

NDI Multiviewer — User Manual

Version 1.2.1 · October 2026 · Lumengrid (lumengrid.shop) · Vision Mix LLC

NDI Multiviewer shows many live NDI sources on one screen as a monitor wall.

Contents

1. What NDI Multiviewer does
2. Installing (Windows, Linux)
3. First launch: renderer choice
4. License and trial
5. Quick start: your first feed
6. A tour of the screen
7. How-to tasks
8. Menu reference
9. Headless mode
10. Settings and where they are saved
11. Troubleshooting
12. Keyboard shortcuts
13. Glossary

1. What NDI Multiviewer does

NDI Multiviewer turns a screen into a **monitor wall**: one window split into tiles, each showing one live **NDI source** (a camera, phone app or computer sending NDI on your network).

- Lay the tiles out as a grid, or build a **mosaic** where some tiles are bigger than others.
- Name each tile, watch its audio levels, add a clock tile.
- Re-broadcast the whole wall as one NDI source (1920×1080).
- No capture cards or extra hardware. The NDI 6 runtime is included in every download.

NDI® (Network Device Interface) is a trademark of Vizrt / NewTek. NDI Multiviewer is sold by Lumengrid and is not an NDI product.

Platforms. Both are supported:

Platform	Current download on lumengrid.shop
Windows, 64-bit	<code>NDI_Multiviewer_Setup_1.2.1_x64.exe</code>
Linux x86_64, Ubuntu 22.04 or newer	<code>NDI_Multiviewer-1.2.1-x86_64.AppImage</code> or <code>ndi-multiviewer_1.2.1_amd64.deb</code>

Not supported: NDI|HX on Linux (see §11), tally lights, PTZ camera control.

2. Installing

Download from **lumengrid.shop** (Multiviewer page). The NDI 6 runtime is inside every download; you do not need to install anything from ndi.video.

Your video sources must be on the **same local network** as this computer (same wired network or WiFi; not a guest WiFi, not mobile data).

Windows

1. Run **NDI_Multiviewer_Setup_1.2.1_x64.exe** and follow the wizard. A desktop icon and **Add install folder to PATH** (for the headless program, §9) are optional.
2. Start **NDI Multiviewer** from the Start menu.

The app installs to `C:\Program Files\NDI Multiviewer\`. The installer is not code-signed, so Windows may show "Windows protected your PC": click **More info → Run anyway**. Do not disable Defender or your antivirus.

Upgrading: run a newer Setup over the old one. Your settings, layout and license are kept.

Linux (Ubuntu 22.04 or newer, x86_64)

AppImage (one file, no install). In a terminal, in the folder where you saved it:

```
chmod +x NDI_Multiviewer-1.2.1-x86_64.AppImage
./NDI_Multiviewer-1.2.1-x86_64.AppImage
```

You can also make it executable in the file's Properties and double-click it. If the system has no FUSE (common on minimal or locked-down installs), run:

```
./NDI_Multiviewer-1.2.1-x86_64.AppImage --appimage-extract-and-run
```

.deb package (Ubuntu, Debian):

```
cd ~/Downloads
sudo apt install ./ndi-multiviewer_1.2.1_amd64.deb
```

Keep the `./` so apt installs the file and pulls in anything missing. Afterwards NDI Multiviewer is in your applications menu; from a terminal, run `ndi-multiviewer`. To remove it: `sudo apt remove ndi-multiviewer`.

Both Linux packages also contain the headless program (§9). Discovery uses mDNS; if sources do not appear, check that `avahi-daemon` is running or add sources by IP (§7).

3. First launch: renderer choice

On first launch a small dialog asks **How should the multiviewer render video?**

- **GPU acceleration** — uses the graphics card to scale and composite the tiles. Lower CPU, smoother on large walls.
- **CPU rendering** — works everywhere, uses no graphics card.

