

StrataWx User Guide



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Live weather for Microsoft Flight Simulator, the way the real sky behaves.

For Microsoft Flight Simulator 2024 and MSFS 2020 • Windows

StrataWx reads your aircraft position out of the sim, pulls real-world weather for that exact spot as your flight moves, models it into a coherent atmosphere (winds aloft, layered clouds, temperature, pressure, precipitation, turbulence, icing), and injects it into the sim in real time. The sky evolves smoothly as you fly instead of snapping.

StrataWx is made by StrataSim for **Microsoft Flight Simulator 2024** and **MSFS 2020**, both fully supported on the stable release. Support for X-Plane is in development. StrataWx runs on Windows only.



Quick start (the two-minute version)

1. **Install the StrataSim Manager**, activate your license there, and install StrataWx from the Manager.
2. **Open StrataWx and leave it running.** That is the whole on switch: app open means weather is injecting, app closed means MSFS goes back to its own weather.
3. **Start a flight in MSFS.** StrataWx links to the sim on its own. When the **SIM LINK** light in the header turns green, you are connected. No SimConnect setup, ever.
4. **Pick your source** with the SOURCE selector: **Live**, **Historical**, or **Sandbox**.

That's it. You do not need to open anything inside the sim, select a weather preset, or configure a thing. Launch order does not matter either: sim first or app first both work.

What you need

- Windows 10 or 11, 64-bit
- Microsoft Flight Simulator 2024 (or MSFS 2020, if your license covers it), installed and run at least once
- An internet connection (weather data and license checks are online services)

No admin rights, no Node, no SimConnect setup, no other dependencies. Everything is bundled, and StrataWx installs per user to your local app data folder.



Installing

Everything installs through the **StrataSim Manager**, the hub app for StrataSim products. You never download a StrataWx installer by hand.

1. Install the StrataSim Manager using the download in your purchase email from Polar or SimMarket.
2. Activate your license in the Manager.
3. Install StrataWx from the Manager.

Can't find the email? Check your spam folder first, then reach out through the customer portal at <https://stratawxfs.com/portal>.

During install, StrataWx auto-detects your MSFS Community folder (you can browse to it yourself if detection fails), installs the in-sim panel, and creates Start Menu and Desktop shortcuts. The default install needs no admin rights.

Everything is digitally signed, so Windows should not show a SmartScreen warning. If you ever see one, stop and contact support through the customer portal at <https://stratawxfs.com/portal> rather than clicking through.

Uninstalling: always remove StrataWx through the StrataSim Manager. That is the only path that promises a clean uninstall (app, shortcuts, in-sim panel, and registry entry all removed); deleting folders by hand or using Windows Add/Remove for the app can leave pieces behind. The Manager itself is the one thing you remove through Windows: Settings, Apps, Installed apps, StrataSim Manager, Uninstall.



Activating your license

Licensing lives in the **StrataSim Manager**, the same hub app you installed StrataWx from:

1. Activate your license in the Manager.
2. Open StrataWx. If it was already open on the activation screen, click **Recheck** and it unlocks without a relaunch.

(The StrataWx activation screen also accepts a pasted license key plus your purchase email, but the Manager is the normal path.)

A few things worth knowing:

- **Offline grace: 14 days.** An already-activated install keeps working if the license server is briefly unreachable. After that it needs a connection to revalidate.
- **Entitlements are per simulator** (MSFS 2024 and MSFS 2020 are separate). If you own one and want the other, cross-grade in the StrataSim Manager. StrataWx will not let you select a simulator your license does not cover.



How it works (the mental model)

Three pieces work together, and you only ever touch the first:

1. **The StrataWx app:** the EFIS-styled window you see.
2. **The weather engine:** a background process the app starts and stops automatically. It follows your aircraft and computes the target weather.
3. **The in-sim panel:** a small package in your MSFS Community folder that applies the weather in-game.

What that means in practice:

- **App open = weather injecting. App closed = MSFS runs its own weather.** Minimizing to the system tray keeps StrataWx running.
- **The in-sim panel is optional to open.** Injection runs in the background whether or not you open it. It lives on the MSFS toolbar if you want to watch what is being injected from inside the sim.
- **The “StrataWx Live” weather preset is created automatically.** Never add or select a preset by hand.
- **The panel keeps itself up to date.** It is maintained at install time and by the app on every launch. If an update lands while MSFS is open, the panel files are locked, so StrataWx retries in the background. Restarting MSFS guarantees the update lands.

