



Reduce Risk and Improve Your Bottom Line with Rapid Update Turbulence Forecast

In-flight injuries caused by turbulence are the leading cause of compensation claims by airline staff. Turbulence also leads to increased fuel consumption as pilots try to find smoother air. In short, it is both a safety risk and a financial headache for airlines.

Accurate weather intelligence can help you reduce risk to passengers and crew while improving your bottom line. We offer an industry-first approach to managing convective turbulence. DTN Rapid Update Turbulence Forecast is an enhanced nowcast turbulence forecast. Offered with DTN AviationSentry® we provide near real-time tactical intelligence dataset that delivers global coverage and integration with the world's most popular flight tracking and electronic flight bag services. With it, you can make better-informed decisions on flight path changes during thunderstorms, helping keep crews safe and reduce compensation claims.

Improve operational confidence, communications, and tactical decision-making related to convective turbulence.

With Rapid Update Turbulence Forecast you can

- Plan and avoid routes with forecasted turbulence
- Make fast and efficient decisions on flight path changes due to thunderstorms, saving fuel and minimizing arrival delays
- Ensure a safer working environment for passengers and crew by avoiding turbulence
- Incorporate our aircraft-specific forecast and alerts into your existing setup

Get turbulence intelligence when you need it

Real-time – fast access to turbulence insights

The DTN Rapid Update Turbulence Forecast provides real-time calculated turbulence intelligence for thunderstorm-induced conditions. It uses our best-in-class lightning networks, which show where lightning is occurring every minute, 24/7. The Rapid Update Turbulence Forecast leverages these high-density, remote-sensing networks in its prediction algorithm, ensuring that you can quickly access these critical insights.

Global – accurate data and coverage, everywhere

DTN produces two Rapid Update Turbulence Forecast outputs: a high-resolution domain over North America and a global domain. Each output updates every 10 minutes and has 22 flight levels of forecasted turbulence – from 1,000 feet (FL010) to 53,000 feet (FL530).

The Rapid Update Turbulence Forecast is quantified in units of Eddy Dissipation Rate (EDR), which is the rate that turbulent energy dissipates into the atmosphere. This metric is an atmospheric, aircraft-independent, measurement of turbulence.

Specific - forecasts designed with your aircraft in mind

Our Rapid Update Turbulence Forecast replaces current categorical and non-aircraft specific products with new, industry-first aircraft-specific forecasts.

Integration with our Flight Route Alerting infrastructure and third-party applications allows it to fit into your specific setup.

How we help

The Rapid Update Turbulence Forecast is fully-operational, with 24/7 support for convective turbulence forecasting. Outputs are available in multiple formats, including Shapefile and PNG images via the DTN Web Mapping Services API. It enables better decisions across multiple roles.

- Pilots can view the data in the cockpit with electronic flight bag applications, so they can clearly understand convective turbulence potential for their altitude and position.
- Dispatchers and flight followers can see the data in our AviationSentry® solution or in their flight tracking application to quickly understand which flights will likely be impacted.
- Pilots and dispatchers can receive alerts in our flight route alerting tool when their planned route will intersect with an area of forecasted turbulence. This allows them to climb, descend, or move to avoid potential turbulence.

The DTN Advantage

We help you better prepare for any necessary flight path changes related to thunderstorm-induced turbulence. You'll anticipate the impact in advance, which will help prevent or reduce injuries, expensive compensation claims, and excessive fuel consumption. The DTN Rapid Update Turbulence Forecast empowers you with intelligent, actionable insights to support your success every day.