Remember my choice is ticked by default. If no usable graphics (OpenGL) is found, the app uses CPU rendering. Help → About shows the renderer in use. To choose again, start the app from a terminal with `--renderer ask` (or `--renderer gpu / --renderer cpu`).

4. License and trial

- **Trial:** 30 days, full function, offline, from first launch. One trial per machine: reinstalling or installing a newer version does not restart it.
 - **After the trial: \$5/month or \$49/year**, paid with Stripe on lumengrid.shop. You receive a license key by email. Keys start with `NDMV1`.
 - **Paste the key: Help → License...** shows trial or licensed status and days left, and has a field for the key.
 - A key works until its expiry date (one month or one year after payment). When you renew, paste the new key.
 - When the trial ends or a key expires, the license dialog opens at start-up and the tiles stop showing video until you paste a valid key. Your layout stays saved.
 - Moving the computer's clock back by more than a day locks the wall until the clock is correct.
 - Keys are checked on your computer; the app does not go online for licensing. There is no shop account or login.
-

5. Quick start: your first feed

First make sure at least one device is sending NDI. If you have none, install a free NDI camera app on a phone on the same WiFi.

1. **Right-click any empty tile.** Empty tiles show **NO SOURCE**.
2. **Open Set source.** Sources found on the network are listed. If you only see **(no NDI sources found)**, nothing is sending yet, or discovery is blocked (§11).
3. **Click a source.** The tile connects and the picture appears with the source name on a plate at the bottom.

Repeat for other tiles.

6. A tour of the screen

On first launch you see **12 empty tiles** (4 across, 3 down) and the menu bar: **View, Layout, Help**.

Tiles. Video is scaled to fit and keeps its shape, so you may see bars above/below or beside the picture (letterboxing).

Name plates. The strip at the bottom of each tile shows the source name, or your own label. Long names end in "...". Once video arrives, the plate also shows the incoming resolution, for example 1920×1080.

Audio meters. When a source has audio, level meters appear down the sides of the tile: green (normal), amber (loud), red (near overload), with a peak-hold marker. Audio is shown only, never played.

Clock tile. Right-click a tile → **Set source → Clock**. The tile shows the computer's time (HH:MM:SS) in green. The small line marked LTC under it comes from the computer's clock too; it is not timecode from your sources.

Fullscreen. Press **F11** or tick **View → Fullscreen**. The menu bar stays visible. Press F11 again to leave. ESC does not leave fullscreen.

Tile states without a picture:

What you see	What it means
NO SOURCE (right-click to assign)	Nothing assigned yet.
Connecting...	A source is assigned and the app is reaching it.
NO SIGNAL (red dot)	Connected, but no usable video is arriving.
HX not available on this platform (Linux) / HX decoder not available (Windows)	The source sends compressed NDI HX that cannot be shown here. Use a full-bandwidth NDI source.

7. How-to tasks

Most changes save automatically.

Assign or clear a source. Right-click the tile → **Set source** → a source, **Clock**, or **— None —**.

Rename a tile. Right-click → **Rename label...**, type a name, confirm. A blank name, or **Use source name**, goes back to the source name.

Change the grid. **View** → **Grid resolution** → 2 × 2, 3 × 3, 4 × 3, 4 × 4 or 5 × 4. Assigned sources carry over in reading order; making the grid smaller drops the extra ones, making it bigger adds empty tiles.

Build a mosaic.

1. **Layout** → **Edit layout (move / resize tiles)** or **Ctrl+E**. An EDIT MODE banner appears and tiles get dashed outlines and corner grips.
2. Drag the middle of a tile to move it; drag its bottom-right corner to resize it over several cells. Tiles snap to the grid.
3. To merge cells, enlarge one tile over its neighbours, then right-click each covered tile → **Delete tile**.
4. **Layout** → **Add video tile** adds a tile and switches to edit mode.
5. Each change is saved when you drop the tile. Press **ESC** or **Ctrl+E** to leave edit mode.

