ASUS ROG Maximus Z790
Dark Hero

**02 CPU:**
Intel Core i9-14900KS
(24-Core, 6.2GHz)

**03 RAM:**
128GB DDR5-6400

**04 GPU:**
4× NVIDIA RTX 4090
24GB

**STORAGE: 05**
2TB NVMe (OS) + 2× 4TB
NVMe RAID0 (Data)

**CASE: 06**
HYTE Y70 / Corsair
7000D

**COOLING: 07**
EKWB custom water loop
(CPU + 4× GPUs)

**PSU: 08**
Corsair AX1600i 1600W

**Use case:**
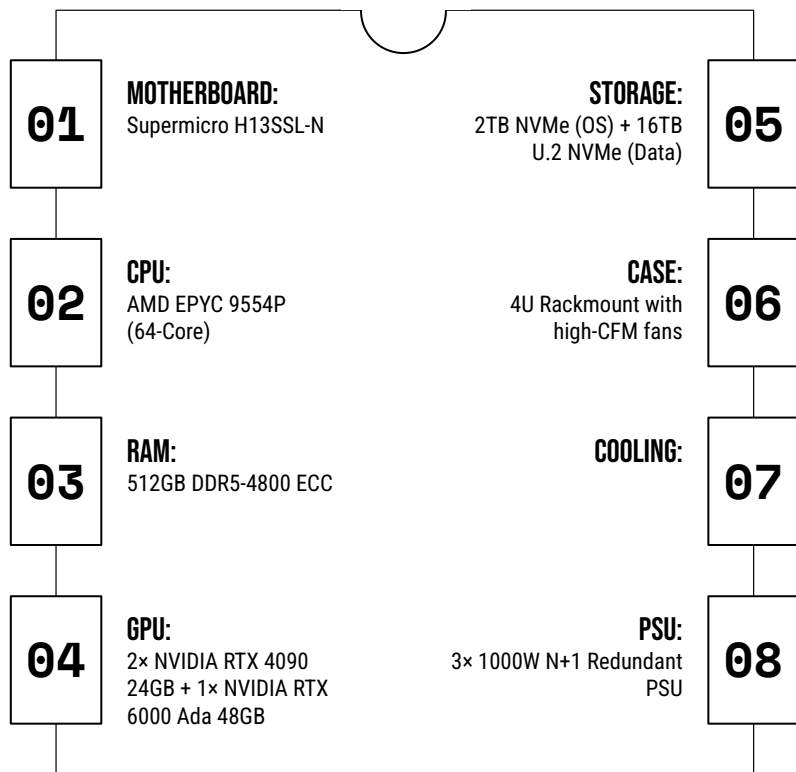Versatile AI development and delivery

**Ideal for:**
Teams managing multiple projects across R&D and operations

☑️ Supports multiple AI tasks at once
☑️ Ultra-fast GPU and storage throughput
☑️ Built for multi-team, multi-purpose workloads

