Global Total Lightning Solutions

aem

Precise lightning data leads to better decisions

In a flash, dangerous lightning can put your customers, vital business operations, or critical infrastructure at risk. From airports and renewable energy companies to mines and disaster management agencies, it is crucial to have accurate and reliable lightning detection technology and data to safeguard lives and protect property. That's why AEM is here to help.

BETTER GLOBAL TOTAL LIGHTNING DETECTION

With more than 1,800 lightning sensors deployed across the globe, our Earth Networks Total Lightning Network® (ENTLN) uses sophisticated algorithms to deliver superior location accuracy and detection efficiency.

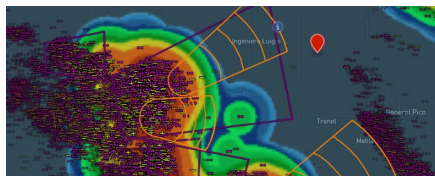**<100m** Accuracy

95% Detection efficiency

How does AEM support customers all over the world?

Our comprehensive portfolio offers flexible lightning data, sensors, software, and alerting solutions that cater to your specific needs and improve decision-making. All backed by an experienced Customer Success team dedicated to deliver the training and maintenance required to help you achieve your goals. We connect you with more accurate and reliable lightning information so you can create better forecasts, maximize business continuity, and provide a high standard for safety.

PRECISE GLOBAL LIGHTNING DATA

The Earth Networks Total Lightning Network offers the world's most reliable and accurate lightning detection data. Use ENTLN data to power forecast models, track real-time lightning, or analyze years of historical data to uncover the impact of severe weather on your business.

REAL-TIME SITUATIONAL AWARENESS AND ALERTING

Quickly assess risk and track lightning around the world in real time with Sferic Maps® web-based collaborative platform. Deliver custom, hyperlocal alerts to key personnel and automatically activate area alerting systems to clear outdoor spaces when lightning threatens.

CUSTOM LIGHTNING DETECTION SYSTEMS

Use advanced technology and tools powered by specialized algorithms to improve the accuracy of lightning data across an area of interest. Deploy a Public Network using ENTLN data to share information with anyone who needs it or build a Private Network to maintain control of your data.

Lightning Data Services

Unlock total lightning data from around the world and bring real-time and historic insights into your own applications and analytical models. AEM operates the largest real-time lightning sensor network in the world using integrated data from global sources to deliver precise, accurate, and reliable weather information.

Keep your organization safe and plan ahead with advanced lightning data solutions powered by the Earth Networks Total Lightning Network.

Key Benefits:

- Quickly and easily integrate high-quality weather information in the desired format into your apps, business tools, and analytics.

- Get simple, direct access to historical or live total lightning and weather data in the way that works best for your organization.

- Near real-time access to reliable lightning data with maximum detection efficiency and location accuracy.

Key Industries:

- ✈ Aviation
- 🗼 Energy utilities
- 🏛 Government agencies
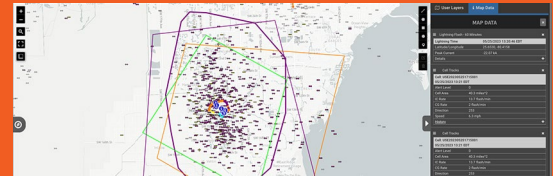- 🔬 Research and analytics
- 🌦 Weather & forecasting services
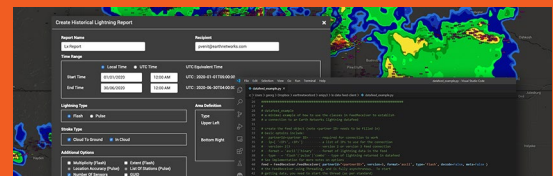
Our Lightning Data Services

Lightning API

Integrate fast, accurate lightning data in weather-related software, applications, and models or analyze historical lightning data for past 24 months.

Lightning Data Feed

Real-time IC and CG data feed with detailed lightning strike attributes delivered via multiple convenient options (Binary, JSON, UALF, CSV).

Lightning Archive

Easily view or download up to 10 years of historical lightning activity within Sferic Maps or Contrail to investigate lightning incidents in operational areas.

Situational Awareness and Alerting

Powered by the Earth Networks Total Lightning Network, our integrated platform and alerting systems allow organizations to track storms and lightning in real time, automatically communicate lightning threats to their audience, and keep people informed on when it will be safe to resume their normal activities.

Key Benefits:

- Minimize financial risk due to weather-related downtime and delays with real-time, accurate lightning information.

- Protect employees and customers from dangerous storms with automated alerts, sirens, and an all-clear countdown.

- Comply with international safety standards and protocols connected to lightning and severe weather.

- Increase response time with immediate notifications to key personnel.

Key Industries:

- Aviation
- Education
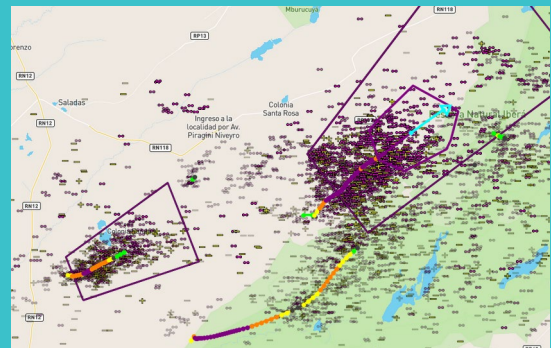- Energy utilities and renewable energy
- Government agencies and military
- Mining

Our Situational Awareness and Alerting Solution

Lightning Monitoring and Alerting Dashboard

Watch live lightning strike data displayed on an interactive weather map.

Configure fast, accurate lightning alerts for any location in the world to notify via email, text, and push notification.