Layout memories. **Layout** → **Save current layout as memory...** and type a name. **Recall memory** and **Delete memory** list the saved names.

Add a source by IP address (when it does not appear by itself). **View** → **Discovery** → **Add source by IP...**, type the device's address (for example 192.168.1.120) and confirm. It appears in every tile's Set source list within a few seconds. Remove it with **View** → **Discovery** → **Remove source IP**.

Stream quality. **View** → **Stream quality** → **Proxy (low bandwidth)** (default) or **Full resolution**. Proxy uses much less network capacity and suits large walls; use Full resolution when a feed needs more detail.

Save CPU. Tick **View** → **Halve frame rate on 50p/60p feeds (saves CPU)**. This reduces processing, not network use.

Publish the wall as NDI. Tick **View** → **Output multiviewer as NDI source**. Other receivers see it as your computer's name (Multiviewer). The output is always 1920×1080, 25 fps by default; change it under **View** → **Output frame rate** (23.98, 24, 25, 29.97, 30, 50, 59.94 or 60). Untick to stop.

Quit. Close the window. Everything is saved; the wall comes back as you left it.

8. Menu reference

View

Item	What it does
Grid resolution	2 × 2, 3 × 3, 4 × 3 (default), 4 × 4, 5 × 4.
Audio meters	Show or hide meters (default on). Off also stops audio being requested.
Stream quality	Proxy (low bandwidth) (default) or Full resolution.
Halve frame rate on 50p/60p feeds (saves CPU)	Default off.
Output multiviewer as NDI source	Publish the wall as one NDI source, 1920×1080. Default off.
Output frame rate	23.98 to 60 fps, default 25.
Discovery → Add source by IP... / Remove source IP / Rescan network	Manage sources found by address; restart discovery.
Fullscreen (F11)	Fullscreen on/off.

Layout

Item	What it does
Edit layout (move / resize tiles) (Ctrl+E)	Mosaic edit mode on/off.
Add video tile	Add an empty tile and enter edit mode.
Save current layout as memory...	Save the arrangement under a name.
Recall memory / Delete memory	Load or delete a saved layout.

Help

Item	What it does
License...	Trial or licensed status, days left, field for an NDMV1 key.
About	App version, NDI runtime version and renderer in use.

Right-click on a tile: Set source, Rename label..., Use source name (when a custom label is set), Delete tile.

9. Headless mode

NDI Multiviewer includes a second program that runs the same wall **without a window**, for servers or unattended machines. It composites a 1920×1080 wall and can publish it as an NDI source, write snapshots, and write a status file.

- Windows: `ndi-multiviewer-headless.exe` in `C:\Program Files\NDI Multiviewer\`. Start menu → **NDI Multiviewer Headless (console)** opens a console showing its help.
- Linux .deb: `ndi-multiviewer-headless`

- Linux AppImage: `./NDI_Multiviewer-1.2.1-x86_64.AppImage --headless`

Examples (Linux; on Windows use `ndi-multiviewer-headless.exe`):

```
ndi-multiviewer-headless --list-sources
ndi-multiviewer-headless --output --grid 2x2 --source "CAM 1" --source "CAM 2"
ndi-multiviewer-headless --license-key NDMV1.xxxx
```

