USER MANUAL · V2.0

URSee

Live immersive monitoring and full-resolution dailies for the Blackmagic URSA Cine Immersive. Every director, DP, and producer inside the shot: live, wireless or wired, with zero setup.

URSee
Apple Vision Pro

URSee Streamer
macOS hub · on the Mac App Store

URSee Remote
iPhone · iPad

CONTENTS

What's in this manual

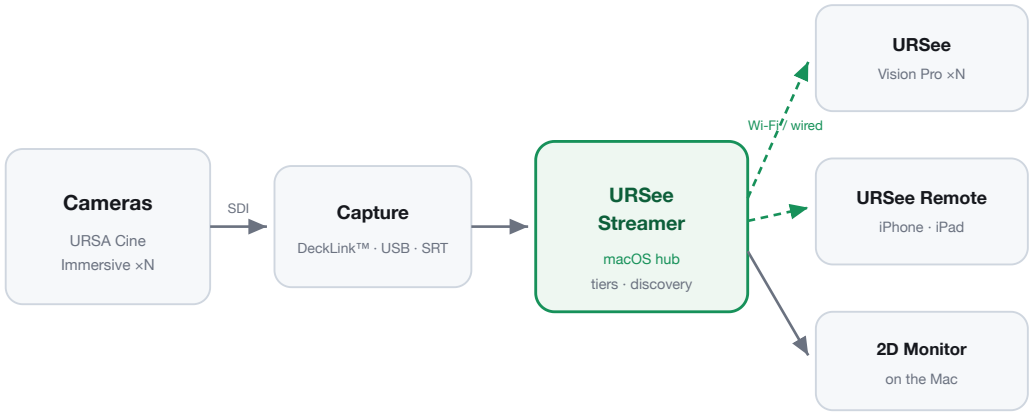
Three apps, one system: each app in full, the CLIPS dailies workflow, every way in, every way to watch.

1 · The system at a glance

The Blackmagic URSA Cine Immersive on location. URSee is its monitoring system.

On an immersive shoot, only one person could ever see what the camera sees. URSee puts everyone inside the shot, live, and renders full-resolution dailies you can stand inside minutes after the take.

Three independent apps combine into one on-set system. Any number of people watch any number of cameras, each choosing their own, with no IP addresses, no stream keys, no network engineering.



Cameras in, everyone sees. Solid lines wired, dashed wireless. Viewers can also connect to a camera directly, with no Mac at all (§9).

THE MAGIC MOMENT

Put on the headset and it finds the system by itself. Tap a camera, and you're standing inside the shot. Product principle: **if the app can find it, you never type it.**

SECTION 2

What you need

A camera, something to capture its signal, and a viewer. The same software rides the whole ladder, from one-cable field kit to broadcast rig.

PIECE	OPTIONS	NOTES
Camera	Blackmagic URSA Cine Immersive (other Blackmagic cameras for 2D control)	The SDI monitor output carries the side-by-side dual-fisheye signal.
Capture	USB capture dongle (~$100) · UltraStudio · DeckLink™ · or an SRT push	Choose by resolution and camera count (§8).
Hub	Any Apple-silicon Mac running URSee Streamer	Optional for the wired field kit; required for wireless multi-viewer and CLIPS.
Viewer	Vision Pro (URSee) · iPhone / iPad (URSee Remote) · the Mac screen	Mix freely; every viewer is independent.

BLACKMAGIC DESKTOP VIDEO

DeckLink™ and UltraStudio hardware needs Blackmagic's free **Desktop Video** software, version 16.0 or newer. USB and SRT sources need nothing extra.

SECTION 3

Quick start

Three steps. Nothing to configure.

1. **Plug camera into capture, capture into the Mac.** Open URSee Streamer; the feed appears and streams automatically.
2. **Open URSee on the Vision Pro and tap** `Discover`**.** The hub's cameras appear.
3. **Tap a camera** and choose `SBS` for the live 3D dome. Done.

More headsets, phones, and iPads join the same way. Nobody types an address or touches a setting.

