

Rhombus Video Wall for Windows — User Guide

Rhombus Video Wall for Windows turns a Windows PC and an attached display into a dedicated Rhombus Video Wall appliance. It shows the video walls configured in your Rhombus Console as full-screen grids of live camera streams, runs unattended 24/7, and keeps itself updated.

It is the Windows counterpart of the Rhombus Apple TV app and behaves the same way: activate once with a short code, then pick a wall and let it run.

This guide covers app version 1.0.18.

1. System requirements

Operating system

- Windows 10 version 1809 (build 17763) or later; Windows 11 recommended.
- For unattended 24/7 walls, Windows 11 Pro or Windows 11 IoT Enterprise.

Hardware

- 64-bit PC with **hardware H.264 decoding**. Any recent Intel CPU with Quick Sync (Intel N100 / Core i3 class or better) is sufficient; discrete NVIDIA/AMD GPUs also work. Hardware decode is required — software-only decoding is not supported for production walls.
- 8 GB RAM.
- Wired Gigabit Ethernet recommended for walls with many cameras.

A small-form-factor PC in the N100/i3 class comfortably drives a 4×4 wall (16 live streams) at 60 fps output. The app automatically balances stream resolution per tile to stay within the GPU's decode budget (see the **Bandwidth** setting in the [Settings reference](#)).

Network

The PC needs outbound access to:

DESTINATION	PORT	PURPOSE
<code>api-mobile.rhombus.com</code> , <code>auth-mobile.rhombus.com</code> , <code>media-mobile.rhombus.com</code>	TCP 443 (HTTPS)	API, authentication, media relay
<code>ws.rhombus.com</code>	TCP 8443 (secure WebSocket)	Live event push (motion promotion)
<code>downloads.rhombus.com</code>	TCP 443 (HTTPS)	Install and automatic updates

For the lowest latency and lowest WAN usage, also allow the PC to reach your Rhombus cameras directly on the local network — the app streams straight from cameras over the LAN when it can, and falls back to the cloud relay when it can't (see the **Connection** setting).

2. Installation

1. On the wall PC, open <https://downloads.rhombus.com> in a browser.
2. Find **Rhombus Video Wall** under Windows downloads and download the `.appinstaller` file.
3. Open the downloaded file. Windows App Installer shows the package (publisher: *Rhombus Systems*) — click **Install**.
4. Launch **Rhombus Video Wall** from the Start menu.

Installing from the `.appinstaller` file is what enables automatic updates: the app checks for new signed versions in the background and on launch, and applies them the next time the app restarts (see [Updates](#)).

Installing does not require administrator rights, and neither does any in-app feature, including Kiosk Mode.

3. Activating the display

The first launch shows a **five-character activation code** on screen.

1. On any computer, sign in to the **Rhombus Console** with an account that can manage TV apps for your organization.
2. Go to **Settings** → **API Management** and open the TV app activation section (<https://console.rhombussystems.com/settings/api-management/tvos/>).
3. Enter the five-character code shown on the wall display and activate it.
4. Within a few seconds the wall PC picks up the activation, loads your organization's data (the screen briefly shows in grayscale with a progress ring while it loads), and lands on the Home screen.

Notes:

- The code refreshes every 10 minutes — if it changed while you were typing, use the code currently on screen.
- Activation is per-PC, not per-monitor. One activation covers all displays attached to the machine (see [Multiple displays](#)).
- After activation the app signs in by itself on every launch. It only returns to the activation screen if you log out or the device's access is revoked.

4. Everyday use

Home

Home lists every video wall in your organization as a live thumbnail card showing the wall's actual layout. Walls you've opened recently appear in a **Recent** shelf at the top, with camera count and rotation badges. Click a card (or use the arrow keys and **Enter**) to open the wall.

Video wall view

The wall renders full screen, edge to edge, with each camera in its grid position. On top of each tile you can show (all configurable in Settings):

- Camera name and a health icon, plus location label
- Temperature and humidity, when the camera has a climate sensor
- A **LAN** badge when that stream is coming directly from the camera on your network
- A latency readout showing how far behind real time the tile is
- A motion icon while motion is active, and a pin icon on pinned cameras
- A wall-level clock (top right)

A thin colored border around a tile indicates stream health; a spinner shows while a tile connects.