Visible and Audible Lightning Alarms

Allow the power of automation to help you make safer weather-related decisions.

Use Sferic Siren Outdoor Alerting System to instantly alert everyone outdoors to seek shelter when lightning is detected.
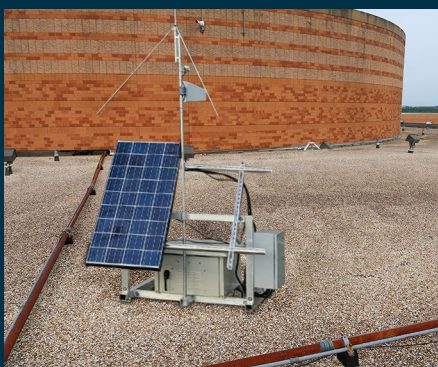
Use a Wall-Mounted Alerting System to notify indoor operations and visitors to adjust outdoor activities.

Custom Lightning Detection Systems

Partner with AEM to deploy a tailor-made total lightning network integrating advanced technologies and superior data processing methodologies to improve the accuracy, reliability, and security of weather information across your region, country, or any area of interest.

AEM's Custom Lightning Detection Systems have been helping major global organizations and agencies minimize operational risk and safeguard lives for 13+ years.
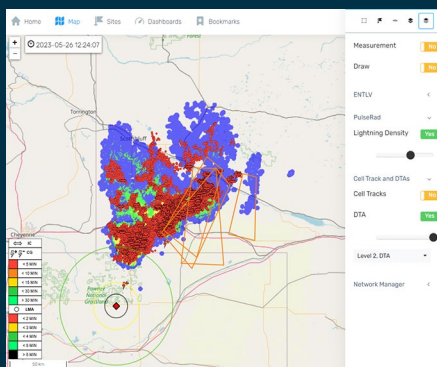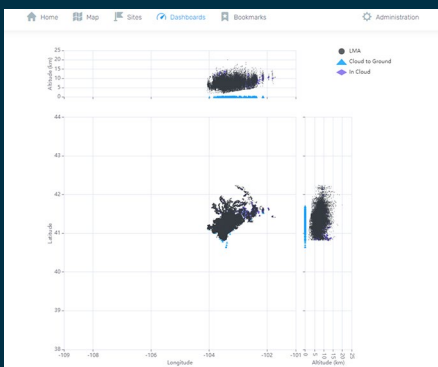
Our Custom Lightning Detection Systems

Innovative Detection Technology

Industry-leading Lightning Sensor offers exceptional detection efficiency and location accuracy.

Premium Lightning Mapping Array (LMA) sensor maps lightning in 3D for highest precision.
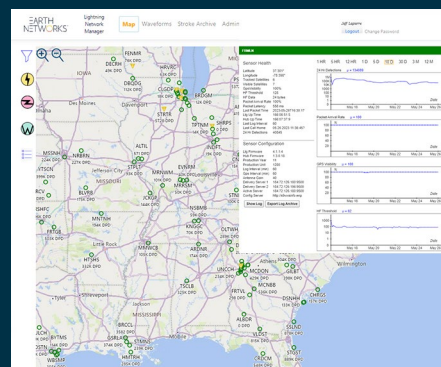

Real-time Display and Alerting Platform

Gather and view critical insights based on real-time and historical data from your network.

Configure alerts to notify personnel via email or text when lightning threatens specific assets or locations of interest.

Layer in proxy radar with to use lightning density to obtain rainfall estimates in remote areas.

Receive Dangerous Thunderstorm Alerts (DTAs) based on a 45-minute nowcast of lightning threats.

Remote Sensor Management, Diagnostics, and Performance Monitoring*

Easily manage and monitor your entire network from anywhere using one application.

View and change sensor configurations, including antenna sensitivity and data collection protocol.

Monitor performance and health for each sensor, including GPS tracking, environmental noise, size and latency of data packets sent to the central server, amount of lightning the sensor is contributing to, and more.

*Network Manager is only available with Private Networks

Public Network vs. Private Network

Public Network

From aviation and energy utilities to forecasting services and government agencies, organizations deploying a Public Network want to:

- Share accurate lightning data with anyone who needs it.

- Access ENTLN's vast global network of established sensors and technology.

- Further improve accuracy by deploying lightning sensors where you need them.

Private Network

Our Private Network allows military and government agencies, meteorological institutions, and environmental research organizations to:

- Maintain complete control of their network and data in a closed system.

- Reduce risks to national security, vital operations, and critical infrastructure that arise from false or inaccurate weather information.

	PUBLIC NETWORK	PRIVATE NETWORK
DATA		
Source	ENTLN	Standalone closed network
Data sharing and security	Cloud data can be shared with stakeholders based on organizational needs	Closed, secure data accessible to approved users only
SENSOR TECHNOLOGY		
Lightning Sensor	Yes (Optional)	Yes
Lightning Mapping Array (LMA)	No	Yes (Optional)
DISPLAY AND ALERTING PLATFORM		
Platform	Sferic Maps (SaaS / Cloud)	Contrail (On-site)
Historical Lightning	Yes (Optional)	Yes (Optional)
Early Warning (DTA)	Yes (Optional)	Yes (Optional)
Proxy Radar	Yes (Optional)	Yes (Optional)
NETWORK MANAGER	No	Yes

Key Industries:

- Government agencies
- Military
- Meteorological agencies
- Research and analytics

Let's start a conversation

At AEM, we appreciate that every organization's severe weather and lightning detection needs are unique to their risk management and business structure and operating environment. That's why our team of lightning solutions experts is here to help you craft an end-to-end lightning network that works for your team, your needs, and your budget.

To learn more about how our accurate and reliable lightning data and technology can help you safeguard lives and property, be sure to **contact AEM** today so we can start a conversation about the right solution for your needs.

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