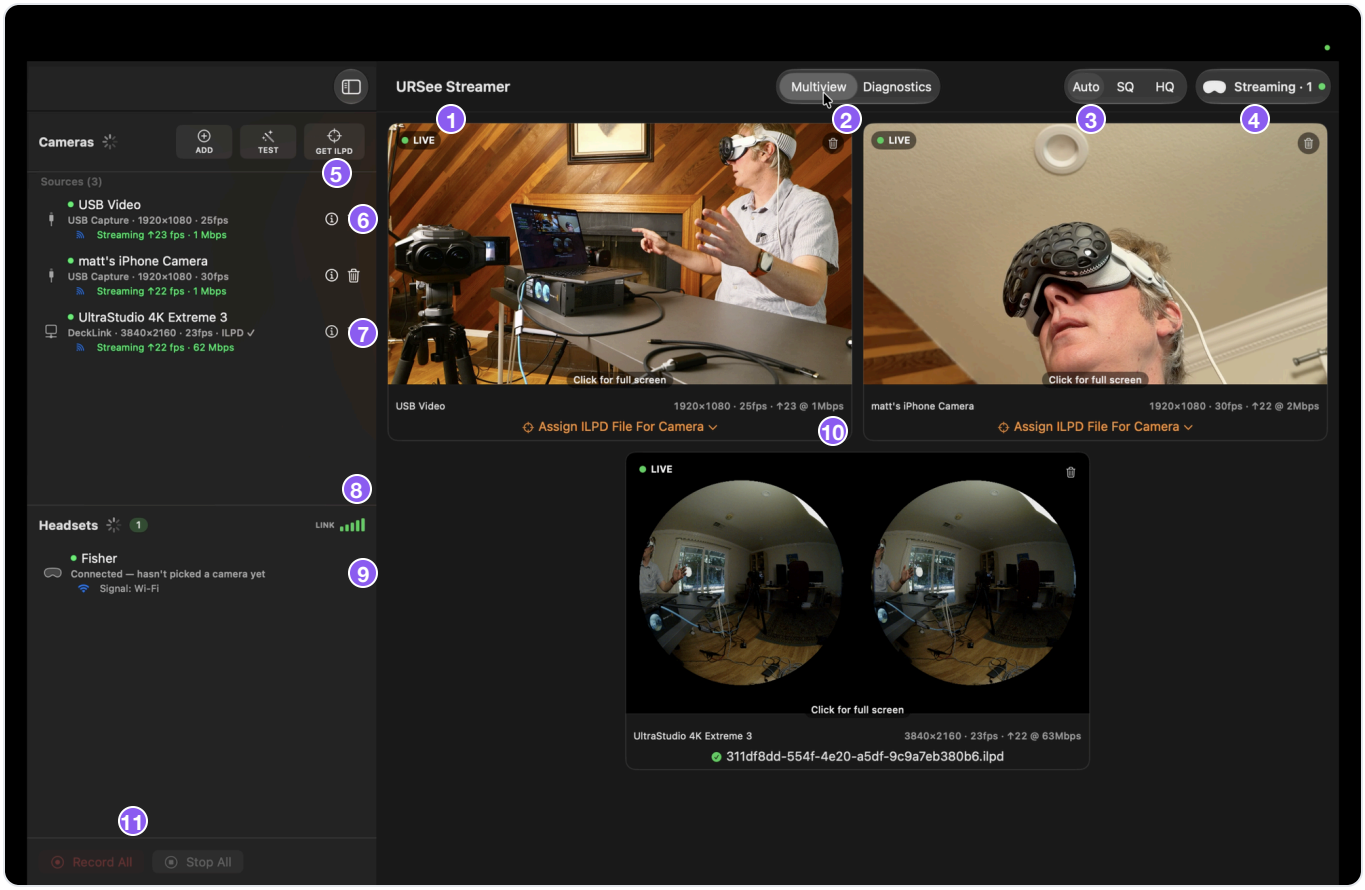
No camera yet?

- **Test pattern:** the `TEST` button adds a synthetic feed.
- **Webcam:** any USB or Continuity camera appears automatically.
- **BRAW files:** `BRAW` plays a clip as a live feed; `CLIPS` renders dailies (§7).

SECTION 4 · THE APPS

URSee Streamer macOS hub

Plug anything in and it appears. The hub encodes every feed, streams to every viewer at once, and doubles as a 2D multiview monitor on the Mac.



1. Hub title & app identity
2. **Multiview / Diagnostics** switch
3. **Auto · SQ · HQ** quality control
4. **Streaming · 1**: status, viewer count
5. **GET ILPD** (also ADD, TEST, BRAW, CLIPS)
6. A **source** row: format, "Streaming ↑fps · Mbps"
7. **ILPD ✓**: lens profile assigned
8. **Headsets** panel, **LINK** health meter
9. A connected viewer, **Signal: Wi-Fi**
10. **Assign ILPD File For Camera**
11. **Record All / Stop All**

Sources on the left, live multiview filling the window, Headsets panel below.

Sources

Every input appears the moment it exists: USB capture, DeckLink™ / UltraStudio, SRT pushes, the test pattern. Each row shows a status dot, live format, an **ILPD ✓** tag, and a green "Streaming ↑fps · Mbps" line. There is no scan button; there is nothing to scan for.

> **STREAMING STARTS BY ITSELF**
> No start button. Spinners beside **Cameras** and **Headsets** show the app is alive and searching. It costs nothing until a viewer connects.

Multiview, fullscreen & Look Around

Click any tile for a full-resolution 2D monitor, a free video-village screen for crew without headsets. **Look Around** magnifies real pixels (1×–5×) for focus checks.

The Headsets panel

Every viewer, live: device name and icon, which camera they're watching, Lens-corrected vs Generic lens, and Signal: WIRED or Signal: Wi-Fi. The **LINK** meter shows overall health.

GET ILPD

GET ILPD extracts a camera's real lens profile straight from one of its Blackmagic RAW clips. Assign it once; it's remembered, re-linked on replug, and pushed to every headset (§10).

