

# METEOMATICS WEATHER API

Everything you need, on demand

# ABOUT METEOMATICS

## Meteomatics Is the Global Leader in Weather Intelligence

Forecast accuracy and direct, easy access to weather data are the most important criteria for companies seeking reliable weather information. With our Weather Intelligence approach, we aim to take the accuracy of weather forecasts to an entirely new level. To achieve this, we tap into the exceptional skills of our employees to develop unique forecasting technologies and high-resolution weather models such as EURO1k.

By utilizing the world's most accurate weather and climate data, companies can improve operational processes, respond quickly to changing environmental conditions, and better manage extreme weather situations. Meteomatics provides over 20 petabytes of global weather data, ranging from historical weather data to current, forecast, and climate scenario data. This allows companies to access weather information from 1940 to 2100 through a single API interface with the highest degree of flexibility and data delivery speed.

## Company Profile

Meteomatics serves over 600 leading B2B companies worldwide and employs around 150 people in Switzerland, Germany, the United Kingdom and the United States. Headquartered in St. Gallen, Switzerland, Meteomatics is the world's only company to compute a 1 km high-resolution weather model with hourly updates covering all of Europe. Additionally, it is the only company that develops weather drones equipped with de-icing capabilities, capable of autonomous flight at altitudes of up to 6 km.

# OUR RESPONSIBILITY



As the world's leading provider of weather information, we know all too well the climate challenges of the century and understand our responsibility towards society and the environment.

Through our services, we promote the use of renewable energies and create innovative solutions that facilitate the energy transition, warn society about dangerous weather events, and help the agriculture industry plan their resources and protect their crops.

## GET IN TOUCH – WE ARE HERE FOR YOU.



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# WHAT IS A WEATHER API?

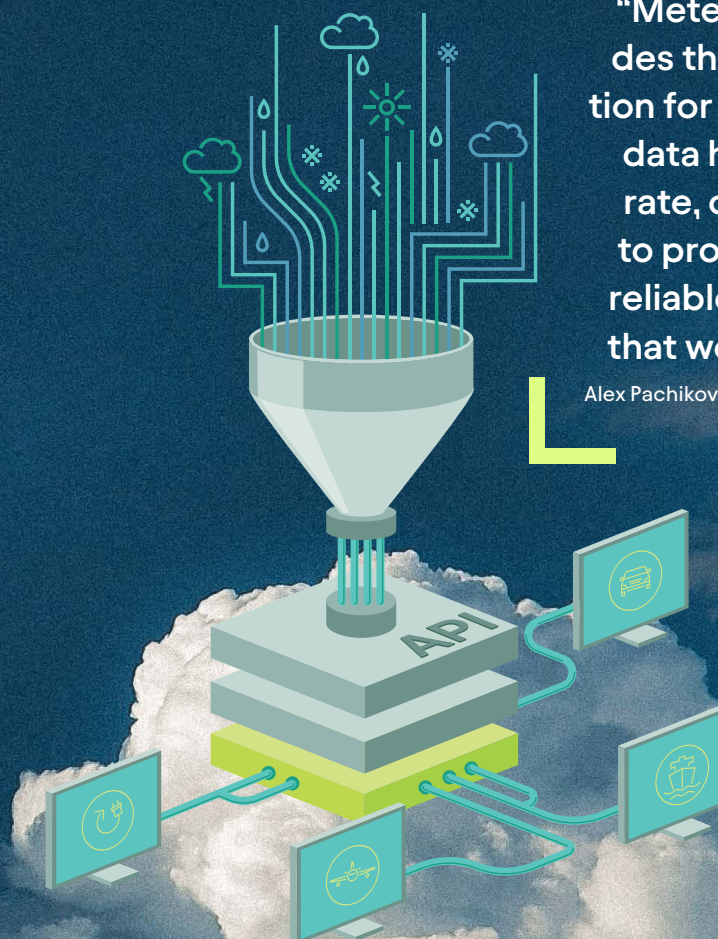
An API, or Application Programming Interface, offers a versatile interface for various programming languages, allowing developers to seamlessly integrate data into their systems in the desired format with just a few simple steps.

The Meteomatics Weather API provides comprehensive data on weather and climate. It offers access to over 25 weather models (e.g., GFS, ECMWF, DWD, Météo France, UK Met Office, HRRR, and many more) and more than 1,800 weather parameters. Our interface is the gateway to the largest database of historical weather data, forecast data, and climate data worldwide.

## 600+ HAPPY B2B CLIENTS

Meteomatics customers report:

- 50% time savings on weather-related tasks
- Improved product quality, reducing their customer complaints by 2/3
- 30% cost savings through efficiency gains and risk mitigation



"Meteomatics provides the perfect solution for our needs. The data has been accurate, complete, easy to process and 100% reliable in all the time that we have used it."

