

Project: Proxmox Standalone GPU Passthrough Server Build

Date: May 31st 2025
Category: Virtualization / Homelab Build

Hardware Overview

Component	Model / Spec
Motherboard	Gigabyte B550 AORUS Elite AX V2
CPU	AMD Ryzen 7 3700X (8-core / 16-thread)
GPU	NVIDIA RTX 2070 Super
RAM	32GB DDR4 3200 MHz
Drive 1 (OS)	Kioxia 512GB NVMe Gen4
Drive 2 (VMs)	Inland 512GB NVMe Gen3
Host OS	Proxmox VE 8.2.7
Primary VM	Pop!_OS 22.04 LTS (NVIDIA ISO)

BIOS Setup for Proxmox + GPU Passthrough

Motherboard: Gigabyte B550 AORUS Elite AX V2

1. Enter BIOS

- Press **DEL** repeatedly during boot to enter BIOS.
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2. Load Optimized Defaults (Recommended)

- Go to the **Save & Exit** tab.
 - Choose **Load Optimized Defaults**
 - Press **F10** to reboot and re-enter BIOS.
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3. Enable Virtualization (SVM Mode)

- Navigate to: Tweaker → Advanced CPU Settings
 - Set **SVM Mode** → Enabled
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4. Enable IOMMU

- Go to: Settings → IO Ports
 - Set **IOMMU** → Enabled
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5. Enable Above 4G Decoding

- Also under: Settings → IO Ports
 - Set **Above 4G Decoding** → Enabled
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6. Set Initial Display Output

- Go to: Settings → IO Ports
 - Set **Initial Display Output** → PCIe 1 Slot
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7. Disable CSM for UEFI Boot

- Go to: **Boot**
 - Set **CSM Support** → **Disabled**
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8. Resizable BAR Support (Optional)

- **Settings → IO Ports**
 - Set **Re-Size BAR Support** → **Disabled** (*recommended for stability*)
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9. Fan Control (Optional)

- **Smart Fan 5 Settings**
 - Set profiles for optimal cooling: Silent, Normal, Full-Speed
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10. Save and Exit

- Press **F10**, confirm changes, and reboot.

Now its time to install proxmox on the new setup.

Revision #3

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