Rotating walls. If the wall has more cameras than tiles:

- *Interval rotation* swaps the longest-displayed tile for the longest-waiting off-screen camera on the configured interval.
- *Motion-based walls* promote a camera to the wall the moment it reports motion.
- Pinned cameras never rotate out. Rotation strategy, interval, and pins are configured on the wall in the Rhombus Console.

Self-healing. A stream that stops delivering video is torn down and rebuilt automatically; while it recovers, the tile shows the camera's last snapshot. No interaction is needed.

Single-camera view

Click any tile (or select it and press **Enter**) to view that camera full screen at high resolution. Press **Esc** or **Backspace** to return to the wall.

Search

The Search tab filters walls by name as you type. Walls with no cameras are not shown.

Keyboard and mouse

INPUT	ACTION
Arrow keys	Move the selection between tiles / cards

INPUT	ACTION
Enter	Open the selected wall or tile
Esc / Backspace / mouse back button	Go back
F11	Toggle fullscreen
Ctrl+Shift+D	Open the diagnostics panel (see Troubleshooting)

5. Settings reference

Open the **Settings** tab. While a row is highlighted, a caption on the left explains it; for video settings, a live preview tile demonstrates the effect.

Network

SETTING	VALUES	WHAT IT DOES
Connection	Auto / LAN Only / WAN Only	Auto streams directly from cameras over your LAN when possible and falls back to the Rhombus cloud relay. LAN Only never uses the relay; WAN Only never streams directly.
Bandwidth	Auto / High / Low	Auto picks per-tile quality (high resolution for full screen and large tiles, standard for small tiles). High forces every tile to high resolution; Low forces every tile to standard resolution.

Video

SETTING	VALUES	WHAT IT DOES
Scale	Resize / Aspect / Aspect Fill	How video fills its tile: stretch, letterbox, or crop-to-fill.
Camera Name	None / Truncated / Multiline	Camera-name overlay format on each tile.
Location	Show / Hide	Location label on each tile.
LAN Indicator	Show / Hide	Badge on tiles streaming directly over the LAN.
Stream Latency	Show / Hide	Shows how far behind real time each tile is. The wall buffers more on a slow or jittery network (smoother, further behind live) and less on a fast one.
Time	None / Date + Time / Time / Day + Time	Wall clock overlay format.

Windows-specific

SETTING	VALUES	WHAT IT DOES
GPU	Auto / (<i>detected GPUs</i>)	Only shown on PCs with more than one GPU. Selects the GPU used for decoding and rendering; takes effect after an app restart. Leave on Auto unless directed otherwise.
Nightly Restart	Off / 12:00 AM – 5:00 AM	Restarts the app briefly each night so staged updates can install. Pick a low-activity hour. While Off, updates install only after a crash or reboot.
Auto-Start	Enabled / Disabled	With Startup Wall , opens a chosen wall automatically when the app starts, so an unattended display goes straight to the wall without a click.
Kiosk Mode	Enabled / Disabled	Makes this PC behave like an appliance — see Setting up an always-on wall .
Software Update	Check for updates	Checks for a newer version and installs it on the spot (packaged installs only). The app closes briefly and reopens.
Send Logs	Upload to Rhombus	Uploads recent app logs and crash reports to Rhombus so support can diagnose issues with this wall.
Logout	—	De-registers this PC: removes credentials, erases all cached data, and returns to the activation screen.
Version	—	The installed app version. Include it when contacting support.

6. Setting up an always-on wall (Kiosk Mode)

For a display that should show a wall 24/7 and recover from anything without a keyboard:

1. **In the app:** turn on **Settings** → **Kiosk Mode** (no administrator rights needed). This registers a Windows Scheduled Task that:
 - starts the app full screen when the user signs in,
 - restarts it within one minute if it ever crashes or is closed,
 - relaunches it after the nightly restart so updates apply.
2. **Also in the app:** enable **Auto-Start** and choose the **Startup Wall**, and leave **Nightly Restart** on a low-activity hour (default 3:00 AM).
3. **In Windows:** configure the PC to sign in automatically (e.g. Sysinternals *Autologon*), so a power cycle or Windows Update reboot returns to the wall without a person present.
4. **Windows Update:** set Active Hours to the display's on-hours so update reboots happen in the maintenance window. The kiosk task plus auto sign-in recover the wall after any reboot.

