



TraffiClair Monthly Updates

2026.09: Smart Warning for Low-visibility Highways

TraffiClair Team

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FogGuide: Smarter Warning for Fog, Rain & Low-Visibility Highways



FogGuide — an inductive fog light engineered specifically for highways prone to fog, heavy rain, and poor visibility.

What it does:

- Synchronized flashing with <10 ms wireless sync time
- Red-and-blue strobe alerts for maximum attention
- ⚠ Vehicle detection with adjustable red warning zones to prevent rear-end collisions
- 📶 Speed limit displays to reinforce safe driving
- ☀ Automatic dimming that adjusts to ambient light for optimal energy use

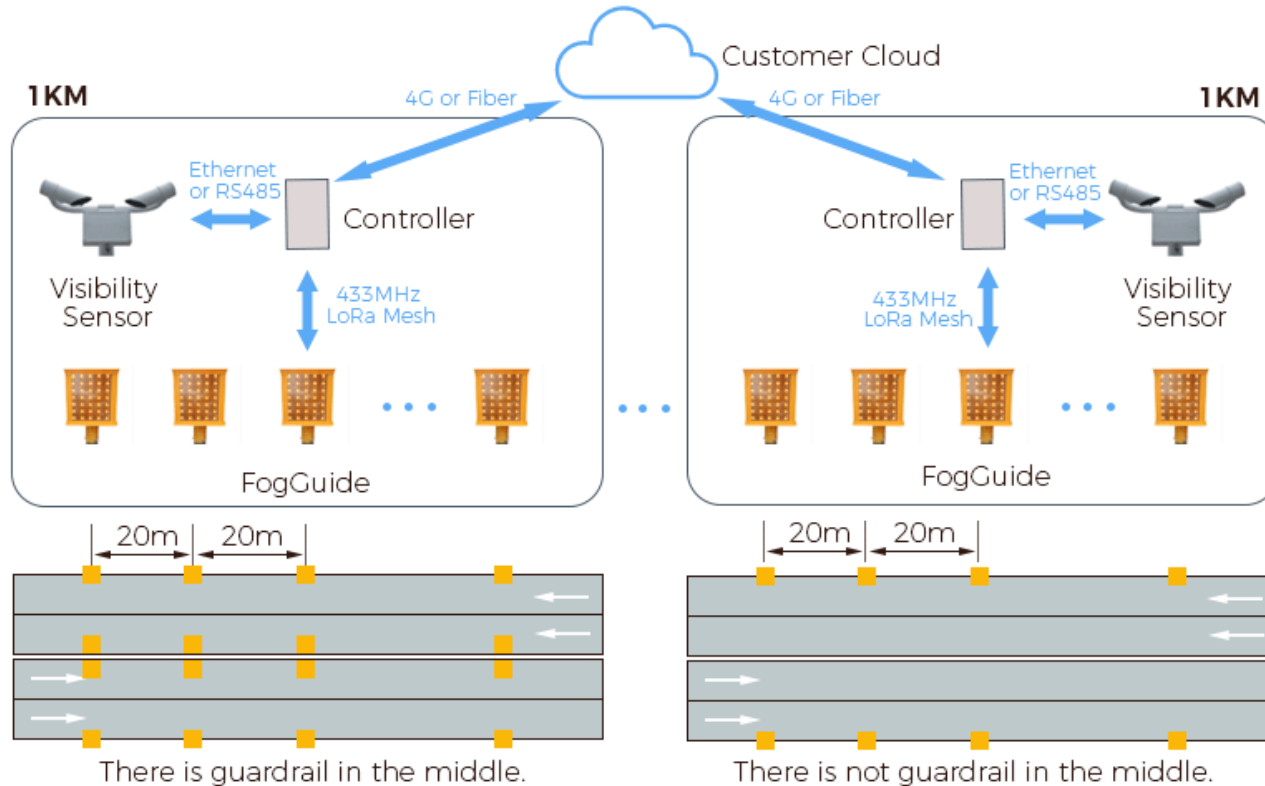
Built for the real world:

- ☀ Solar-powered — no external wiring or power connection needed
- 🛡 LEDs + reflective film for combined active and passive visibility
- 🔧 Industrial-grade components with overcharge, over-discharge, and surge protection
- 🕒 Up to 120 hours of continuous flashing on a full charge, with 5 days of autonomy in overcast or rainy conditions
- 🕒 LED lifespan ≥ 80,000 hours; solar panel service life of 15 years
- 🏠 Corrosion-resistant sheet-metal body with shatter-resistant polymer solar panel

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FogGuide: System Architecture & Installation

System Architecture



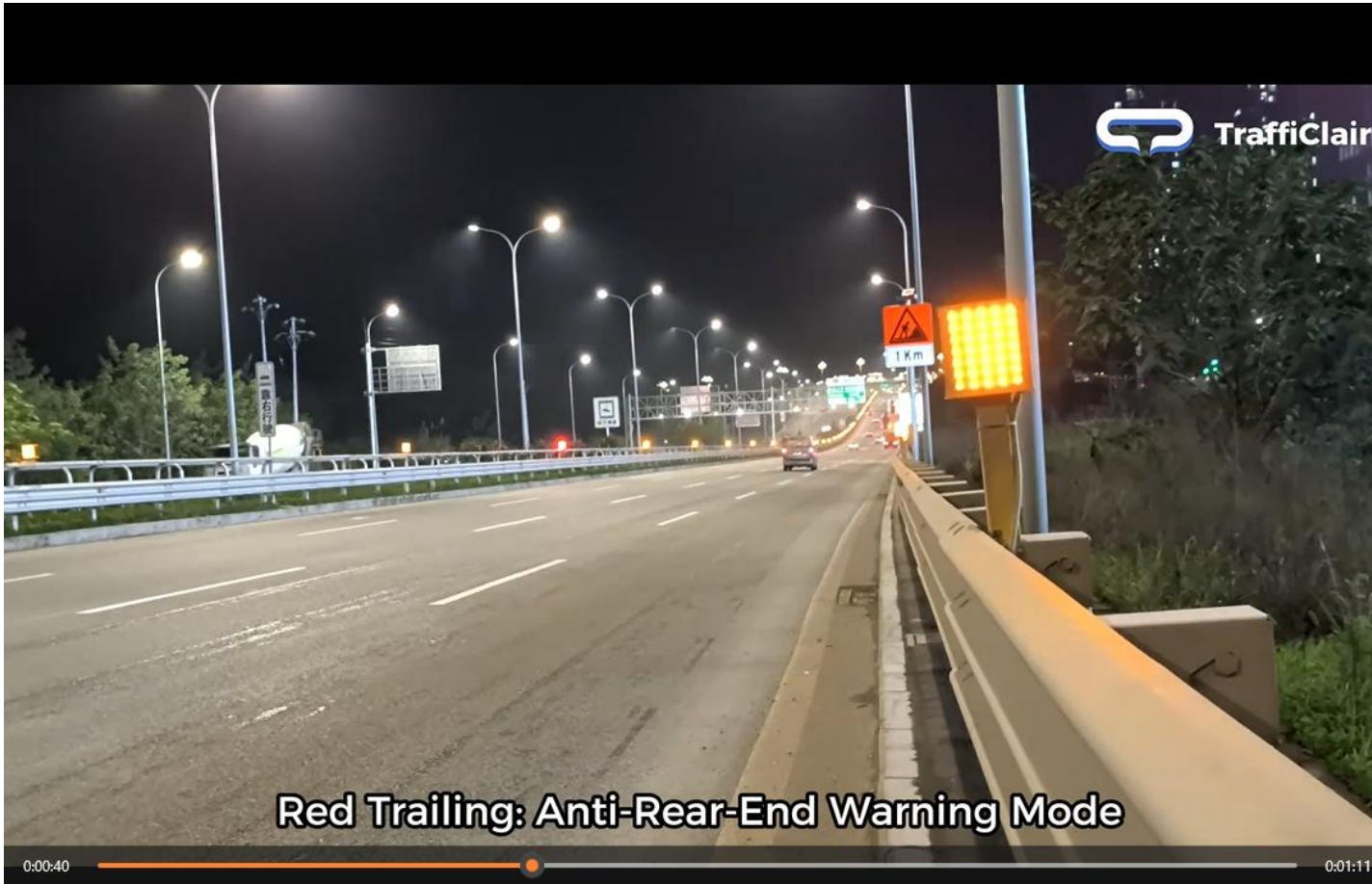
System Architecture

FogGuide communicates with the controller via a 433MHz LoRa mesh network.

