Vaisala Lightning Detection Networks

/ BECAUSE ACCURACY MATTERS

VAISALA

Vaisala Lightning Detection Technology

If you have to provide forecasts and weather services for your country, and make decisions about the safety of people, you want to have the most accurate information possible, especially when severe weather and lightning is a threat. Including lightning detection information alongside your standard weather data ensures that you are providing the highest level of service for your citizens and supporting the expansion of economic development. For decades, meteorological agencies around the world have relied on Vaisala lightning detection technology to improve forecasts and weather services for their countries.

The Benefits of Accurate Lightning Detection

Better Forecasts

Lightning data are used in weather models, which have a huge impact on daily forecasts. Having accurate data in those models equates to better forecasts, advanced warnings and safer communities.

Better Weather Services

Providing lightning data and warnings to your aviation authority, electrical services provider, national security, or other in-country agencies allows them to better serve citizens and support economic development.

Trusted Decisions

Having accurate lightning data allows you to make confident decisions to protect life and property. Keeping citizens and visitors safe, especially during high-profile events such as during outdoor concerts or athletic functions, builds trust in forecasts and warnings, which results in lives saved.
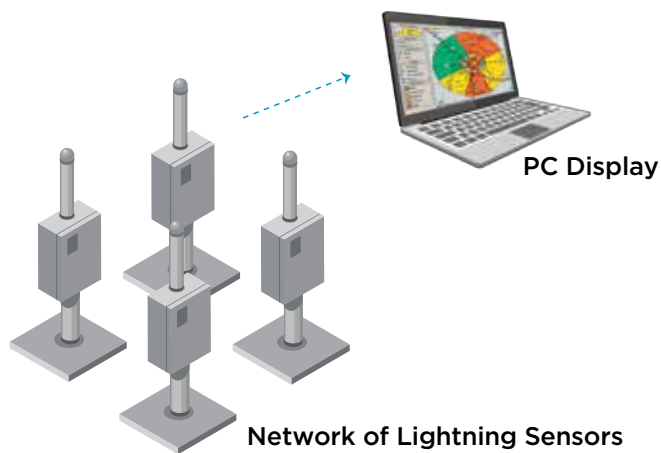
Vaisala Lightning Detection Networks

A lightning detection network is a system of ground-based sensors, strategically placed to detect electro-magnetic pulses emitted by lightning. The sensors detect the electro-magnetic pulses, and a central processor combines the information from many sensors to characterize and pinpoint the lightning. Vaisala offers two solutions:

Precision Lightning Networks

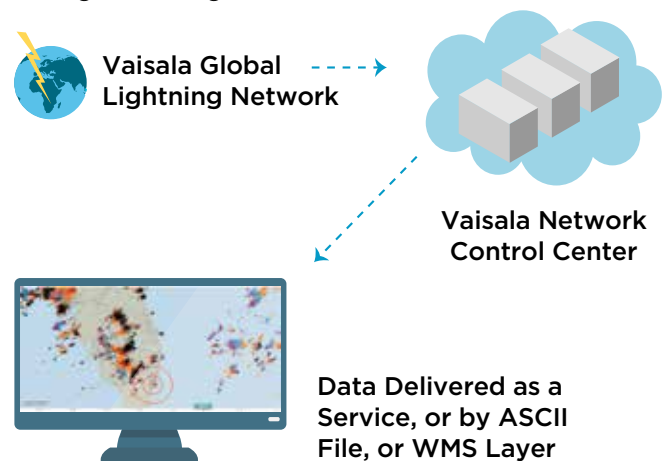### Invest in Your Own Lightning Network

- Over 95% detection efficiency for cloud-to-ground lightning
- Cloud-to-cloud flash detection efficiency of 50-60%
- Location accuracy is better than 100 m

PC Display

Network of Lightning Sensors

Global Lightning Network

Vaisala GLD360 Subscription Service

- Detects 100% of thunderstorms
- Detects 8 out of 10 cloud-to-ground flashes
- Location accuracy is 2-3 km
- Begin receiving data within a week

Vaisala Global Lightning Network

Vaisala Network Control Center

Data Delivered as a Service, or by ASCII File, or WMS Layer

Know What You Are Getting

Investing in a lightning network is a big decision. Vaisala will work with you to provide a cost effective solution that best fits your needs and future goals. There are some important factors to consider when deciding to implement a lightning network.

Cloud & Cloud-to-Ground Lightning Detection

Modern lightning detection networks detect both cloud lightning and cloud-to-ground lightning. Vaisala detects both types of lightning, providing a comprehensive view of the activity in a storm. In addition, Vaisala's precision network technology is the first and only technology to use pulse classification instead of altitude to correctly distinguish between cloud and cloud-to-ground lightning. Misclassification of lightning is not a good input for modeling, forecasting, and weather warnings, which impact people and commerce.

Quality, Reliability and Accuracy

The quality and reliability of data is of utmost importance because it is the basis for models, forecasting and operational decisions. All Vaisala lightning detection technology is proven and scientifically validated. We care about the lightning data you are receiving, and want you to have the most correct information as possible to make decisions. Partnering with Vaisala helps you improve the safety of your citizens during severe storms and build a weather ready nation.

Less is More

More sensors does not mean better data! With Vaisala technology, fewer sensors bring highly accurate data and a more reliable network. Our lightning networks provide significantly greater accuracy with 70% fewer sensors than any alternative. Fewer sensors bring cost savings in total cost of ownership, installation, site hosting, hardware maintenance and are a more sustainable solution. Contact Vaisala to discuss more about our technology and why it is a better choice for your investment.

A Trusted and Experienced Partner

Confidence Starts with Experience

GLOBAL
Vaisala established the first global lightning network for customers to receive lightning data anywhere, at any time in the world.

90%
of meteorology offices in the world choose Vaisala lightning data to improve the safety of their communities during severe storms.

TOTAL LIGHTNING
Vaisala detects and properly classifies both cloud and cloud-to-ground lightning, providing comprehensive information for the specified area.

OVER 30 YEARS
Vaisala's lightning information services are based on over 30 years of experience in operating lightning networks and providing lightning data services from our data centers.

OVER 1,000
scientific references on Vaisala lightning detection technology.

RESOURCES
Vaisala provides the most educational resources with webinars, users' groups meetings, and we host the ILDC/ILMC lightning conference.*

EXPERIENCE
Vaisala has operational experienced meteorologists and numerous PhDs in meteorology and lightning physics.

* View archive ILDC/ILMC scientific papers at www.vaisala.com/ildc.

Lightning Expertise

Vaisala lightning networks are built on over 80 years of experience in weather measurement technology. Vaisala sets the world standards for lightning detection, our technology is scientifically proven, and we have thousands of references in the scientific community.

Vaisala lightning technology and data is operationally used by the US National Weather Service and the Federal Aviation Authority (FAA) – and has been for over 25 years.

Vaisala has successfully established over **90** lightning networks in 45 countries

---

VAISALA

Please contact us at
www.vaisala.com/requestinfo

www.vaisala.com

Scan the code for more information