# Project: Proxmox Standalone GPU Passthrough Server Build

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

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# 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) |

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# 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.

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