BRAW & CLIPS

BRAW loops a .braw file as a live feed: a full rehearsal with real footage, no camera needed. **CLIPS** renders takes into full-resolution dailies (§7).

Everything else

Auto · SQ · HQ picks quality (leave it on Auto; §11). **Diagnostics** narrates the whole system in plain language, with a one-click copy button for support. **Record All / Stop All** rolls every connected camera. Only one copy runs at a time, and the app watches its own memory so long shoots stay stable.

SECTION 5 · THE APPS

URSee

Apple Vision Pro

The immersive monitor. Feeds appear the moment the hub streams; each headset picks any camera and stands inside a live, lens-accurate dome.

1. **Source** picker
2. **Format** (resolution · fps · color)
3. **Discover**: find the hub
4. Power / quit
5. LIVE & WIRED badges
6. The live dual-fisheye signal
7. Labeled **stats pill**
8. View tools: flip · zoom
9. Host status
10. **SBS**: stereo 3D dome
11. **Mono**: mono dome

Monitoring a wired camera directly, no Mac. SBS and Mono open the immersive domes.

Discovery & switching

Tap **Discover**; cameras appear under **FROM HOST**. Switching is instant because every feed is already flowing; the headset just decodes the one you chose, and the hub gives your choice full quality. Each headset chooses independently.

Two domes

SBS **Stereo dome**

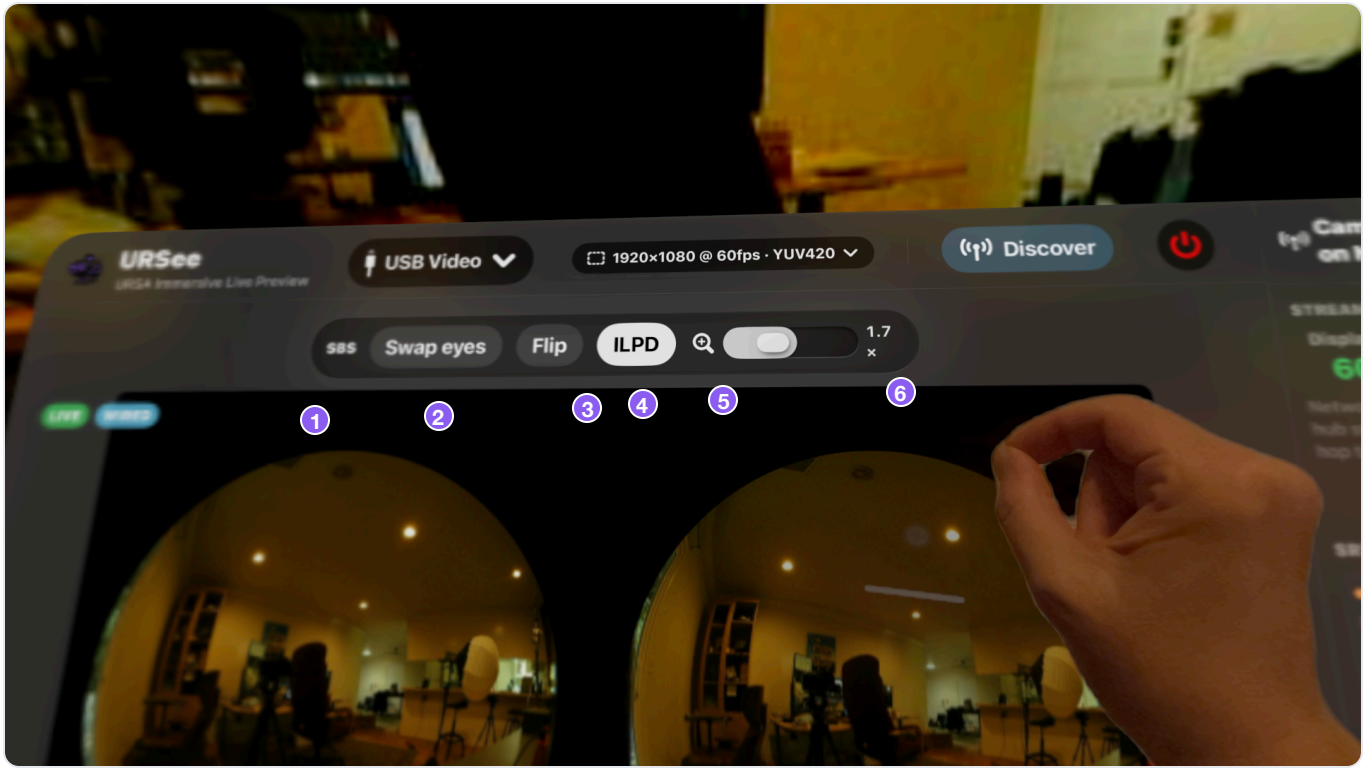
Real per-eye depth, projected through the camera's lens profile. The flagship view for live monitoring, and where CLIPS dailies play. Set the URSA to side-by-side output.

