TOTAL LIGHTNING NETWORK

WORLDWIDE LIGHTNING DETECTION

Earth Networks Total Lightning Network® (ENTLN) incorporates the most advanced lightning location technology delivering unsurpassed lightning detection efficiency and location accuracy.

OVERVIEW

Our Total Lightning Network is the first of its kind. With over 1,200 sensors in 40+ countries around the world, our network is the most extensive and technologically-advanced global lightning network. Our ability to monitor in-cloud lightning sets us apart from other lightning networks by enabling the most complete lightning system. Detecting in-cloud lightning enables us to generate faster, localized storm alerts and warn of other forms of severe weather like tornadoes, downbursts and hail.

BENEFITS

COST EFFECTIVE

Very low ongoing maintenance and operational costs with 24/7 network monitoring and support from anywhere. Remote system diagnostics and upgrade capabilities.

NETWORK DENSITY

Cost-effective sensor technology enables dense network build-out on a large scale allowing for unsurpassed detection efficiency and location accuracy globally.

GLOBAL SCALE COVERAGE

Lightning detection capabilities and network architecture deliver scalability and cause for significant improvement in severe storm warning lead times for greater asset protection anywhere in the world.

MULTI-INDUSTRY SOLUTION

Advanced analytics, display capabilities and the option for hosted or standalone configurations meets the needs of weather sensitive users and industries worldwide. This includes federal and national governments, energy and utilities, aviation, outdoor recreation, insurance and telematics, and education.

Earth Networks' lightning technology and real-time data services have enabled us to rapidly expand and enhance the Australia Total Lightning Network. EN assigned a team of individuals who assisted in the design, siting and implementation of the network. The operational support and low maintenance requirements have made the ATLN an extremely cost effective solution. We are extremely pleased with the detection efficiency and location accuracy and aim to expand the service throughout the country of Australia, so that early warning benefits of this technology could benefit more government organizations, businesses and communities."

Charles Solomon,
Managing Director, WxZone

EARTH NETWORKS®

KEY FEATURES

- Global Lightning Network (GLN)
- Unique sensor technology
- Lightning activity detection system
- Total lightning detection
- Dangerous Thunderstorm Alerts

WE DETECT STRIKES YOU CAN'T SEE

Cloud-to-ground lightning represents only a small percentage of the total lightning discharges that occur in the atmosphere. In fact, in-cloud lightning flashes account for the vast majority of lightning activity. Our unique capabilities detect long-range in-cloud lightning at high efficiencies, which are critical for the advanced prediction of potentially deadly weather events that often occur within 5 to 30 minutes of in-cloud flash initiation.

Largest Global Lightning Network

- 1,200 sensors in 40 countries
- Dense sensor deployment needed for high-efficiency capture of total lightning activity
- Advanced analytics and display capabilities
- Improved lead times for identification of storm cell growth and development
- Early storm warning capability

Unique Sensor Technology

- Industry-leading broad frequency range extending from 1 Hz to 12 MHz
- Detection of in-cloud and cloud-to-ground lightning. Competing lightning networks are constrained to frequencies of up to just a few hundred kilohertz
- Superior timing and range accuracy

Lightning Activity Detection System

- Time-of-arrival detection methodology
- GPS technology and sophisticated algorithms for every stroke
- Accurate lightning location and classification (IC/CG) for assessing storm development
- Global detection efficiency

Total Lightning Detection

- Detect long-range in-cloud lightning at high efficiencies
- Significantly improves severe weather warning times over radar and other technologies
- Highly advanced predictive capabilities crucial for characterizing severe storm precursors, improving severe storm warning lead times, and comprehensive weather management planning
- Prediction of tornadoes, cyclones, heavy rain and monsoons, downburst winds and hail

Dangerous Thunderstorm Alerts

- Automated and customized delivery and alerting
- Constantly monitors dangerous weather conditions and issues customized alerts in real time
- Used all over the world to help detect high rates of lightning, which indicate increased potential for dangerous conditions

CONNECT WITH US

For more than 20 years Earth Networks has operated the world's largest and most comprehensive weather observation, lightning detection, and climate networks.
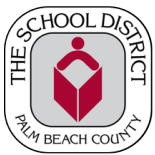
Our observations inform and alert consumers, enterprises and governments around the world, providing them with advanced environmental intelligence for decision making and safety.

📱 (301) 250-4000
✉ info@earthnetworks.com

Earth Networks enables us to give exact geographic severe weather warnings to our schools right when it's happening, right where it's happening and that's important to us.

Fred Cahill, Safety Professional, Palm Beach County School District, Florida

TRY SFERIC MAPS & MOBILE FOR FREE

With your free trial, you'll have access to your Sferic Maps dashboard on-the-go and receive push notifications of active alerts for both your current location and other key locations.

