

=====

COMMERCIAL HARDWARE REQUIREMENTS

=====

PROJECT TITLE: Multi-Tenant Portfolio Hardware Infrastructure
PHASE LAYER: 3-to-5-Year Capex & Sizing Matrix (Per-Website Slicing)
DATE: August 30, 2026
CLASSIFICATION: Confidential - Portfolio Development Asset Management
=====

1. MODULAR HARDWARE ARCHITECTURE BY STAGE

To maintain absolute data integrity and prevent cross-domain contamination, local staging hardware scales from shared single-unit development devices up to dedicated, isolated physical micro-nodes as websites deploy into production.

* STAGE 1: YEAR 1 (THE SINGLE WEBSITE PROTOTYPE)

- Objective: Establishing the localized "bench matrix" to develop your first site's content, write custom AI prompts, and handle early asset packaging.
- Device Allocation: 1 x Shared Primary Workstation (Your existing HP Laptop).
- Peripheral Addition: 1 x High-Speed 32GB USB 3.0 Flash Drive (\$15.00) dedicated exclusively to this specific website's link dumps and asset storage.
- Net Hardware Investment (Per Website): \$15.00

* STAGE 2: YEAR 2 (THE MULTI-SITE PIVOT - 3 SITES ACTIVE)

- Objective: Introducing dedicated hardware units to isolate website production workflows locally, ensuring that code or design assets for Site A never mingle with Site B.
- Device Allocation: 3 x Dedicated Single Board Microcomputers (e.g., Raspberry Pi 5 or equivalent Linux Micro-Nodes).
- Peripheral Addition: Each micro-node is mapped to its own 32GB Flash Drive (\$15.00) and shares access to the 2TB Roving HDD for deep system storage snapshots.
- Net Hardware Investment (Per Website):
 - 1 x Linux Microcomputer Board/Power Kit: ~\$85.00
 - 1 x Website-Specific 32GB Flash Array: \$15.00
- Net Cost Per Website Layer: \$100.00 (Total Stage 2 Capex: \$300.00)

* STAGE 3: YEARS 3-5 (THE FULL 12-SITE PORTFOLIO)

- Objective: Maximum production isolation. Each of your 12 distinct website industries receives its own physical staging node. Instead of maintaining 12 individual micro-boards, the system upgrades to high-efficiency Intel N100 Micro PCs running Proxmox or Docker. This creates hard-sandboxed Linux Containers (LXC) for each domain.

- Device Allocation: 3 x Quad-Core Mini PCs (Each unit hosts exactly 4 completely isolated website development containers).
- Peripheral Addition: 12 x 32GB Flash Arrays (\$15.00 each) to maintain individual physical sneakernet keys for every website in the portfolio.
- Net Hardware Investment (Per Website):
 - 1/4 Fractional Share of a Mini PC Node: ~\$65.00 (Based on a ~\$260 Mini PC unit)
 - 1 x Dedicated 32GB USB Ingestion Key: \$15.00
- Net Cost Per Website Layer: \$80.00 (Total Stage 3 Cumulative Capex: \$960.00)

PORTFOLIO HARDWARE INVESTMENT SUMMARY MATRIX

TIMELINE PHASE	WEBSITES	ACTIVE DEVICES REQ.	PER-SITE COST
TOTAL CAPEX			

Year 1	1 Site	Existing Laptop + 1 USB Key	\$15.00
\$15.00			
Year 2	3 Sites	3 x Linux Microcomputers	\$100.00
\$300.00			
Years 3-5	12 Sites	3 x Quad-Core Mini PCs	\$80.00
\$960.00			

2. OPERATIONAL FOOTNOTES & HARDWARE ROUTING CONSTRAINTS

----- ZERO VECTOR

INTERACTION

At no point do these local development nodes connect directly to your public production cloud servers. All software deployments, website modifications, and AI knowledge base updates are exported to the website-specific 32GB USB flash keys and physically walked to your secure 5G internet gateway laptop.

HARDWARE COMPONENT FLEXIBILITY

Mini PC infrastructure costs assume entry-level, highly efficient x86 chipsets (such as the Intel Alder Lake N100 or N150 architecture). These chips consume fewer than 15 Watts of power, keeping your ongoing operational utility costs near zero while providing native hardware-accelerated encryption extensions for file handling.

=====