Alex Pachikov, CEO, Sunflower Labs Inc.

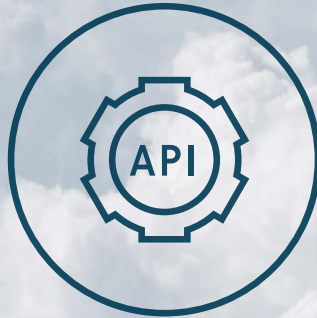


# THE CHALLENGE WITH WEATHER DATA

## The Solution: The Meteomatics Weather API — Get Everything You Need, in Any Format and in Real Time

Weather data is highly complex, and its volume is constantly increasing as weather science advances. Handling this data, especially with formats like GRIB2 and NC, requires a lot of computer power. This process can

be both costly and time-consuming, often leading to weather forecasts being delivered too late to be useful. However, with Meteomatics, things are different. Our technology is designed to process vast amounts of weather data quickly and efficiently, ensuring that forecasts are delivered on time and ready for use.



Get quick and easy access to the world's most accurate weather, marine, environmental and climate data for every coordinate on Earth.

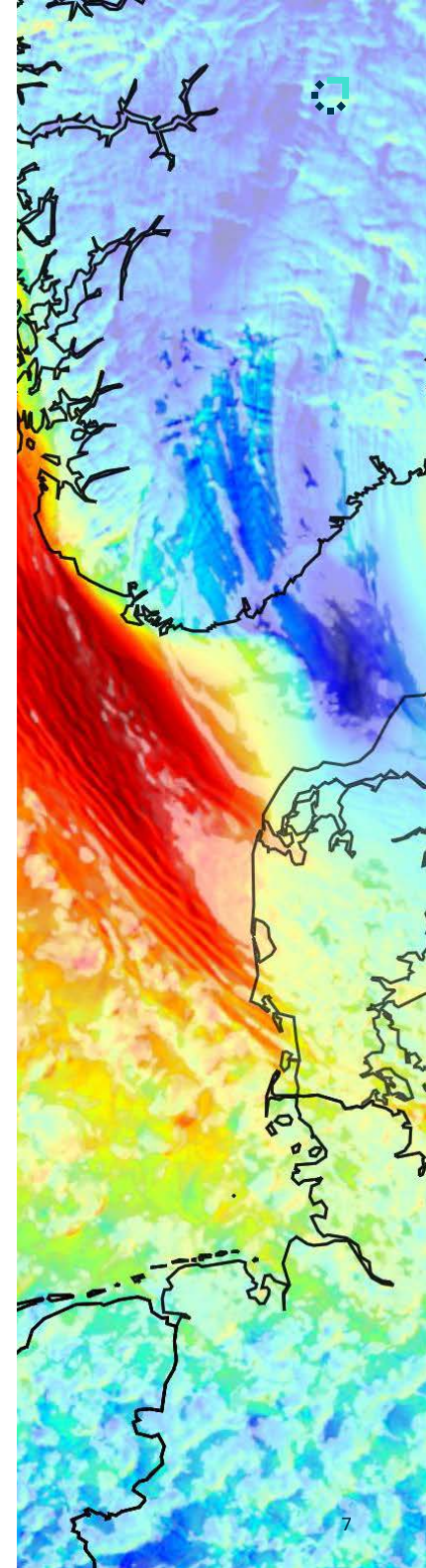
## METEOMATICS WEATHER API

Access the Largest Weather Database in Real Time

## What Does the Weather API Offer?

Meteomatics provides customized solutions based on our powerful Weather API. With our unique Weather API, you get access to weather data easier, faster and more accurately than ever before.

- Our Weather API as SaaS: We provide the API and the IT infrastructure – you use the API
- Fast, direct and easy access to global weather, environmental, climate, ocean and water data
- Model data (ECMWF, UKMO, etc.), station data, satellite images, radar data and lightning data
- Proprietary and high-resolution weather models for unique forecast quality
- Over 1,800 different weather, ocean and environmental parameters
- Forecast data, ensemble and trend forecasts up to 7 months
- Climate data including climate scenarios up to the year 2100
- Historical data from 1979 onwards, including historical forecast data
- A detailed and constantly updated documentation
- A flexible, fast and scalable environment: updates without rewriting code
- Constant extensions and updates with new data sources and industry-specific parameters



## Advantages Over Other Weather API Providers:

- One source, one interface: Query multiple parameters simultaneously for single or multiple sites, routes and areas
- Query data in real time with a response time of a few milliseconds
- Real-time access to over 7 petabytes thanks to unique data processing technology (Meteocache)
- “On the fly” downscaling using topographic maps enables 90-meter resolution worldwide, vastly improving accuracy at the local level
- High resolution of the data per minute
- Highest data quality: over 1,640 updates per day ensure accuracy and timeliness