- Spacing: 20m per FogGuide
- Controller density: 1 controller per 1km
- Function: The controller reads visibility data from a sensor and activates FogGuides when visibility drops.
- Cloud connectivity: Connects to the customer's cloud via 4G/5G or fiber, using standard or customized MQTT protocol.

[Full Story](#)

FogGuide in Action: Real-World Cases from Fog-Prone Highways



Low visibility doesn't have to mean high risk. See how ClairSaf-FogGuide is helping highways fight fog, heavy rain, and rear-end collisions — with solar-powered, wirelessly synchronized warning lights that install in minutes and run for days without sunlight.

From synchronized flashing and red-blue strobe alerts to vehicle detection and speed limit displays, these video cases show the FogGuide working where it matters most: in adverse weather, on real roads, protecting real drivers.

[Full Story](#) | [Youtube Video](#)

CatEye: Bright Guardians of the Night Highway



Keep roads safer with ClairSaf-CatEye Solar Synchronized Warning Lights—a cutting-edge, solar-powered flashing beacon designed to enhance visibility and prevent accidents in high-risk zones.

- ◆ **Solar-Powered & Wireless:** No external power needed—harnessing the sun’s energy for sustainable operation.
- ◆ **High-Impact Visibility:** Ultra-bright LEDs + reflective tape ensure 24/7 warning, even in heavy rain or fog.
- ◆ **Smart Synchronization:** Wireless 2.4G communication enables perfectly timed flashing (60x/min) across multiple units.
- ◆ **Built to Last:** Industrial-grade components, UV-resistant PC housing, and a staggering 280,000-hour LED lifespan.
- ◆ **Where It’s Needed Most:** Ideal for sharp curves, steep slopes, intersections, and low-visibility areas—visible from 300+ meters away!
- ⚡ **Safety never sleeps.** Equip your roads with CatEye and drive change, one flash at a time.

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 [Demo Video](#)

Enhance Road Safety with CatEye Solar Synchronized Warning Light!

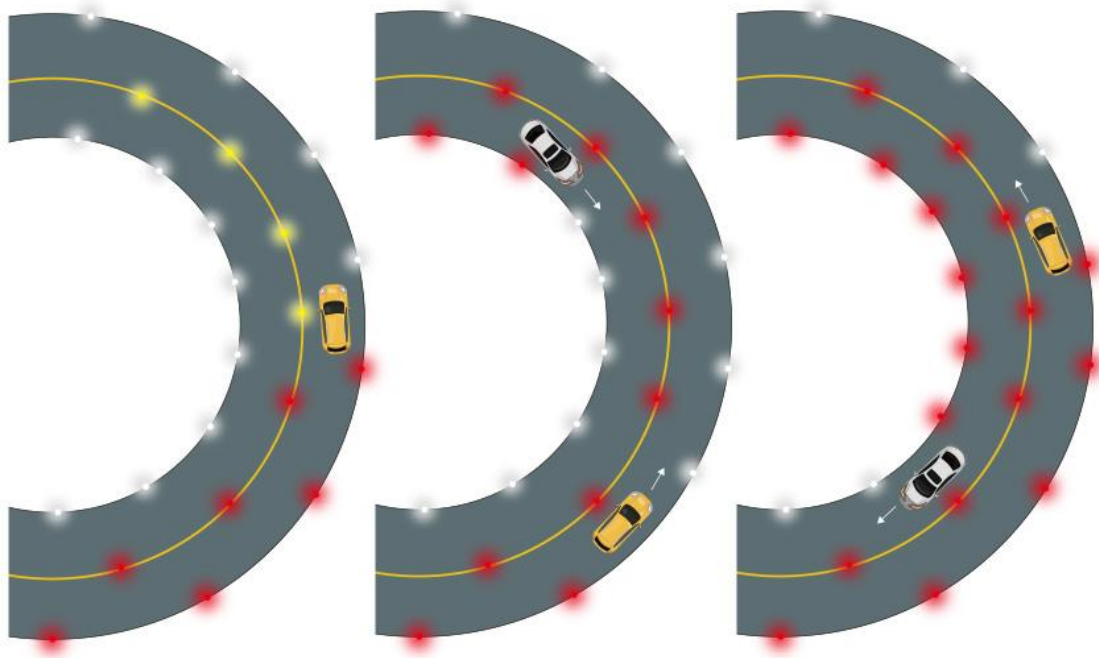


Why Choose ClairSaf-CatEye?