The three weather sources

SOURCE	WHAT IT DOES
Live	Real-world weather for your aircraft position, right now, updating as you fly.
Historical	Replay a past date and time, at your aircraft position or a chosen airport or lat/lon. Fly yesterday's storm, or the weather from any flight you remember.
Sandbox	Author your own weather by hand. Perfect for practicing approaches in exactly the conditions you choose.



Around the app

PAGE	WHAT IT IS
Main	The home display: the weather currently being served for your aircraft. Shows a standby state before the sim connects.
Live	Configure the live real-time source.
Historical	Set the date, time, and place to replay.
Sandbox	Build manual weather for testing and practice.
Radar	Precipitation mosaic around the aircraft.
Flight Plan	Route weather briefing.
Settings	The system console.

Flight Plan highlights: save your SimBrief username once and StrataWx can pull your latest OFP automatically, or import a flight plan file with no SimBrief account at all (`.fms` , `.pln` , `.fpl` , `.lnmpln`). You can arm a corridor so weather is planned along your route, and export historic per-fix winds and temperatures aloft to a `.wx` file (the PMDG winds-aloft path).

You also get ATIS generation per airport, hazard profiles (icing, turbulence, freezing level, ceiling, VFR/MVFR/IFR/LIFR flight rules), convective analysis, and nearby AIRMET, SIGMET and PIREP advisories.



Settings that matter

Flight (how weather reaches the sim while you fly)

SETTING	DEFAULT	WHAT IT DOES
Cloud depiction	Preset	Preset: StrataWx injects real winds aloft plus clouds, full accuracy and control. Passive: MSFS draws its own clouds and winds, and StrataWx only adds felt air effects like turbulence from the real weather.
Transition speed	Cinematic	How long a full weather change takes. Glacial (about 3 to 4 minutes), Cinematic (about 1.5 to 2 minutes), Smooth (about 40 to 60 seconds), Fast (about 15 to 25 seconds).
Turbulence intensity	Real	From Smooth to Max.
Cloud density	Default (1.0)	Below 1 thins dense decks, which helps systems where solid overcast renders grainy.
Weather range (look-ahead)	25 NM	How far ahead along your track the engine samples, so a system builds on the horizon instead of appearing on top of you. 0 is strictly local.
Auto-freeze on approach and takeoff	Off	When on, weather holds steady near the ground (takeoff roll, terminal approach, initial climb) and releases above the band.
Freeze ceiling	3000 ft AGL	The top of that hold band (1500 to 8000 ft, in 500 ft steps).

There is also a **Refresh now** button to re-fetch and re-inject immediately, and a manual **FREEZE** control on the deck that overrides auto-freeze for the current phase.



Software

- **Software updates:** shows state, with **Check now** and **Restart to update**.
- **Beta channel:** Stable or Beta. Beta gets features and fixes early and may be rougher.
- **Share diagnostics:** on by default. Sends a small snapshot (engine status and the in-sim log only). No weather data, nothing personal beyond the license email already on file. Opt out any time.
- **Send logs to support:** uploads a redacted log bundle and returns a reference number.
- **Streamer mode:** masks identifying fields (SimBrief alias, callsign, tail number, OFP id) for streams and screenshots. Route airports stay visible.

Simulator

- **Target simulator:** Auto (default), MSFS 2024, or MSFS 2020. Auto follows whichever sim is connected.
- **In-sim panel location:** shows the Community folder in use per simulator, with a **Change** button for non-standard installs.

Units and theme: temperature C or F, pressure inHg or hPa, wind kt or m/s, altitude ft or m, and wind arrows drawn true or relative to heading. Units are display-only and never change what is injected. Light and dark themes are included (dark EFIS is the default).



Updates

StrataWx updates itself. It checks on launch and every few hours, downloads in the background, verifies the download, and then waits for you: when an update is ready the button becomes **Restart to update**, so you pick the moment. If you never click it, the update simply applies on the next launch.

Updates install in place. Nothing to download by hand, no reinstall, and your license and settings are preserved. Do not download installers manually to update.

Beta testers can switch back to the stable channel in Settings at any time.