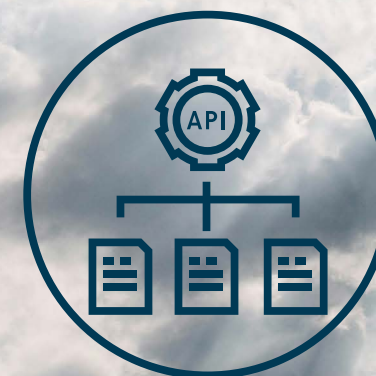
## METEOCACHE – MODELLING WEATHER DATA IN REAL TIME

The Meteomatics Weather API is powered by our Meteocache, a sophisticated background caching system that stores a large amount of observational data. It allows the Weather API to recalculate forecasts with the latest available information about the state of the atmosphere.

Furthermore, we improve the accuracy of weather data by taking into account the details of the topography. Based on a proven interpolation technique, the latest weather

data from the weather models are combined with model data from NASA’s 90m digital terrain model and refined to produce higher local accuracy.

The Meteocache ensures that large amounts of data can be modeled and provided “on the fly” i.e., in real time. It matches the data in time and space and ensures that the Weather API can return the requested data query efficiently and very quickly despite the size and format of the original data set.





# HOW CAN YOU INTEGRATE THE WEATHER API'S DATA INTO YOUR WORKFLOW?

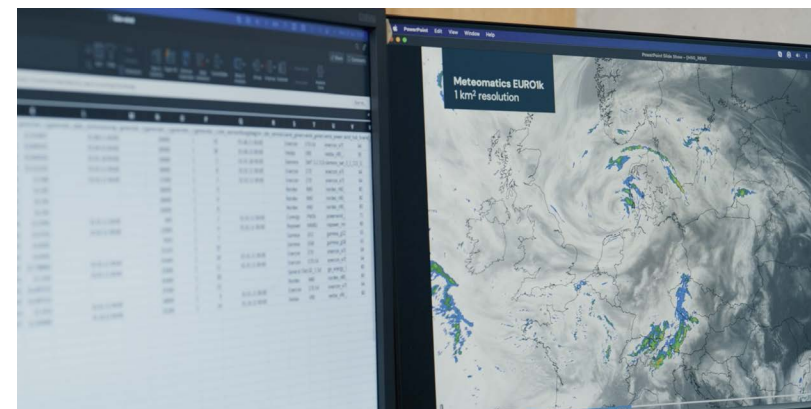
It couldn't be simpler! The Weather API offers convenient access to a wide range of weather data and can be integrated into third party software platforms or your own systems with just a few lines of code.

For each programming language, a detailed description is available in our documentation. Our videos provide additional support for integrating the Weather API into your environment without any problems.

## Data Connectors and Formats

Across several programming languages, we offer free connectors on Github. Query data in real time with a response time of a few milliseconds:

- MATLAB, Python, C++, R, Java, C#, JS
- Excel, Power BI, Go, ArcGIS, Julia, QGIS and many more

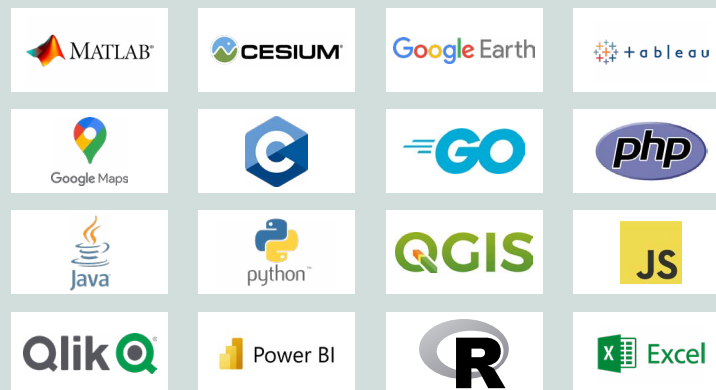


## OUR OUTPUT FORMATS

Weather information needs to be stored or further processed. Standard output formats ensure that the weather data you obtain through our Weather API can be delivered in the format that suits your needs, such as CSV, XML, JSON, HTML, PNG/WMS, GeoTIFF, NetCDF, and more.

A RESTful API provides seamless access to historical, current and forecast data. THE WMS/WFS capability of our data enables integration into visualizations.

We offer multiple connectors on our GitHub





We improve the business of over 600 leading companies worldwide. Here are some examples of popular use cases:

"The Meteomatics Weather API is unique in the market as it provides flexible and fast access to a huge amount of weather data in different data formats."