Mono **Mono dome**

One fisheye, both eyes. The dependable fallback, and the view for the camera's own mono playback output. Selectable projection (210° / 180° / EqD) and layout.

REVIEWING TAKES

The camera's own SDI playback is mono. The better way to review a take is **CLIPS** (§7): full resolution, full 3D, with sound and a transport.

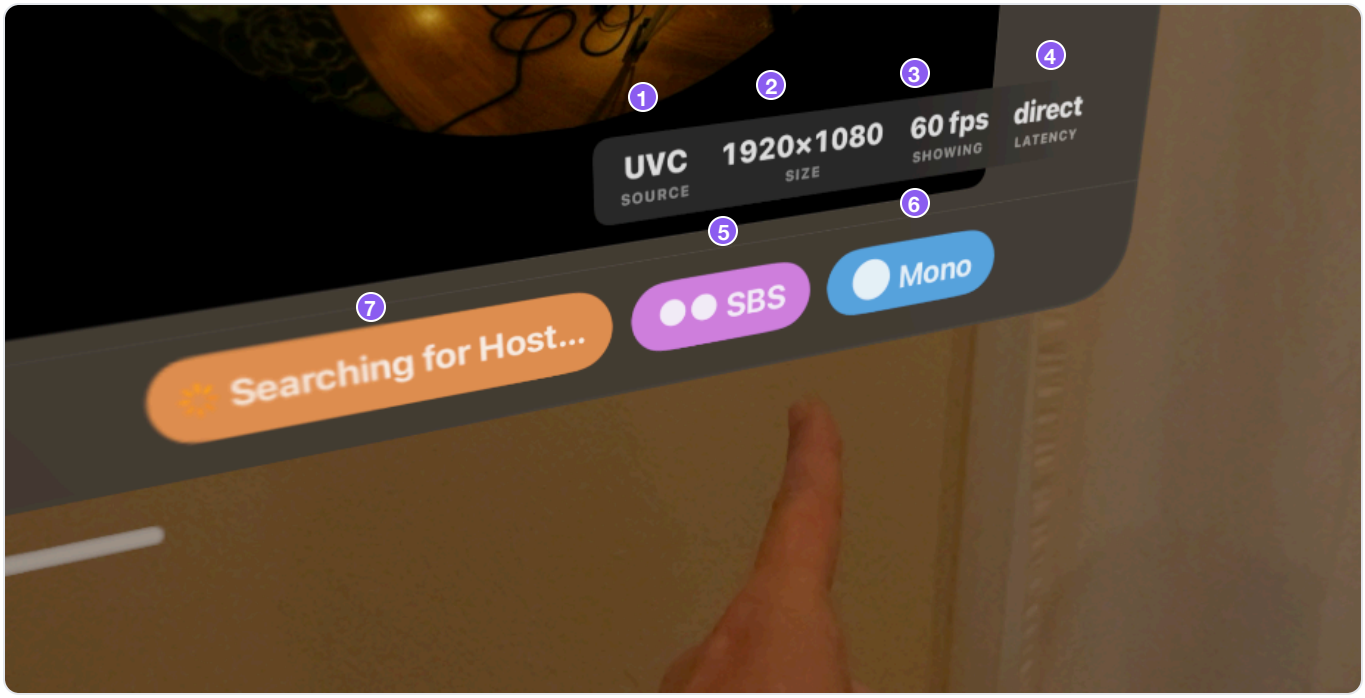


1. **SBS**: you're in the stereo dome
2. **Swap eyes**: fix reversed stereo
3. **Flip**: invert vertically
4. **ILPD**: lens correction on/off
5. **Zoom** slider
6. Current zoom

The stereo dome control bar. The ILPD toggle is a great corrected-vs-generic before/after.

Reading the dome

The labeled **stats pill** shows SOURCE · SIZE · IN · SHOWING · DECODE · RENDER · LATENCY. During clips it switches to clip mode: per-eye size, time with loop count, and "local" latency. LATENCY is a true end-to-end number; the devices sync clocks so it can't be fooled by drift. Green meters mean the link is keeping up; orange means look at the network (§12).



1. **SOURCE**
2. **SIZE**
3. **SHOWING** (frames / sec)
4. **LATENCY** ("direct" when wired)
5. **SBS** dome button
6. **Mono** dome button
7. Host status chip

The stats pill: a wired source at 1920×1080, 60 fps, "direct" latency.

Wired direct, no Mac

URSee monitors a camera directly over USB capture through the Developer Strap (§9). Pick **USB Video**; the app selects the best format. Load a lens file from the **Files** app to calibrate in the field.

> **THE VISIONOS WIRE QUIRK**
> visionOS parks the strap link while headset Wi-Fi is on. Turn **Wi-Fi off on the Vision Pro** and the hub hands the seat to the wire in seconds.

SECTION 6 · THE APPS

URSee Remote iPhone · iPad

Camera control and a pocket monitor in one.

Getting connected

Tap **Connect**; discovered cameras appear (or add one by IP). The dot in the top bar is red idle, orange connecting, green linked. It remembers your last camera and reconnects on its own.