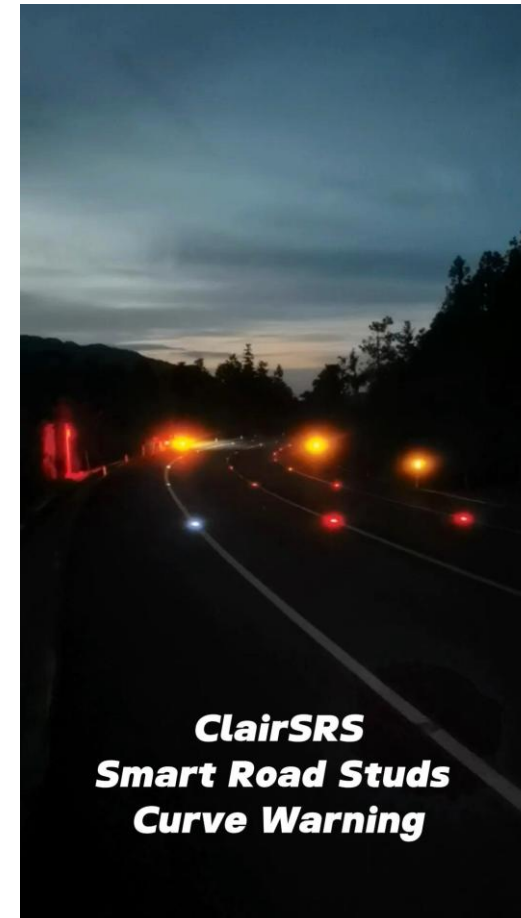
- ✓ Easy Installation – Quick setup with sleeve base or U-bracket mounting.
- ✓ Synchronized Flashing – Wireless sync with <50ms response for coordinated alerts.
- ✓ Auto Brightness Adjustment – Optimizes light intensity based on ambient conditions.
- ✓ High Visibility – Combines ultra-bright LEDs with reflective tape for 24/7 warning.
- ✓ Industrial-Grade Durability – Weather-resistant, corrosion-proof, and built with surge protection.
- ✓ Zero External Power – Fully solar-powered for eco-friendly, cost-effective operation.

[Full Story](#) [Youtube Video](#)

Dynamic Vehicle-Following Effect with ClairSRS Solar Mag Stud



- A yellow (or white) light pattern illuminates ahead of the vehicle, guiding the driver through the bend.
- Red lights activate behind the vehicle, warning following drivers of the car in front.
- Edge lines and centerline studs adjust dynamically based on oncoming or rear traffic, creating a clear, real-time visual corridor.