ANDROID APP ON Google play

Available on the App Store

KEEP VISITORS AND EMPLOYEES SAFE, PROTECT PROPERTY, AND MANAGE RESOURCES

Be the first to know when severe weather threatens and track the storm in real-time with Sferic Maps & Mobile.

OVERVIEW

Sferic Maps & Mobile aggregates and visualizes data from:

- ▸ Earth Networks Total Lightning Network (ENTLN)
- ▸ 17,500+ weather stations
- ▸ Partner networks
- ▸ Publicly available sources (U.S. National Weather Service)

BENEFITS

Plan ahead for severe weather with current and forecast observations

Improve situational awareness with 130+ layers of weather data and automated alerts

Quickly assess risk and act with easily accessible desktop and mobile solutions

Reduce false alarms and uncertainty with hyperlocal, highly accurate alerts

KEY FEATURES

- 130+ map layers
- 10+ base layers
- 17,500+ weather stations
- 1,800+ total lightning sensors
- Import custom layers for key locations
- Customizable mobile, text, and email alerts
- Location-based mobile alerts

FEATURED LAYERS

- Real-time lightning flashes and pulses
- Animated current and forecast radar
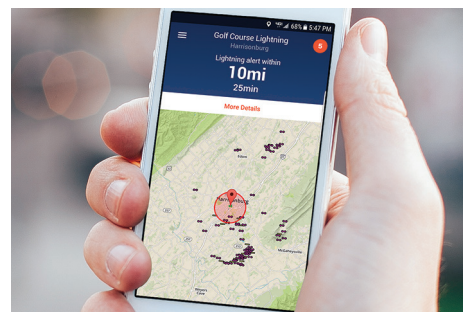- Current and forecast temperatures
- Real-time wind speed and direction

ASK ABOUT AN ON-SITE WEATHER STATION

Feed weather data from your location into Sferic Maps with your own Earth Networks weather station. View the data in real-time from an online weather center.

RELIABLE, EASY-TO-USE WEATHER TRACKING AND ALERTING EVERYWHERE YOU ARE
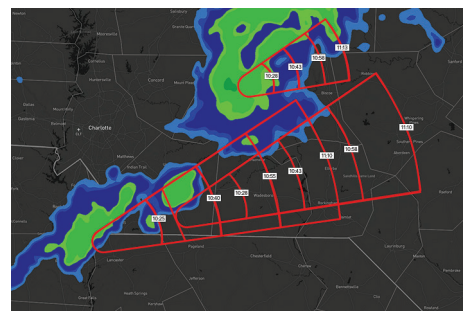
We ensure that only **the most accurate weather information** makes its way to you, wherever you are, with "**Find Me Follow Me**" mobile alerts that use GPS-tracking to alert you to dangerous weather conditions based on your current location.
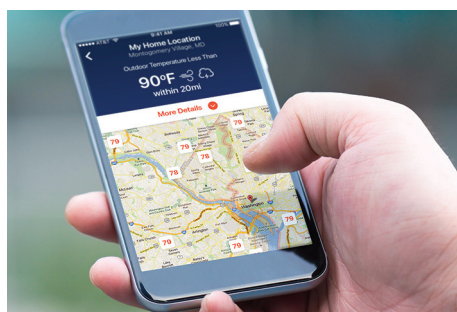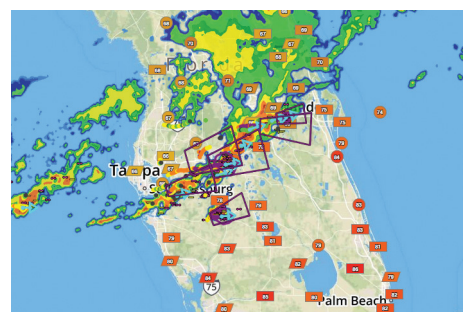

WHAT MAKES SFERIC MAPS DIFFERENT?

Powered by Earth Networks Weather Station & Lightning Detection Networks

Radar & Lightning-Derived Storm "Estimated Time of Arrival"

Wet Bulb Globe Temperature Alerts

Lightning-Derived Dangerous Thunderstorm Alerts

TECHNICAL SPECIFICATIONS:

- Internet connection required
- Supported web browsers: Latest versions of Chrome, Firefox, Safari
- Supports KMZ and GeoJSON file imports
- Mobile application support for iOS and Android 6.0 or later
- "**Always On**" location tracking required for mobile alerts

This system allows us to alert the entire property of dangerous weather conditions. When the horn goes off, it's mandatory that every person come in. And then at 3 sounds of the horn, it's all clear and we allow the members to go back out.

Ted Pogorelc, Head PGA Professional, Bethesda Country Club, Maryland

SAVE LIVES WITH AN OUTDOOR MASS NOTIFICATION SYSTEM FOR LIGHTNING ALERTING

Instantly alert everyone outdoors to seek shelter when lightning is detected nearby with Sferic Siren.