Camera control

Big jog-dials for the controls that matter, with preset chips and tap-to-type:

ISO	200–3200, presets 200–3200
White balance	2500–10000 K, presets 3200 / 4500 / 5600 / 6500 K
Tint	–50 … +50
Shutter	11.2°–360° angle, presets 45–360
ND filter	Clear / 2 / 4 / 6 / 8 stop
Convergence	0.5–20 m (immersive), presets 1 / 2 / 3 / 5 m
Record	Big record button; timecode and REC / STBY in the status bar

The URSA Cine Immersive's fixed lens has no iris, focus, or zoom, so those are absent by design. Color, Monitor, Slate, Camera Audio, Presets, and Stream panels live under **More** (iPhone) or the sidebar (iPad).

ILPD in your pocket

Get Lens Profile (ILPD) on the Connect screen pulls the camera's real profile over the network, then AirDrop or Save to Files (§10).

Auto-record spatial audio

When the camera rolls, the Remote can record first-order ambisonics on your device, stamped with the camera's timecode for automatic sync in DaVinci Resolve. On by default; switch in **System ▸ Spatial Audio**.

> **VERIFY ON YOUR DEVICE**
> Confirm ambisonic capture and timecode sync on real iOS 26 hardware before relying on it for a shoot.

Pocket monitor

The hub's live feeds in the viewfinder, with camera-switch chips. Fullscreen landscape with pinch-zoom (1–6×) makes a proper handheld monitor.

SECTION 7

CLIPS: full-resolution dailies

Render any BRAW take on the Mac and stand inside it minutes later: every pixel the sensor captured, 8160×7200 per eye, in full 3D, with sound.

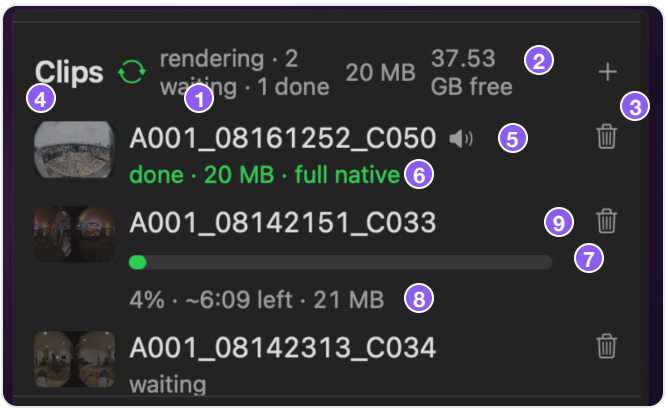
URSee Streamer develops the original Blackmagic RAW file into a viewing copy at full native resolution, with visually transparent 10-bit encoding, lossless audio, and the camera's lens calibration embedded in the file. Finished clips go to every connected headset and play in the stereo dome.

THE NEGATIVE AND THE PRINT

BRAW is the camera negative: sensor data, grading latitude, headroom. A CLIPS render is dailies: a full-resolution print for viewing, about 4% of the BRAW's size (roughly 1 GB per 30-second take). Every pixel, none of the darkroom.

Rendering on the Mac

Click `CLIPS` and pick .braw files. Each gets an instant thumbnail, so duds are trashable before they cost a render. Takes render one at a time while live monitoring continues; a notification fires when a background render finishes.



1. Queue status: rendering · waiting · done
2. Library size & free disk
3. Add clips
4. Instant thumbnail
5. Audio badge
6. Done: size & "full native"
7. Live render progress
8. Percent · time left · size so far
9. Trash (frees the space)

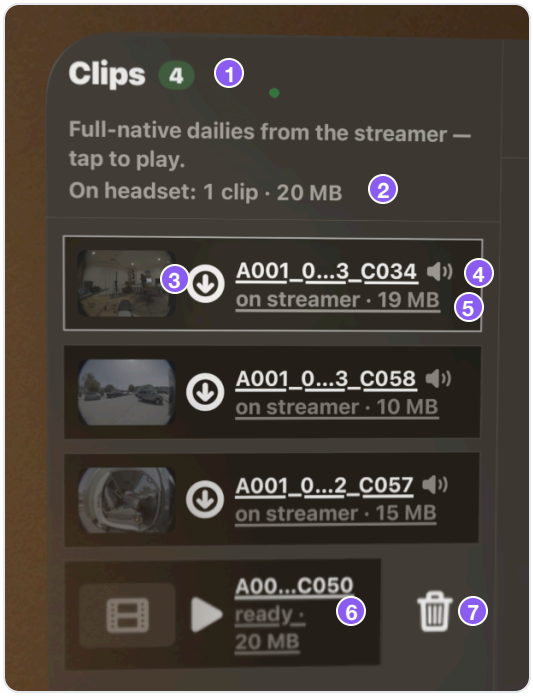
The Clips queue. A render that won't fit on disk is refused up front, not at 90%.