Sibylle Wiederkehr, Senior Operations Research Analyst, BKW

**Axpo:** Power traders at Axpo use the Meteomatics Weather API to optimize power trading and make more informed decisions. This results in improved trading outcomes and helps them optimize their resources in the most efficient way.

**Toyota:** Toyota utilizes our Weather API to manage energy consumption in its European assembly plants and factories, thereby contributing to the conservation of the environment and making financial savings at the same time.

**BKW:** The Meteomatics Weather API makes the procurement of weather data at BKW easier, faster and more flexible than ever before, and is thus facilitating the integration of renewable energies into the electricity market. This makes the use of renewables more cost-efficient.

**ENEL:** ENEL Green Power adopted the Meteomatics Weather API to access and utilize weather data more efficiently and easily than ever

before. The integration of the Weather API has brought several benefits to ENEL, including greater flexibility in design and service extensions, improved process and staff efficiency, and enhanced services for their clients.

**Unisphere:** Thanks to Meteomatics' high-resolution weather data used in Unisphere's flight management

software, Unisphere is improving the safety and efficiency of drone and air taxi flight operations.

**Heimdall Power:** Using sensor data from power lines in combination with data from Meteomatics, Heimdall Power can deliver an average increase of 25% in transmission capacity of high-voltage power lines.

## We Improve the Business of Leading Brands Worldwide

Contact us today to get professional advice on how we can improve your business.

# WEATHER API ACCESS

The Weather API is fully customizable to your needs. The pricing depends on the configuration of your account. The API for Business includes:

- Queries individually coordinated
- Over 1,800 parameters
- Deterministic forecast up to 15 days
- Extended forecast up to 46 days
- Ensemble trend forecast up to 7 months
- Climate projections up to the year 2100
- Historical data back to 1979, including historical forecast data
- Global resolution of 5 minutes and 90 meters
- Support 24/7

"We carried out a robust verification study, which included forecasts from seven leading weather companies. The study identified Meteomatics as providing the most accurate forecast across a number of locations within Romania."

Matei Stratan, CEO, Ogre.Ai

# TECHNICAL INFOS



**With the Meteomatics Weather API, You Get:**

**Unlimited Access:** The API supports an infinite number of requests per day.

**Versatile Interfaces:** Offers WMS, WFS, and several other formats for seamless integration.

**Fast Response Times:** Delivers forecasts with an average response time of 20 to 30 milliseconds, depending on the query.

**Secure Operation:** Utilizes HTTP basic authentication and supports HTTPS for secure data transmission.

**RESTful API:** Easily query weather data via URL for convenient access.

**Comprehensive Data Access:** Provides a single interface for historical and current weather data, weather forecasts, climate models, and data from over 25 weather models.

## WEATHER API FOR BUSINESS: TEST FOR FREE

Start a 14-day free trial to get familiar with the Weather API. We're here to support you every step of the way.

**WE HELP YOU SET UP YOUR ACCOUNT.**



**Talk to an expert**



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# CREATING VALUE WITH UNIQUE FORECASTING SOLUTIONS

Products and Solutions by Meteomatics



## WEATHER API

With our Weather API you get continuous access to global high-resolution weather, ocean, environment and climate data as well as historical data, real-time data, forecasts and climate scenarios up to the year 2100.



## EURO1k: WEATHER MODEL

European weather model at 1 km resolution (other areas upon request): get accurate weather forecasts across Europe to make better business decisions.



## MAPS AND VISUALIZATIONS

Visualize all weather events in a high-resolution map view – with our web-based weather map tool MetX based on the Weather API.



## METEODRONES

Close the meteorological data gap in the earth's lower and mid atmosphere with Meteodrones, designed and assembled in Switzerland.



## ENERGY FORECASTS

Energy forecasts for solar, wind and hydropower – based on the world's most accurate weather data. Customized, accurate and easy to integrate.



## WEATHER WARNINGS

Weather warning parameters can be customized with individual thresholds based on the requirements of the user. With real-time data and nowcasting, you are informed on time to make better decisions in critical weather situations.



## WEATHER DATA SHOP

If you only need one-time access to weather data, you can directly download weather data sets from our weather data shop. You will find a selection of current and historical weather data as well as industry-specific weather parameters.



## CLIMATE DATA

Standardized time series until the year 2100 with one query – for any place on the world. Data for five climate scenarios (SSP) is available based on the IPCC's Shared Socioeconomic Pathways.

## GET INSPIRED AND LEARN FROM OUR USE CASES

Our expert team of meteorologists and scientists is continuously working on the optimization, accuracy and availability of our data to deliver reliable solutions for your business.



**WATCH OUR  
VIDEOS ON  
YOUTUBE!**







[www.meteomatics.com](https://www.meteomatics.com)



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