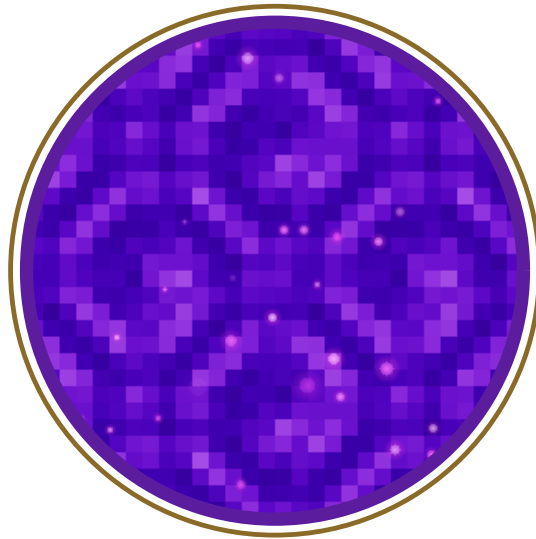




NETHER PORTAL

DISPLAY DEVICE

User Setup & Configuration Manual

VIPER DYNAMICS LLC | AARON CERALDI

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1 What's in the Box

- **Nether Portal Display** — 3D-printed enclosure with a 3.5-inch 320×480 colour LCD

IMPORTANT

Power the device with any standard **5V USB-C** charger or computer USB port, via the USB-C connector on the back of the enclosure.

2 Device Overview

The Nether Portal is a self-contained ambient display that joins your home **2.4 GHz** Wi-Fi and shows one of four visual modes on its LCD. All settings are managed through a built-in web page on a phone or computer — no app required. Once configured, the device remembers Wi-Fi and settings through power cycles. Firmware version is printed on the boot screen and in the web header.

NETHER PORTAL

Vanilla 2×3 portal interior fills the screen — looping swirls and notes. Default ambient mode.

PHOTO FRAME

Your photos — local uploads or a public shared album — cycling on a timer you set.

NETHER CLOCK

Minecraft 7-segment clock, Glow Squid (or any wiki mob), portal clip on a timer.

PLAYER STATS

Walking Minecraft skin, Hypixel status, and a clock. Username required; API key optional.

Four display modes. Changing Mode in the web UI applies immediately — no reboot.

NOTE

This radio is **2.4 GHz only**. A 5 GHz-only network name will not join. Use a 2.4 GHz SSID, or the 2.4 GHz side of a dual-band router.

3 First-Time Setup

When powered on for the first time (or after a Wi-Fi reset), the Nether Portal creates its own temporary Wi-Fi hotspot so you can configure it.

Hotspot name	Nether-portal-Setup
Password	none (open network — no lock icon)
Config page	http://192.168.4.1

3.1 Connecting from iPhone (iOS)

- **Open Settings → Wi-Fi.** Wait a few seconds for networks to populate.
- Select **Nether-portal-Setup**. It appears without a lock icon.
- Dismiss the “No Internet” alert. Tap **Stay Connected** or **Use Without Internet**.
- Open Safari and go to <http://192.168.4.1>

TIP

iOS often drops open networks that have no internet. Stay on Nether-portal-Setup until you have tapped **SAVE**.

3.2 Connecting from Android

- **Open Settings → Network & Internet → Wi-Fi** (some phones: Connections → Wi-Fi).
- Tap **Nether-portal-Setup** (open network) → Connect.
- When Android says “Connected, no internet,” choose **Yes / Use this network as-is**.
- Open Chrome and go to <http://192.168.4.1>

TIP

After you save a new Wi-Fi network the device reboots onto that network. Rejoin your normal Wi-Fi, then finish setup at `http://Nether-portal-xxx.local` — the unique hostname is shown in the config page header.

4 Web Configuration Interface

Open a browser to `http://192.168.4.1` (first-time setup) or `http://Nether-portal-xxx.local` (after Wi-Fi is configured). The page is divided into cards. Changing **Display Mode** switches the screen immediately and reveals extra cards for Photo Frame, Nether Clock, or Player Stats.

4.1 Mode Selection

Nether Portal	Full-screen looping vanilla 2×3 portal interior.
Photo Frame	Local photos and/or a public shared album.
Nether Clock	Minecraft 7-segment clock, mob animation, portal on a timer.
Player Stats	Walking skin + Hypixel status and a clock.

TIP

The mode dropdown applies on the display as soon as you pick it — no Save or reboot. Your choice is stored so it comes back after a power cycle.

4.2 Wi-Fi Setup

SSID: type your 2.4 GHz network name, or tap **SCAN** and pick from the list. **Password:** enter the Wi-Fi password, or leave blank to keep the one already saved.

PRIVACY

Credentials are stored in on-device flash (NVS) and are never shown on the page.

4.3 Time & Timezone

Once on Wi-Fi the device syncs time via NTP. Pick a timezone from the list, or Custom (POSIX). **AUTO-DETECT FROM IP** estimates timezone and lat/long from your public IP; location is used for sunrise/sunset auto-dim.