FULL NATIVE REQUIRES RECENT HARDWARE

Full native resolution requires an M3-generation Apple-silicon Mac or newer. Earlier Macs render at the highest resolution their encoder supports, automatically.

On the headset

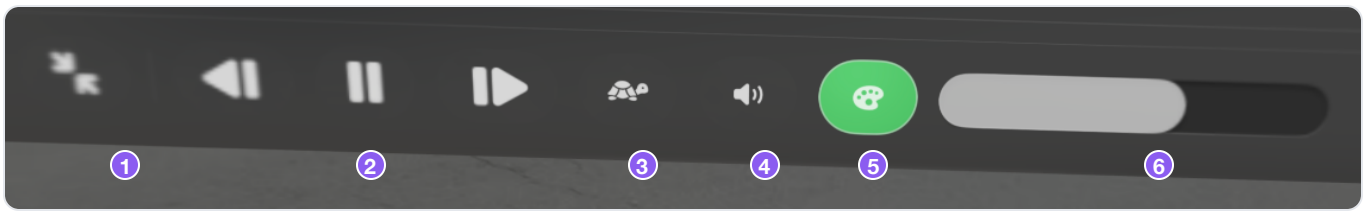
Finished takes appear in the **CLIPS** panel on every headset. Tap to download (live speed and ETA), tap again to play. The cache cleans itself up, oldest first; storage is never your problem.



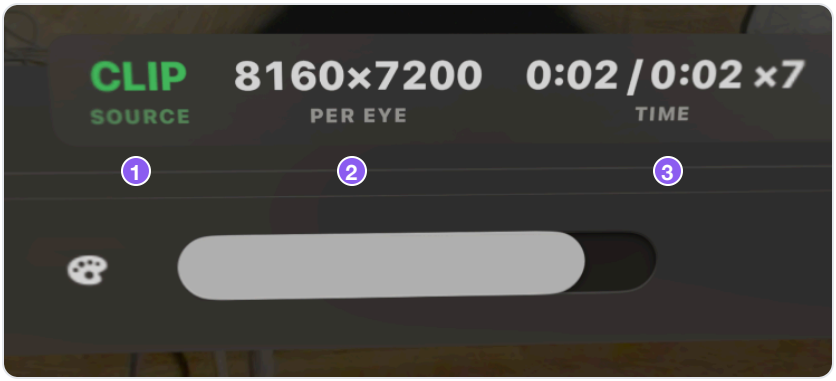
1. Clip count
2. What this headset is caching
3. Download
4. Audio badge
5. Where it lives & size
6. Ready: tap to play
7. Remove from headset

The CLIPS panel. Takes appear on their own the moment a render finishes.

The transport

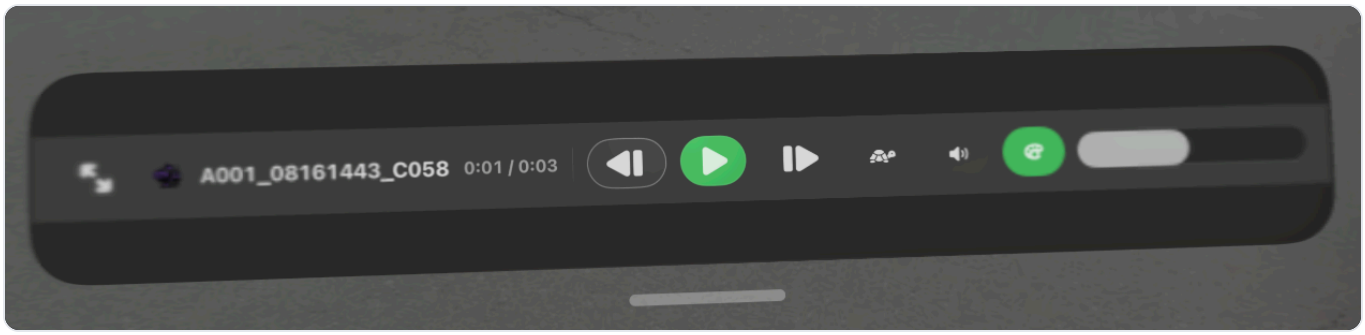


1. Minimize to mini player
2. Frame step · play/pause · frame step
3. Slow motion (half speed, pitch-corrected sound)
4. Mute
5. Color panel toggle
6. Scrubber: coarse while dragging, frame-exact on release



1 **CLIP** source
2 Full native, per eye
3 Time, with loop counter

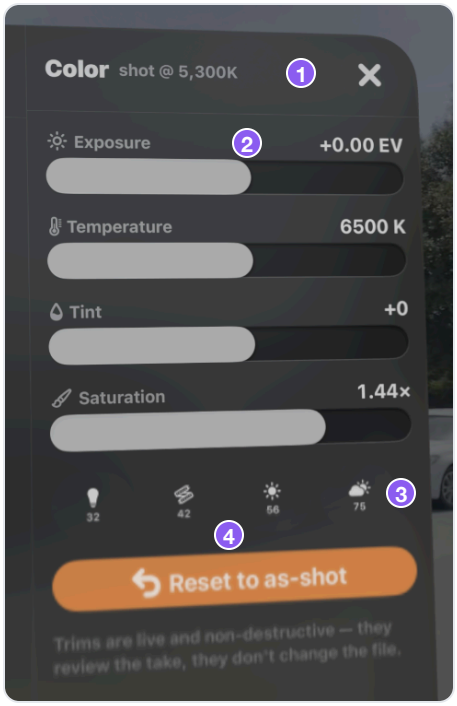
The stats pill in clip mode. Clips loop until you stop them.