Troubleshooting

No weather is injecting / the sky is still MSFS default

1. Is StrataWx actually open? Check the system tray, it may be minimized there.
2. Is the **SIM LINK** light green? If not, the sim is not connected yet. Load into a flight.
3. Is the source set to what you expect (Live vs Historical vs Sandbox)?
4. In Settings, Simulator, confirm the in-sim panel path points at the Community folder your sim really uses. Use **Change** if your sim is installed somewhere non-standard.
5. Restart MSFS. If a StrataWx update landed while the sim was open, the panel update is deferred until the sim closes.

The panel is missing from the MSFS toolbar

Check that the panel package exists in the Community folder shown in Settings. Note that injection still works with the panel unopened, so a missing toolbar entry does not by itself explain missing weather.

“Not activated” / the app is locked

Activate in the StrataSim Manager, then press **Recheck**, or paste your license key on the activation screen. Confirm the purchase email matches. If you have been offline more than 14 days, you need a connection to revalidate.

A simulator is greyed out in the target selector

Your license does not cover that simulator. Cross-grade in the StrataSim Manager.

Weather changes too abruptly or too slowly

Adjust Transition speed in Settings, Flight.



Clouds look grainy or too heavy

Lower the Cloud density slider below 1.0 to thin dense decks.

Weather arrives too early or too late relative to the aircraft

Adjust Weather range (look-ahead). 25 NM is the default; 0 makes it strictly local.

Bumps on final / weather shifting during landing

Turn on auto-freeze and set the freeze ceiling, or use the manual FREEZE control.

My aircraft's weather radar shows nothing in the storms

This is a known limitation of injected weather in MSFS, not a StrataWx bug. Injected weather is a uniform preset, so the onboard WXR cannot render individual convective cells. Every external weather engine shares this limit. Use the StrataWx **Radar** page for the precipitation picture.

Sending logs

Settings, Software, **Send logs to support**, and add a short note about what went wrong. Logs are redacted: license keys, emails, tokens and your Windows account name never reach the file. If the upload cannot reach the server, StrataWx saves a local bundle you can attach to an email.

The app crashed

StrataWx writes a crash log you can upload from Settings after relaunching. Include the upload reference number when you contact support.



Where the weather comes from

- **METAR observations** from NOAA, trusted near the reporting station and blended into the model with distance and age.
- **Upper-air model data** with multi-model fusion and spatial interpolation, served through StrataSim's own licensed weather service.
- **Historical mode** uses ERA5 reanalysis.
- A bundled offline airport and runway database, so airport lookups work without a round trip.

Over ocean and remote terrain there may be no nearby station; the app tells you when a frame is model-only. That is normal, and winds aloft, turbulence and clouds are still valid there.



FAQ

Do I need to open the in-sim panel for weather to work?

No. Injection runs in the background. The panel is there if you want to watch what is being injected.

Do I need to pick a weather preset in MSFS?

No. The “StrataWx Live” preset is created and selected automatically. Never set one by hand.

Does launch order matter?

No. Sim first or app first both work.

Is there a Mac, Linux, or Xbox version?

No. StrataWx is Windows only.

How do I turn injection off?

Close the app. MSFS immediately goes back to its own weather. (Minimizing to the tray keeps StrataWx running.)

I own MSFS 2024. Can I use StrataWx with MSFS 2020 too?

Yes, MSFS 2020 is fully supported, and entitlements are per simulator. Cross-grade in the StrataSim Manager and you are set. No channel switching needed.

What about X-Plane?

X-Plane support is in development. No release date yet, so keep an eye on official StrataSim channels for news.



Support

The best way to reach us is the **customer portal** at <https://stratawxfs.com/portal>. You can also email **admin@stratawxfs.org**.

Either way, use **Send logs to support** in Settings first and include the reference number it gives you. It is the fastest way for us to see exactly what happened.

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PHOTOSENSITIVE SEIZURE WARNING

A very small percentage of people may experience a seizure when exposed to certain visual effects, including flashing lights or patterns. Weather simulated by StrataWx can include thunderstorms with lightning flashes, rapidly changing light conditions, and strobing aircraft lighting reflected in cloud. These effects may trigger symptoms in people with photosensitive epilepsy, including those with no prior history of seizures. Symptoms can include lightheadedness, altered vision, eye or face twitching, jerking or shaking of limbs, disorientation, confusion, or momentary loss of awareness. If you or anyone using the software experiences any of these symptoms, stop immediately and consult a doctor. Parents should watch for or ask children about these symptoms. You can reduce exposure by using the Sandbox source to avoid convective weather, sitting farther from the screen, using the software in a well-lit room, and taking regular breaks.

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