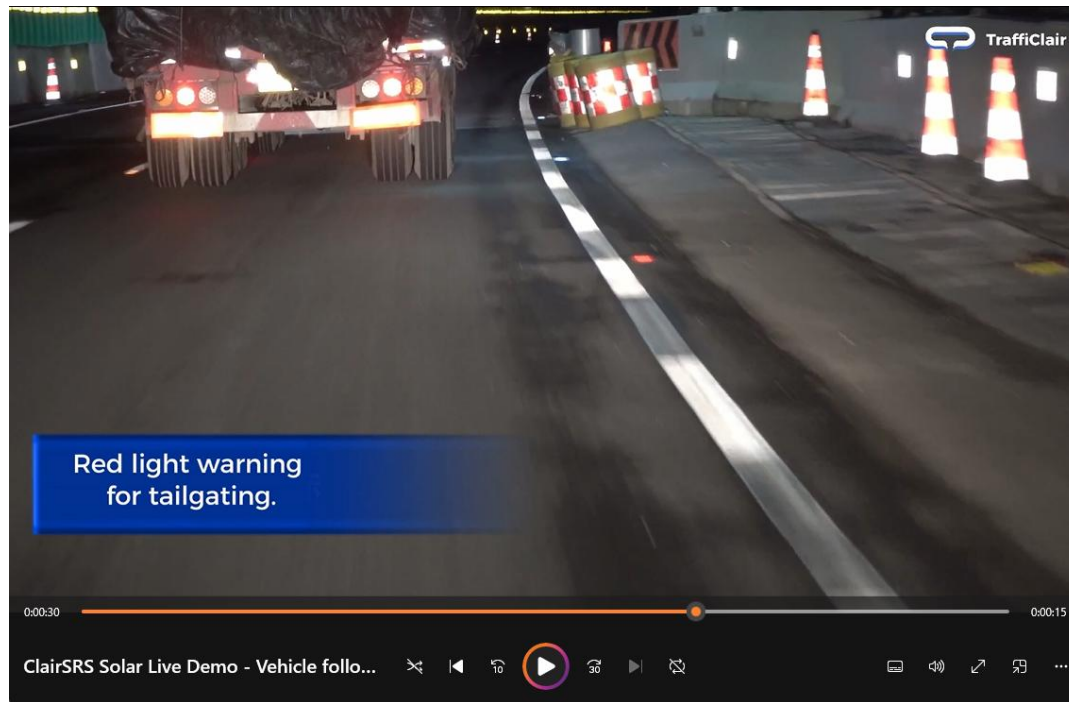


On sharp curves or foggy highways, standard road markings often fall short when visibility is low or traffic conditions change rapidly.

The ClairSRS Solar Mag changes this with its **smart vehicle-following effect**. Each solar-powered road stud is equipped with a built-in geomagnetic sensor and chain communication network, enabling real-time detection of vehicle speed, movement, and position.

[Full Story](#)
[Youtube Video](#)
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ClairSRS-Solar-Mag – Intelligent Light Guidance for Low-Visibility & Follow-Driving Scenarios



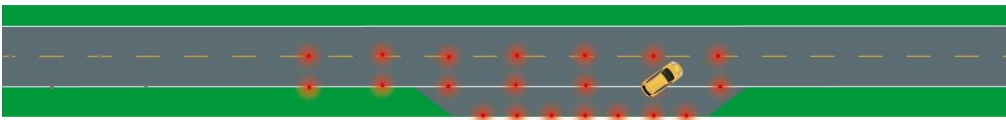
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In follow-driving mode, the same front/rear principle applies – with red always having priority. The system adjusts in real time as the gap between two vehicles changes:

- ① Far apart (>250 m) – each vehicle operates independently, with a dormant gap between the lead vehicle's red rear band and the following vehicle's yellow/white front band.
- ② Approaching (100–250 m) – the dormant gap shrinks until all studs are lit; as distance continues to decrease, the following vehicle's yellow/white front band gradually shortens.
- ③ Close following (<100 m) – the following vehicle enters the lead vehicle's red rear zone, and the entire space between the two vehicles is fully covered by red studs, providing a clear visual warning.

Whether in fog, at night, or in follow-driving traffic, the ClairSRS-Solar-Mag creates a **real-time, priority-aware visual language** that enhances safety, reduces reaction time, and gives drivers clear situational awareness – without relying on roadside infrastructure alone.

Real-Time Safety on High-Speed Roads: Emergency Lane Parking Alerts



When a vehicle stops in the emergency lane on a high-speed highway, every second counts—not just for the driver, but for everyone approaching from behind.

Watch how ClairSRS Solar Mag transforms road safety with its intelligent, solar-powered detection system:

- ◆ **Instant Detection:** The built-in geomagnetic sensor immediately identifies a stationary vehicle in the emergency lane.
- ◆ **Dynamic Warning:** In real-time, a chain of red warning lights activates across a critical distance behind the parked vehicle, alerting oncoming traffic and drastically reducing the risk of secondary collisions.
- ◆ **Seamless & Low-Latency:** Thanks to its innovative chain communication network, the lights synchronize flawlessly—even at highway speeds—without network congestion.
- ◆ **Always On, Always Ready:** Powered by solar energy with a 720-hour backup, and housed in a rugged, flush-mount design that withstands extreme weather and heavy traffic loads.

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[202607: ClairWav Radar Use Cases](#)

[2026.08: Tunnel Radar Application](#)

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Thanks

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