The mini player: the whole window collapses to a floating transport while you're inside the dome.

The color panel

Exposure, temperature, tint, and saturation, applied live to the dome. The panel shows the take's as-shot white balance from camera metadata, one-tap presets (tungsten, fluorescent, daylight, shade), and **Reset to as-shot**. Trims review the take; they never change the file.



1. As-shot white balance, from the camera
2. Live sliders
3. Presets: tungsten · fluorescent · daylight · shade
4. Back to as-shot

EVERY CLIP CALIBRATES ITSELF

Each clip carries its camera's real lens profile inside the file. On a multi-camera shoot, every take projects through its own lens. Zero setup, zero mixups.

SECTION 8

Every way to get a camera in

Almost anything, automatically. No scanning, no configuration.

INGEST PATH	WHAT IT IS	TYPICAL USE
USB capture (UVC)	SDI→USB or HDMI→USB dongle	Budget field kit; ~1080p class
Continuity Camera / webcam	Built-in or Continuity camera	Testing without the rig
Blackmagic UltraStudio	Thunderbolt SDI/HDMI capture	Desk / cart; 4K
DeckLink™ card	PCIe SDI/HDMI capture	Multi-camera rigs; 4K per input
SRT drop-box	Always-listening SRT port (9998)	OBS / ffmpeg / encoder pushes
Blackmagic network camera	Discovered camera pushed to SRT	Wireless ingest, supported bodies
BRAW file	A .braw looped as a live feed	Rehearsal with real footage
Test pattern	Synthetic color bars	No hardware at all

Every source becomes an equal tile and an equal feed. Capture cards deliver zero-copy frames and auto-detect the incoming format.

> **SHARING A CAMERA**
> Feed URSee from a second SDI output, a loop-through, or a distribution amp. **We tap a split; we never share your port.**

> **FORMATS**
> URSee captures the camera's SDI/HDMI output; it does not ingest SMPTE 2110 / IP video. The URSA Cine Immersive does not livestream on its own; URSee brings it onto the network from the capture side.

SECTION 9

Every way to watch

On Apple Vision Pro (URSee)

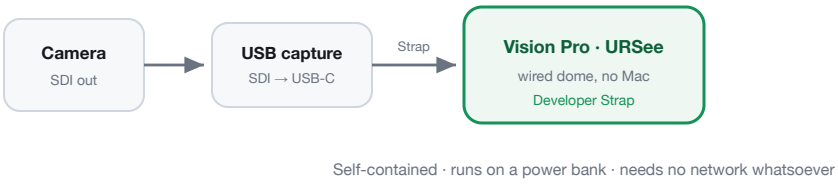
- **Stereo dome over Wi-Fi:** the everyday multi-director path.
- **Stereo dome over a wire:** Developer Strap to the Mac; the steadiest seat (§12).
- **CLIPS dailies:** full 3D at full resolution, with sound (§7). The definitive review.
- **Mono dome:** the camera's own mono playback output (§5).
- **Wired field kit:** camera → SDI → USB capture → Developer Strap. No Mac, no network.
- **Camera-direct wireless:** supported cameras push SRT straight to the headset.

On the Mac (URSee Streamer)

- **Multiview grid:** every camera live, filling the wall.
- **Fullscreen 2D monitor** with **Look Around** (1×–5×).

On iPhone & iPad (URSee Remote)

- **Pocket monitor** and fullscreen landscape with pinch-zoom.



The wired field kit: headset, a capture stick, and power.

SECTION 10

Lens calibration (ILPD)

The difference between good and amazing in the stereo dome is the camera's own lens profile. URSee carries it for you, four ways.

Each URSA Cine Immersive has an Immersive Lens Profile (ILPD) describing its exact lens geometry. The stereo dome is built from it, so the fisheye is projected the way the camera truly sees.

WHERE	HOW
URSee Streamer	**GET ILPD**: carve the real profile out of any of the camera's BRAW clips; assign and save.
URSee Remote	**Get Lens Profile (ILPD)**: pull it over the network from the camera; AirDrop or Save to Files.
URSee	Load a `.ilpd` file from Files (for the no-Mac field kit).
CLIPS	Automatic: every rendered clip carries its profile embedded (§7).

The headset resolves in order: manual file → embedded in the playing clip → hub-pushed per-camera → built-in generic. It never breaks; a real profile just makes it its best. The **ILPD** toggle compares corrected vs generic instantly.

> **ASSIGN ONCE, EVERYWHERE**

> Assign a camera's ILPD on the Mac once; it's remembered, re-linked on replug, and delivered to every headset on connect.