OVERVIEW

The Sferic Siren system uses advanced lightning detection technology to automatically issue mass notification alerts across multiple channels. This system is powered by the Earth Networks Total Lightning Network®, which features:

▸ 1,800+ total lightning detection sensors
▸ In-cloud and cloud-to-ground lightning flash and pulse detection
▸ Up to 50% faster alerts

BENEFITS

Let the siren do the talking so you don't have to run around explaining to everyone why activities need to stop
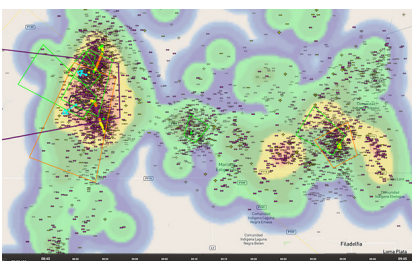
Allow the power of automation to help you make safer weather-related decisions with automated alerts and an all-clear countdown

Minimize the risk of false or missed alarms with a high-density lightning network that has redundancy, reliability, efficiency, and location accuracy built-in

Cover a large area with daisy-chained sirens and solar-powered options to reach the farthest corners of your outdoor spaces
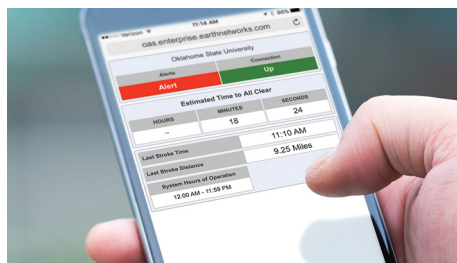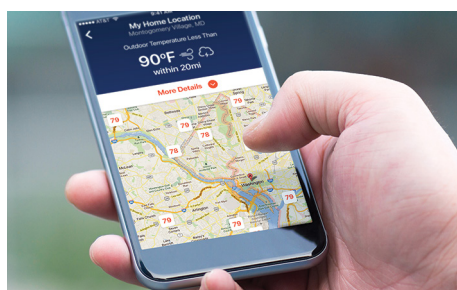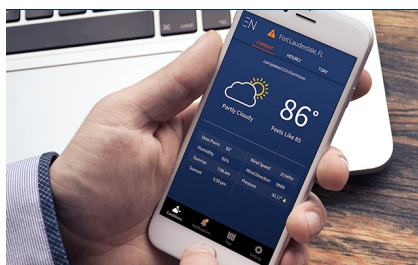
VIEW LIVE LIGHTNING STRIKES

Watch our lightning detection network in action as live lightning strike data is recorded and displayed on our interactive weather map, Sferic Maps.

IDEAL FOR:

- ▶ Airports
- ▶ Construction sites
- ▶ Golf courses
- ▶ Large state / national parks
- ▶ Manufacturing plants
- ▶ Mines

FLEXIBLE CONFIGURATION FOR EFFECTIVE LIGHTNING ALERTING ANYWHERE

The Sferic Siren (E-Horn) system is ideal for large outdoor spaces that span several acres and may not have access to an electric power source. Our team works with you to determine the number of sirens needed and the best locations to blanket your entire property with alerts. You also have complete control over alert hours and lightning alert radius.

WHAT'S INCLUDED?

All-Clear Countdown Clock

Informer Control Box

Multi-Channel Alerting

Automated Strobe Lights

PERFORMANCE SPECIFICATIONS:

- ▶ 100dBA horn
- ▶ Speakers audible to a maximum of 700 yards
- ▶ 170,000 Peak Candela Strobe Lights
- ▶ 360 degrees of audible and visual coverage
- ▶ Integrated with the Earth Networks Total Lightning Network®

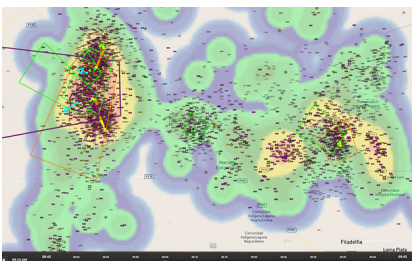### PERFORMANCE SPECIFICATIONS (SOLAR):

Solar Panel	SolarTech 55 watt 24 volt panel - SPM055P-WP-F
Panel Mount	RAC-M455B
Charge Controller	Morningstar SunSaver 10 amp 24 volt – SS-10L-24V
Batteries	Quantity 2 of 55 Ah 12 volt AGM Batteries –UB22NF
Enclosure	Aluminum System Enclosure –BBA-1 Circuit Protection: Quantity 3 of CBi Electric Circuit Breakers – QY18U210B1 Breaker per positive (+) wire from charge controller
Wire from Panels	10 AWG wire
Wire to Load	10 AWG wire
Wire Between Batteries	4 AWG wire

ASK ABOUT THE SFERIC CONNECT APP

Sferic Connect is a streamlined and user-friendly weather app powered by our proprietary weather and lightning networks. It is the "single source of truth" all your employees can turn to for the most accurate weather information and alerts.