# OPTION 3 ($20K) – "THE DEEP LEARNING ENGINE" (TRAINING-OPTIMISED)

**01**

**MOTHERBOARD:**
Supermicro H13SSL-N

**02**

**CPU:**
AMD EPYC 9554P
(64-Core)

**03**

**RAM:**
512GB DDR5-4800 ECC

**04**

**GPU:**
2× NVIDIA RTX 4090
24GB + 1× NVIDIA RTX
6000 Ada 48GB

**05**

**STORAGE:**
2TB NVMe (OS) + 16TB
U.2 NVMe (Data)

**06**

**CASE:**
4U Rackmount with
high-CFM fans

**07**

**COOLING:**

**08**

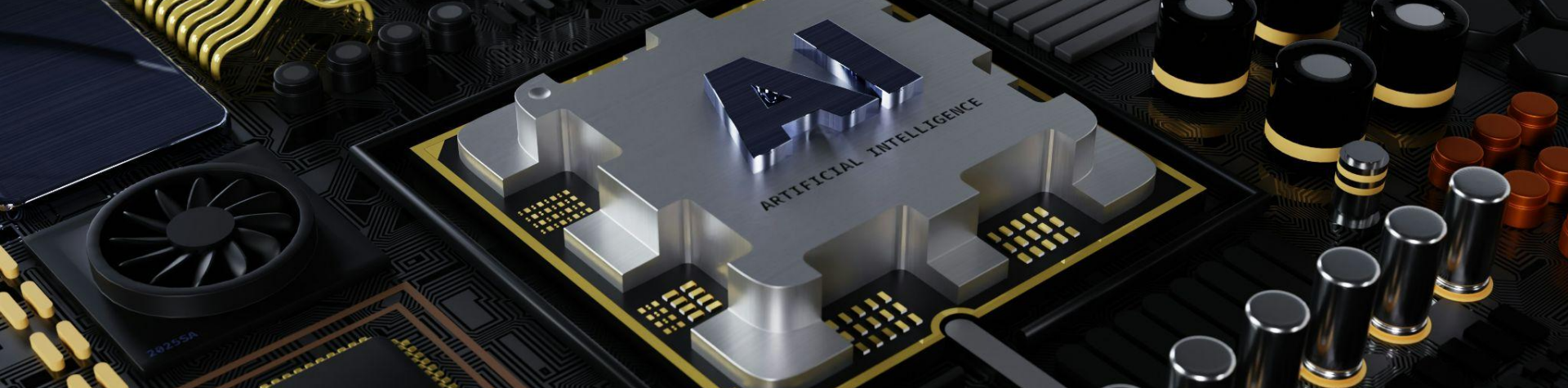**PSU:**
3× 1000W N+1 Redundant
PSU

**Use case:**
Advanced internal training at scale

**Ideal for:**
R&D divisions or AI research hubs

✅ Purpose-built for heavy training jobs
✅ Supports 24/7 operation with redundancy
✅ Enables innovation in high-volume settings

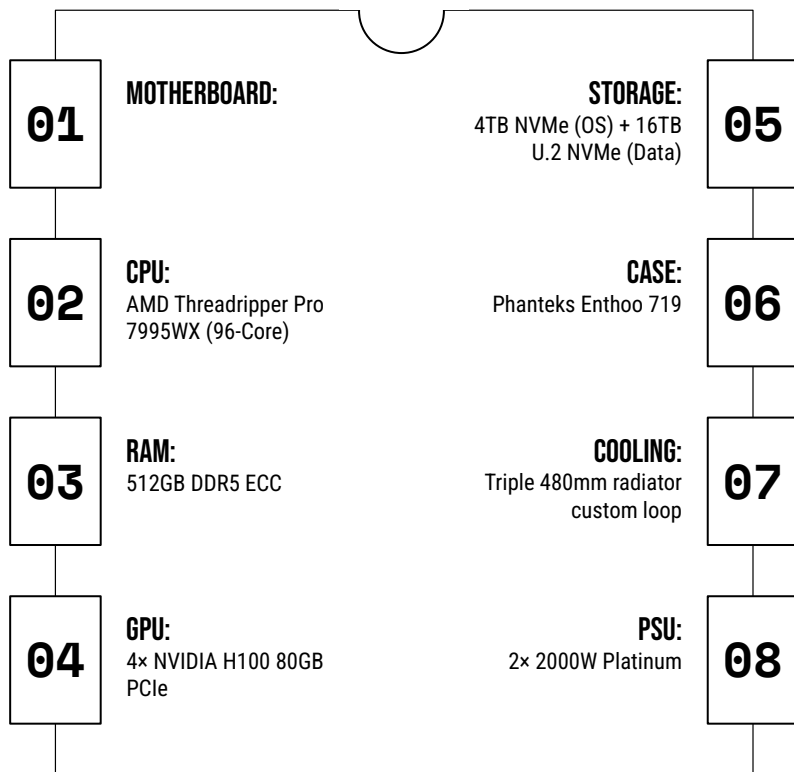# $50K+ TIER – SUPERCOMPUTING POWER FOR AI LEADERS

Perfect For:

- AI companies, research institutions, and regional innovation hubs
- Organisations building or hosting custom AI models
- Projects that require full-scale model training with total control

# WHAT YOU CAN ACHIEVE ON $50K+ TIER:

- Train and serve GPT-class models in-house
- Power multiple teams and services at once
- Remove reliance on cloud costs entirely

**| EXAMPLE:** A REGIONAL FINANCIAL SERVICES FIRM COULD DEPLOY THIS TIER TO HOST PRIVATE AI TOOLS, REDUCING CLOUD SPEND BY 80%.