Option	What it does
<code>--list-sources</code>	Discover sources, print the list, exit.
<code>--license-key KEY</code>	Activate a license key, then exit.
<code>--wait-sources SEC</code>	How long to wait for discovery (default 5).
<code>--source NAME</code>	Source for the next tile (repeatable). Full name <code>HOST (CAM 1)</code> or short <code>CAM 1</code> if unambiguous. Without <code>--source</code> , every discovered source is assigned (<code>--auto</code>).
<code>--grid ROWSxCOLS</code>	Tile grid, e.g. <code>3x4</code> . Default: smallest preset that fits.
<code>--layout-from-config</code>	Reuse the desktop app's saved grid and sources (read-only).
<code>--duration SEC</code>	Stop after SEC seconds (0 = run until stopped).
<code>--require-all-sources</code>	Exit with code 5 if a requested source never sent a frame.
<code>--bandwidth lowest</code> or <code>--bandwidth highest</code>	Proxy (default) or full resolution.
<code>--drop-high-fps</code>	Halve 50p/60p feeds.
<code>--audio</code>	Report audio levels in the status file (needs <code>--status-json</code>).
<code>--ip IP</code>	Query this host directly, bypassing mDNS (repeatable).
<code>--output / --output-name NAME / --output-fps FPS</code>	Publish the wall as NDI. Default name: your computer's name (Multiviewer headless); default 25 fps.
<code>--snapshot PATH / --snapshot-interval SEC</code>	Save the wall as .png/.jpg every SEC seconds (default 10). A <code>%</code> in PATH is expanded as a date/time pattern.
<code>--status-json PATH / --status-interval SEC</code>	Write a status file every SEC seconds (default 5).
<code>--verbose</code>	Log tile events.
<code>--version, --help</code>	Version, full option list.

Stop it with Ctrl+C or SIGTERM. Exit codes: 0 stopped cleanly, 1 error, 2 bad options, 3 no sources found, 4 license gate closed (trial over or clock lock), 5 a required source never delivered.

The headless program uses the same trial and license as the desktop app on the same user account.

10. Settings and where they are saved

Settings save automatically: grid, stream quality, audio meters, frame-drop, NDI output and its frame rate, sources added by IP, the full tile layout and labels, and layout memories.

What	Windows	Linux
Settings and layout (<code>config.json</code>)	<code>%APPDATA%\ndi-multiviewer\</code>	<code>~/.config/ndi-multiviewer/</code>
License and trial (<code>license.json</code>)	<code>%LOCALAPPDATA%\ndi-multiviewer\</code>	<code>~/.local/share/ndi-multiviewer/</code>

Uninstalling does not remove these folders, so the trial is not reset. `config.json` can be backed up or copied to another machine.

11. Troubleshooting

My source is not in the list. Discovery uses mDNS, which firewalls, VPNs and WiFi "client isolation" can block. Find the device's IP address (NDI phone apps usually show it) and use **View** → **Discovery** → **Add source by IP...** On Linux, also check `systemctl status avahi-daemon`.

NO SIGNAL. The source is reachable but sends no usable video. Check it is still sending.

HX message on a tile. The source sends NDI|HX (compressed). Linux does not decode HX. On Windows the bundled NDI runtime decodes it if the machine can; otherwise the tile shows "HX decoder not available". Use a full-bandwidth NDI source, or set the phone app to High Bandwidth / full NDI.

Slow or high CPU. Use Proxy, turn on Halve frame rate on 50p/60p feeds, or show fewer tiles.

NDI output not starting. If publishing fails, a warning appears and the option switches off. Check that no other app publishes under the same name, then try again.

Linux: the AppImage does not start. Make it executable (`chmod +x`). If the disk is mounted `noexec`, copy it to your home folder. Without FUSE, use `--appimage-extract-and-run` (§2).

Windows: the app does not start on a very clean PC. Install the Microsoft Visual C++ Redistributable (x64), then start it again.

License dialog at every start. The trial has ended or the key expired. Paste a current key (§4).

12. Keyboard shortcuts

Key	Action
Ctrl+E	Edit layout on/off
ESC	Leave edit mode (does not leave fullscreen)
F11	Fullscreen on/off

13. Glossary

NDI — Network Device Interface, a protocol for live video and audio over an ordinary network.

NDI|HX — a compressed NDI variant used by many cameras and phone apps.

Mosaic — a layout where tiles have different sizes.

Name plate (UMD) — the label strip under each picture.

Proxy — a lower-resolution version of a feed that uses less network capacity.

Peak-hold — the meter marker that briefly holds the loudest recent level.

mDNS — the automatic discovery NDI uses on a local network.

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