This system allows us to alert the entire property of dangerous weather conditions. When the horn goes off, it's mandatory that every person come in. And then at 3 sounds of the horn, it's all clear and we allow the members to go back out.

Ted Pogorelc, Head PGA Professional, Bethesda Country Club, Maryland

VIEW LIVE LIGHTNING STRIKES

Watch our lightning detection network in action as live lightning strike data is recorded and displayed on our interactive weather map, Sferic Maps.

SAVE LIVES WITH A LIGHTNING WARNING SYSTEM FOR RESIDENTIAL AND INDOOR AREAS

Instantly alert everyone to nearby lightning activity with custom voice alerts and the Sferic Siren.

OVERVIEW

The Sferic Siren system uses advanced lightning detection technology to automatically issue mass notification alerts across multiple channels. This system is powered by the Earth Networks Total Lightning Network®, which features:

▸ 1,800+ total lightning detection sensors
▸ In-cloud and cloud-to-ground lightning flash and pulse detection
▸ Up to 50% faster alerts

BENEFITS

Let the siren do the talking so you don't have to run around explaining to everyone why activities need to stop

Allow the power of automation to help you make safer weather-related decisions with automated alerts and an all-clear countdown

Minimize the risk of false or missed alarms with a high-density lightning network that has redundancy, reliability, efficiency, and location accuracy built-in
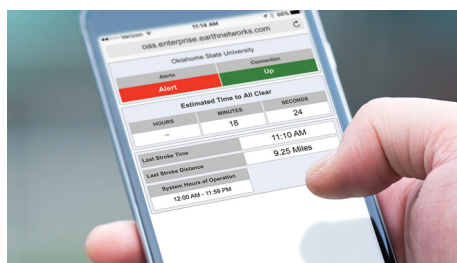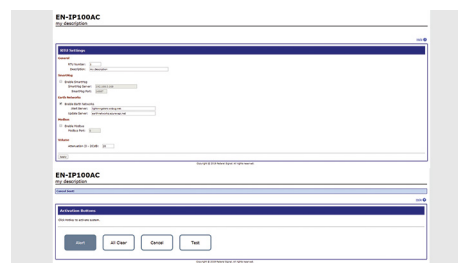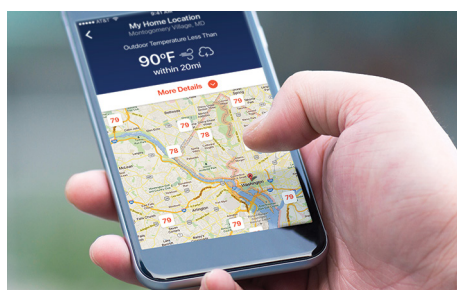
Configure your alerts to get the job done without disrupting the neighboring community with loud horn blasts

IDEAL FOR:

▶ Indoor/outdoor pools

▶ Community playgrounds

▶ Neighborhood parks

▶ Indoor recreation facilities

FLEXIBLE CONFIGURATION FOR EFFECTIVE LIGHTNING ALERTING ANYWHERE

The Sferic Siren (Voice) system can be used indoors or for outdoor spaces located in residential communities where a typical siren may be too loud. You can configure the system with custom alerts using voice recordings or your favorite audio file. You also have complete control over alert hours, lightning alert radius, and the alert duration.

WHAT'S INCLUDED?

All-Clear Countdown Clock

Online Control Center

Multi-Channel Alerting

Automated Strobe Lights

ASK ABOUT THE HD DISPLAY

Keep your members and visitors informed of the latest weather conditions, 3-forecasts, radar, local weather alerts and live camera feeds.

PERFORMANCE SPECIFICATIONS:

▶ Indoor/Outdoor IP-enabled speaker with high-powered voice and tone

▶ Speakers that go up to 120 dB

▶ Speakers audible to a maximum of 700 yards

▶ Adjustable volume control through device internal IP page

▶ 15-minute audio storage with up to 250 .WAV files

▶ 170,000 Peak Candela Strobe Lights

▶ 360 degrees of audible and visual coverage

▶ Integrated with the Earth Networks Total Lightning Network®

TECHNICAL SPECIFICATIONS:

▶ Input: 120/240VAC, 50/60Hz, 1.5A/.78A max

▶ Operating Temp: -40°F (-40°C) to 104°F (40°C)

▶ Wired Ethernet

▶ Wall or Pole Mount

▶ Net Weight: 16.2 to 19.2 lbs