



# Panel Component Design for Multiple Application Solutions

Location  
**Midwest (USA)**

Industry  
**Security & ITS**

Application  
**Multiple**

Products Used  
**LNP-0500G-24-T**  
**AMY-5133-AC-PD**

## BACKGROUND

In Security and Intelligent Transportation System (ITS) industries, the demand for robust industrial networking solutions using solar power has grown significantly. Applications involving security cameras, loud speakers and parking systems have become more “intelligent” and connected. This case study highlights integrators serving this market who need scalable products and solutions that operate at voltages compatible to connect directly with custom solar solutions. Fixed and mobile trailer solutions are powered from various sources such as solar and wall outlets.

In response to customer needs, Antaira offers switch solutions that integrate seamlessly with various power sources. Whether the product is stationary or mobile, Antaira provides enhanced integration characteristics coupled with operational efficiency for both manufacturing and deployment.

## THE CHALLENGE

The panel builder required a standardized networking solution that is easily deployed across multiple applications with various power input requirements. A single model Ethernet switch solution is preferred to use as a key component for the panel that fits the multiple trailer applications with varying power sources ranging from 12~36VDC. The network switch is needed to support power-over-ethernet IP cameras and wireless radios while maintaining a simplified connection to minimize troubleshooting. An extended temperature rating of -40°C to 75°C is required for panels on trailers deployed in outdoor environments.

## THE SOLUTION

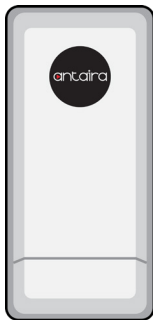
Antaira’s solution took an innovative approach when addressing power challenges while leveraging advanced technology. To streamline the deployment process, the customer opted for the LNP-0500G-24-T as their key subpanel network component.

The LNP-0500G-24-T features an internal DC-to-DC power boost function that takes a low-voltage input (12~36VDC) and boosts the voltage for use with PoE at 30W per port. This switch connects to the components in a solar application using 24VDC or 36VDC power input. Additionally, the external power supply option is available to connect to wall power.



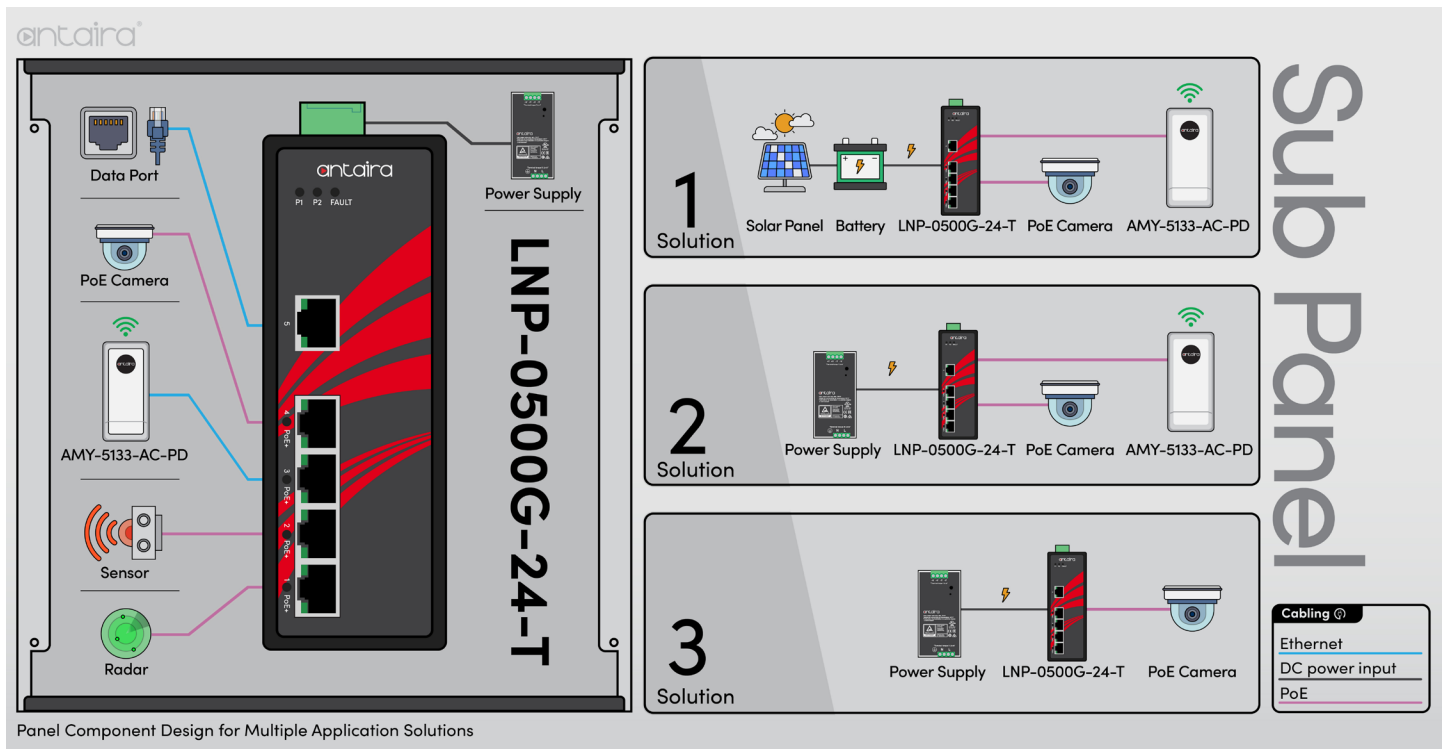
**LNP-0500G-24-T**  
**5-Port Industrial PoE+ Unmanaged Ethernet Switch**

- 4-Port 10/100/1000 IEEE 802.3at compliant PoE+ function with 30W/port
- 1-Port 10/100/1000Tx Ethernet
- Supports auto MDI/MDI-X function
- Surge Protection: 2,000VDC support
- ESD Protection: 6,000VDC support
- UL C1D2 listed



**AMY-5133-AC-PD**  
**Industrial 802.11AC Wireless (Wi-Fi) LAN Bridge**

- Support AP/Client Bridge mode
- Support IEEE 802.11AC / High-speed WLAN Supports Up to 867Mbps
- PD (Powered Device) IEEE 802.3af/at Compliant or External Power
- Up to 24dBm Tx Power
- Built in 14dBi MIMO Panel Antenna



Sub Panel

## WHY ANTAIRA

Antaira's commitment is to exceed its customer's expectations by offering high quality industrial Ethernet products and outstanding support services. Antaira has demonstrated its capability of delivering comprehensive network solutions that ensure the fulfillment of security, scalability, and redundancy demands for any critical application.

## ABOUT ANTAIRA

Antaira Technologies is a leading developer and manufacturer that provides high-quality industrial networking and communication product solutions. Since 2005, Antaira has offered a full spectrum of product lines that feature reliable Ethernet infrastructures, extended temperature tolerance, and rugged enclosure designs. Our product lines range from industrial Ethernet Switches, industrial wireless devices, Ethernet media converters, and serial communication devices. Our vast professional experience allows us to deploy a wide array of products worldwide in mission-critical applications across various markets, such as, automation, transportation, security, oil & gas, power/utility, and medical. Antaira is ISO9001 certified.

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