SECTION 11

Automatic quality & tiers

Quality is discovered, not chosen. Each viewer streams at the best rate its connection has proven.

TIER	WHEN	ROUGHLY
WIRED MAX	Wired viewer, proven clean	Up to ~175 Mbps at 4K
HIGH	Wi-Fi viewer, proven clean	~100 Mbps at 4K
STANDARD	Ordinary Wi-Fi viewer	~50 Mbps at 4K
PREVIEW	Feeds nobody is watching	~2.5 Mbps trickle, so switching is instant

Seats earn their tier by holding a clean link and step down the moment they struggle. Under network pressure, rate control thins frames while holding latency steady; a monitor never freezes. CLIPS sidestep the tiers entirely: downloaded once, played locally at full quality.

SECTION 12

Connections, network & latency

Discovery is local and automatic: devices advertise, the hub dials out. No IP addresses, no internet.

The wired director's chair

One Thunderbolt cable into the Developer Strap makes that seat the premium one: top tier, every camera at full rate, steadiest latency. Plug in mid-session and it switches on its own. (Remember the quirk: headset Wi-Fi off, §5.)

Getting the best out of Wi-Fi

Smoothness depends on the wireless link far more than on URSee. If it feels soft:

- **Wire the Mac to the router** with Ethernet.
- **Use a strong, dedicated 5 GHz (or 6E) access point** near the viewers.
- **Add a mesh node** near the headsets on a large set.
- **Give the director a wire**, or go fully wired with the field kit (§9).

TRUST THE METERS

Green means the link is keeping up; orange means attention. If a headset reads orange, the fix is almost always the network, not the app.

SECTION 13

Reading the apps: indicators

Green means active, orange means attention, red means stopped.

YOU SEE	IT MEANS
LIVE	A feed is flowing right now.
WIRED / WIRELESS	How this headset is receiving.
SIGNAL LOST	A feed stopped (camera off, battery, cable). The tile waits for it.
↑ 23 fps · 62 Mbps	Actual outbound rate for a live source.
LINK / **Signal** meters	Link health: green keeping up, orange busy, red struggling.
Stats pill	SOURCE · SIZE · IN · SHOWING · DECODE · RENDER · LATENCY; clip mode in playback.
Sending to headset · N%	A clip transferring from the Mac to a viewer.
PAUSED	Clip paused; the dome holds the frame at full resolution.
Lens-corrected / Generic lens	Whether the real ILPD is applied.
Header spinners	Actively searching; proof the app is alive.
Connection dot (Remote)	Red idle, orange connecting, green connected.

SECTION 14

Troubleshooting

SYMPTOM	USUALLY	DO THIS
"Searching for Host…"	Streamer not running, or different network	Open URSee Streamer; same Wi-Fi on both.
No DeckLink™ / UltraStudio tile	Desktop Video not installed	Install it; USB / SRT / test feeds work without it.
DeckLink™ fails with "no input interface"	Desktop Video older than 16.0	Update Desktop Video, reboot, relaunch.
Removed a DeckLink™ source, want it back	Sources return on device arrival	Relaunch URSee Streamer; inputs reappear.
Signal present but wrong / black	Wrong input or color-format mismatch	Pick the correct input (HDMI vs SDI) in Desktop Video Setup.
Choppy over Wi-Fi, meter orange	The link can't hold the bitrate	Wire the Mac to the router, better AP, or wire the seat (§12).
Thunderbolt plugged in, still Wi-Fi	visionOS parks the strap	Turn Wi-Fi off on the Vision Pro.
Dome looks distorted	Wrong or missing lens profile	Assign the camera's ILPD (§10).
No 3D on camera playback	The camera's SDI playback is mono	Render the take with CLIPS for full 3D (§7).
Clips render below full native	This Mac's encoder tops out lower	Expected on pre-M3 Macs (§7).
A Remote control does nothing	Unsupported on this camera/firmware	Expected: unsupported controls are ignored.

SECTION 15

Requirements & specifications

Requirements

Hub	Apple-silicon Mac, macOS 26+
Headset	Apple Vision Pro, visionOS 26+
Remote	iPhone / iPad, iOS/iPadOS 26+
Capture	USB UVC, UltraStudio, or DeckLink™ (Desktop Video 16.0+)
Wired seat	Vision Pro Developer Strap + Thunderbolt cable
Full-native dailies	M3-generation Apple silicon or newer (earlier Macs render reduced, automatically)

Performance

Live resolution	Up to 4K DCI, wireless
Dailies (CLIPS)	Full native 8160×7200 per eye, 10-bit HEVC, lossless audio; ~4% of BRAW size
Frame rate	Real-time, at the camera's SDI cadence
Latency	Network-dependent; true figure shown in-app (§12)
Wired tier	Up to ~175 Mbps at 4K
Viewers	Any number; each independent

NOT FOR CLINICAL OR SAFETY-CRITICAL USE

URSee is a production monitoring tool, not a medical device.