Nothing else is required — the app prevents display sleep on its own while running.

To undo, toggle **Kiosk Mode** off. For scripted or MDM deployment, the same enrollment is available from the command line: `rhombus-videowall.exe --enroll-kiosk / --unenroll-kiosk` (exit code 0 = success).

7. Multiple displays

One app instance drives one wall on one display. A PC with several monitors runs one instance per monitor:

```
rhombus-videowall.exe --profile lobby --display 1
rhombus-videowall.exe --profile dock --display 2
```

- `--profile <name>` gives the instance its own settings, recents, and Auto-Start wall.
 - `--display <n>` pins the window to that monitor (1-based). If that monitor is unplugged later, the app still starts, on the default display.
 - All instances share the PC's single activation — activate once, and note that **Logout from any instance logs out all of them**.
 - Kiosk Mode enabled inside an instance enrolls *that* instance (with its profile and display), so each monitor gets its own watchdog.
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8. Updates

- **Automatic:** the app checks for signed updates on launch and in the background (roughly daily). Updates staged while the wall is running are applied at the next app restart — normally the **Nightly Restart**. A fleet stays current with no interaction.
- **Manual:** **Settings** → **Software Update** → **Check for updates** installs any available update immediately; the app closes briefly and reopens on the wall.

If **Nightly Restart** is Off and the app literally never exits, staged updates wait until the next crash, reboot, or manual update.

9. Data storage and security

Everything the app stores lives under the signed-in user's profile at `%LOCALAPPDATA%\Rhombus\`:

- **Credentials and the device identity key are encrypted** with Windows DPAPI, and the device's private key is created non-exportable — the wall's identity cannot be copied to another machine.
- Camera thumbnails and stream URLs are also stored encrypted.
- Logs (`logs\`) contain timestamps, app state, and errors only — never credentials, tokens, or video.

Logout (Settings) de-registers the PC and erases all of the above. If a wall PC is lost or retired without a logout, revoke its access from the Rhombus Console.

10. Troubleshooting

The activation code isn't accepted, or the app never activates

- The code rotates every 10 minutes — enter the code currently on screen.
- Confirm you're activating in the correct organization in the Console.
- Confirm the PC has outbound access to the endpoints in [System requirements](#) (a proxy or firewall blocking `*.rhombus.com` or port 8443 is the usual cause).

A tile is black or frozen

- The app rebuilds stalled streams automatically within about a minute; the tile shows the camera's last snapshot while it recovers.
- If it doesn't recover: check the camera is online in the Rhombus Console, then press **Ctrl+Shift+D** on the wall — the diagnostics panel shows per-tile connectivity and a live log of recent requests.
- If only LAN streaming fails (tiles work with **Connection** → **WAN Only**), the PC can't reach the cameras directly — check VLANs / client isolation between the PC and cameras.

Video is choppy or stuttering

- Confirm the PC meets the hardware-decode requirement. Very large walls forced to **Bandwidth** → **High** can exceed a GPU's decode budget — set Bandwidth back to **Auto**.
- On PCs with two GPUs (e.g. a laptop with integrated + discrete graphics), the app picks the GPU wired to the display automatically. If playback is choppy, try the **GPU** setting and restart the app.

The wall doesn't come back after a reboot or power cut

- Enable **Kiosk Mode**, **Auto-Start** (with a Startup Wall), and Windows auto sign-in — see [Setting up an always-on wall](#). All three are needed for fully hands-off recovery.

Software Update says "Dev build"

- The app was installed without the `.appinstaller` package (e.g. a development copy) and can't self-update. Install from downloads.rhombus.com to get automatic updates.

The app returned to the activation screen on its own

- Its credentials were revoked or invalidated. Re-activate with a new code from the Console.

Sending logs to support

Settings → **Send Logs** uploads recent logs and crash reports to Rhombus. Local copies are at `%LOCALAPPDATA%\Rhombus\logs\`. When contacting support, include the app **Version** from Settings and what the **Ctrl+Shift+D** diagnostics panel shows for the affected tiles.