

An Efficient Solution for Maximum Uptime

## Solar-Powered Mobile Surveillance Units Provide Critical Protection for Customers

“With predictive analysis enabled by data from Morningstar controllers, we can monitor system health and achieve our client ask for 24/7 surveillance”

**Lemuel Blanco**

President and CTO  
ECAMSECURE

## Summary

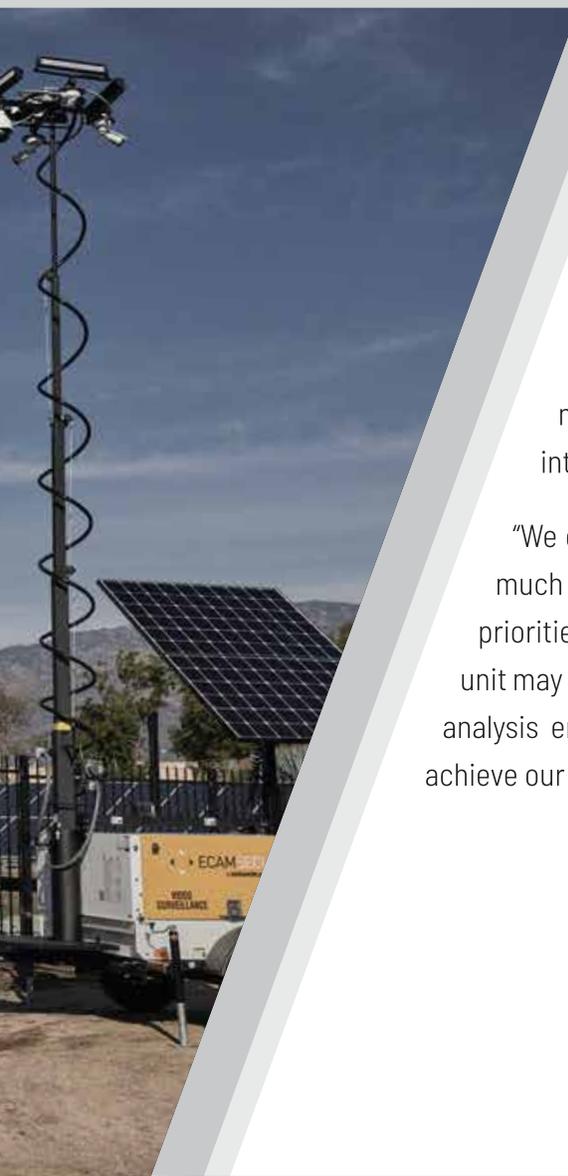
Fueled by the rising cost of materials along with concerns about rising criminal activity, construction sites, retail locations, and other businesses are increasingly seeking effective surveillance systems. ECAMSECURE strives to meet its clients' goal of 100% equipment uptime for continuous protection. With sites often located in remote, challenging locations, Morningstar's solutions are proven to deliver maximum efficiency and data needed to provide the 24/7 support that ECAMSECURE's clients expect.

## Situation

Founded nearly thirty years ago, ECAMSECURE started as a traditional security guard service that quickly developed a reputation for reliability and customer service. By 2000, CEO and founder Chris Coffey recognized that emerging new technologies had the power to overcome human limitations in remote surveillance situations. Toward that goal, the company became one of the first to develop mobile, trailer-based camera platforms for flexible applications in the most challenging environments.

ECAMSECURE's mobile surveillance units (MSUs) are portable, off-grid units with the form factor of a small trailer on wheels, and can accommodate a variety of security devices from cameras to lights. MSUs can draw power from 800W+ of solar panels and a 200-800Ah+ battery bank or a diesel generator. In the case of batteries, lithium-ion is the first choice for this application because it provides the best capacity in limited space and the longest lifespan for simplified maintenance.





## Solution

ECAMSECURE produces hundreds of MSUs each month, all of which include a Morningstar ProStar MPPT. The mid-range solar charge controller features TrakStar Technology™ which provides maximum power point tracking battery charging to maximize PV efficiency and energy harvest. Other ProStar advantages include a fanless design for increased efficiency (no parasitic fan load) and reliability (no fans to fail), as well as special lithium battery features including “lithium foldback” circuitry for safe charging in cold weather.

“Even in a shady construction site or on a cloudy day, the Morningstar controllers help capture enough amperage from the available sunlight to sustain the equipment overnight,” Lemuel Blanco, president and CTO of ECAMSECURE, said. “They are truly built to endure in the toughest environments.”

Additionally, Morningstar’s Ethernet MeterBus Converter™ (EMC-1) allows the MBU fleet to communicate with ECAMSECURE’s Certified Command Center by way of Simple Network Management Protocol (SNMP). Through this platform, ECAMSECURE is able to view data for more efficient device management. By monitoring voltage and wattage levels, the team can pinpoint issues and make intelligent decisions to prevent the loads from losing power.

“We can look at data and see why a device may be dying, whether it’s from shade or too much equipment draw,” Blanco said. “With notifications, we can shed loads according to priorities before a unit goes down. Additionally, historical data helps us understand why a unit may be draining faster than others and take action to resolve the problem. With predictive analysis enabled by data from Morningstar controllers, we can monitor system health and achieve our client ask for 24/7 surveillance.”



ProStar™ MPPT



EMC-1