4.4 Display & Auto-Dim

Brightness (10–100%) updates the backlight live. When auto-dim is checked, the device switches to daytime brightness at sunrise and night brightness at sunset (defaults 80% / 25%). You can override either calculated time.

NOTE

Auto-dim needs a timezone and location. Use **AUTO-DETECT FROM IP** first.

4.5 Photo Frame

Visible when Mode is Photo Frame. Source is **Local uploads** or a **Gallery URL**.

Local: drop JPEG / PNG / WebP onto the page. Photos are resized to a 320×480 cover-crop. About 1 MB is reserved. Each photo shows for the slideshow interval (default 30 s). After the last local photo, the portal animation plays twice.

Gallery URL: a *public* shared-album link (anyone-with-the-link). Google Photos, iCloud Shared Album, a JSON list `{"images": [{"https://...jpg"}]}`, one URL per line, or a single JPEG. Images are requested at 320×480. **Test gallery** resolves the album and starts playing if you are already in Photo Frame. Local files are kept if you switch to a gallery URL. The album list refreshes on the interval you set (default 30 minutes).

TIP

Portrait photos fill the screen best. Private Google Photos links will not resolve — the album must be shared with “anyone with the link.”

4.6 Nether Clock

Minecraft seven-segment time, day and date, a seconds bar, and the selected mob animation. **Portal plays every** sets how often the nether portal clip interrupts the clock (1 minute to 24 hours).

4.7 Player Stats

Enter a **Minecraft username**. The device loads that player’s skin and walks a 3D model on the left. A clock sits at the bottom. A free **Hypixel API key** from developer.hypixel.net adds online status, current game, and network level. Skin + clock work without the key; the player must also enable API access in their own Hypixel settings.

4.8 Clock Animation

Change Clock Animation (on the Nether Clock card) applies immediately. **Glow Squid** is stored on the device and is the default. Any other mob from the Minecraft wiki’s Animated mob renders list is downloaded into RAM when you select it and is not kept on flash — after a reboot the device re-downloads it. Needs internet.

NOTE

Glow Squid always works offline. Custom wiki GIFs need Wi-Fi the first time after each reboot.

4.9 Save & Danger Zone

SAVE writes form changes. The device restarts *only* if you changed the Wi-Fi network or password. Mode, photos, gallery URL, clock animation, brightness, and timezone apply without a reboot.

RESET WIFI CREDENTIALS clears the saved network and returns to the `Nether-portal-Setup` hotspot. Other settings are kept.

5 Display Modes

Nether Portal Mode

A looping vanilla nether-portal interior (2 blocks wide × 3 tall) fills the 320×480 screen. Default ambient mode — no extra setup.

Photo Frame Mode

- Each photo shows for the slideshow interval (default 30 seconds).
- Local source: after the last photo, the portal plays twice, then the cycle repeats.
- Gallery source: photos stream from the public album and cycle while online.

Nether Clock Mode

12-hour seven-segment time with a blinking colon, day and date, a seconds bar, and the selected mob. The portal clip plays on the interval you set.

Player Stats Mode

Walking Minecraft skin with Hypixel stats (when a key is set) and a small clock. The portal clip also plays on the hour.

6 Returning to Configuration

Once on your home Wi-Fi, open:

`http://Nether-portal-xxx.local`

The suffix **xxx** comes from the device MAC and is printed in the page header. Phone or computer must be on the same Wi-Fi. You can also use the IP from your router.

TIP

If .local fails on Windows, install Bonjour Print Services for Windows, or use the raw IP.

7 Troubleshooting

Problem	Solution
Screen is black / no display	Check the USB-C cable and 5V charger. Try another port or brick.
Nether-portal-Setup hotspot doesn't appear	Wait up to 45 seconds after power-on. Cycle power. The hotspot starts when no Wi-Fi is saved, or after RESET WIFI.
Config page won't load at 192.168.4.1	Stay on Nether-portal-Setup (dismiss "no internet"). Refresh. Only 2.4 GHz radios can join the setup AP.
Won't join home Wi-Fi	2.4 GHz only. Dual-band routers often present a strong 5 GHz signal with the same name — move closer or use a dedicated 2.4 GHz SSID.
Clock shows wrong time / WAITING FOR NTP	Needs internet. Wait up to 60 seconds for NTP. Check timezone on the config page.
Nether-portal-xxx.local not found	Same Wi-Fi as the device. Try the router's IP listing. Windows may need Bonjour.
Auto-dim not working	Needs timezone and location. Time & Timezone → AUTO-DETECT FROM IP.
Photo upload fails	Storage bar near 1 MB: delete photos first. Use JPEG/PNG/WebP.

Problem	Solution
Gallery URL finds no photos	Album must be public (anyone with the link). Use Test gallery on the config page.
Clock animation stays on Glow Squid	Custom mobs need internet after each reboot. Wait for “Playing ...” on the config page.
Player Stats has no skin / no online status	Check the username. Online status needs a Hypixel API key and the player’s in-game API toggle.
Need to change Wi-Fi	Update SSID/password and SAVE (this one change does reboot), or RESET WIFI CREDENTIALS for the setup hotspot.

■ NETHER PORTAL ■

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