# OPTION 1 ($50K+) – "THE ENTERPRISE AI GATEWAY" (INFERENCE-OPTIMISED)

**01** MOTHERBOARD:

**02** CPU:
AMD Threadripper Pro
7995WX (96-Core)

**03** RAM:
512GB DDR5 ECC

**04** GPU:
4× NVIDIA H100 80GB
PCIe

**05** STORAGE:
4TB NVMe (OS) + 16TB
U.2 NVMe (Data)

**06** CASE:
Phanteks Enthoo 719

**07** COOLING:
Triple 480mm radiator
custom loop

**08** PSU:
2× 2000W Platinum

**Use case:**
Secure, high-volume AI access across teams

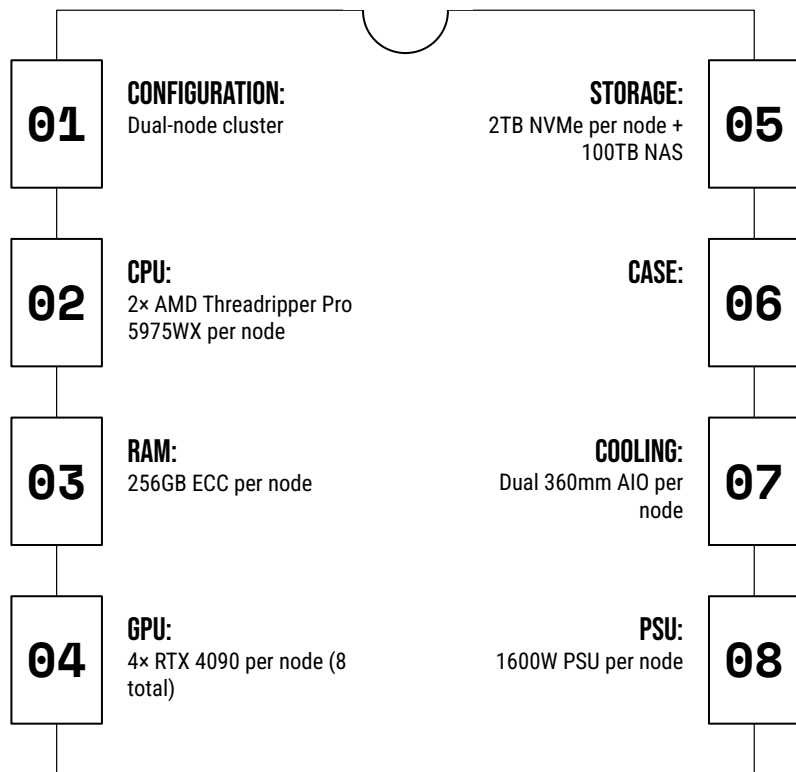**Ideal for:**
Enterprises with hundreds of users accessing AI simultaneously

☑ Delivers AI services at cloud scale — privately
☑ 24/7 uptime with full redundancy
☑ Supports many concurrent services

# OPTION 2 ($50K+) – "THE CORE AI INFRASTRUCTURE" (BALANCED)

**01** **CONFIGURATION:**
Dual-node cluster

**02** **CPU:**
2× AMD Threadripper Pro
5975WX per node

**03** **RAM:**
256GB ECC per node

**04** **GPU:**
4× RTX 4090 per node (8 total)

**05** **STORAGE:**
2TB NVMe per node +
100TB NAS

**06** **CASE:**

**07** **COOLING:**
Dual 360mm AIO per node

**08** **PSU:**
1600W PSU per node
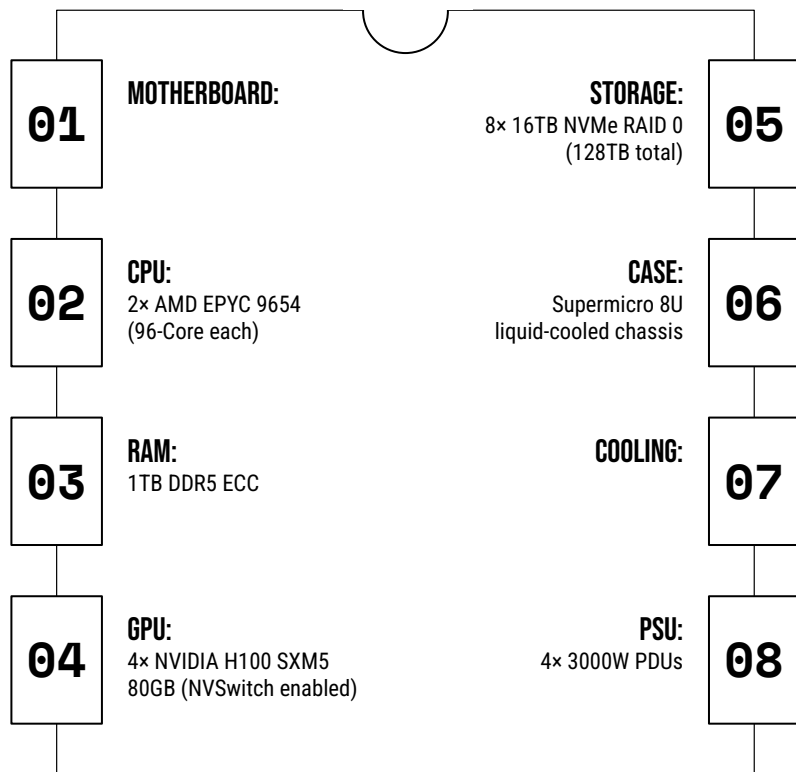
**Use case:**
Train and serve from the same platform

**Ideal for:**
Universities or businesses running AI clusters

✅ Multi-node setup
✅ Built for collaborative AI workloads
✅ Strong long-term investment

# OPTION 3 ($50K+) – "THE AI LAB-IN-A-BOX" (TRAINING-OPTIMISED)

**01** MOTHERBOARD:

**02** CPU:
2× AMD EPYC 9654
(96-Core each)

**03** RAM:
1TB DDR5 ECC

**04** GPU:
4× NVIDIA H100 SXM5
80GB (NVSwitch enabled)

**05** STORAGE:
8× 16TB NVMe RAID 0
(128TB total)

**06** CASE:
Supermicro 8U
liquid-cooled chassis

**07** COOLING:

**08** PSU:
4× 3000W PDUs

**Use case:**
End-to-end foundation model training

**Ideal for:**
Research teams training their own large language models

☑️ Matches enterprise-grade compute
☑️ Supports 10+ researchers at once
☑️ Eliminates long-term cloud training costs
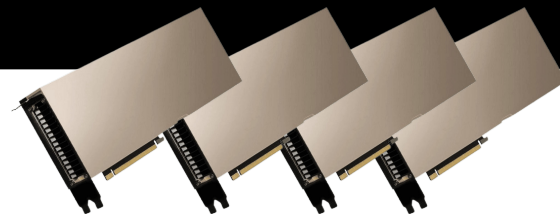
# EXAMPLE USE CASE – LOCAL BUSINESS

A Ballarat retailer adds a $2K setup:

- Runs a chatbot that handles 80% of customer FAQs
- Summarises online reviews weekly to track sentiment
- Auto-generates social media captions

→ Saves 12 hours per week
→ Reduces phone support by 50%
→ No ongoing cloud costs

| AND IT ALL RUNS QUIETLY ON A PC UNDER THE COUNTER.

# NEXT STEPS — LET'S GET YOU STARTED

1. Tell us what your business needs.

2. We'll match you with a setup tier — *no jargon*.

3. You choose your pace — *we'll help you every step*.

# CONTACT US!

## DO YOU HAVE ANY QUESTIONS?

Contact: **hello@brain.net.au**

Learn more: **BRAIN Website (brain.net.au)**

**LinkedIn**

**Credits:** This project was developed in partnership by students from **Federation University** as part of their **Industry Project** subject, sponsored and guided by *Dr. Rob Layton* from **BRAIN**.

# FINAL THOUGHTS

## ARTIFICIAL INTELLIGENCE SHOULDN'T FEEL OVERWHELMING.

With the right tools, it becomes an **invisible partner** — helping your business run smarter, faster, and stronger.

Ballarat's businesses are ready to lead the way.

**Let <u>BRAIN</u> help you get there.**