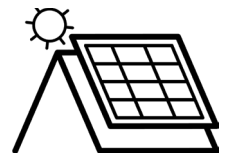




# Case Study - Industrial Park San Pedro Sula, Honduras

## PVKIT® | S-5-H™ Mini



### At-A-Glance

**Project Name:**

Industrial Park in  
San Pedro Sula

**Location:**

Villanueva, San  
Pedro Sula, Honduras

**Industry:**

Industrial

**General Contractor:**

DICOMA Corporation

**Module Manufacturer:**

JA SOLAR

**Inverter Manufacturer:**

SOLIS- 480HV & 208LV

**Roof Profile:**

Self-supporting curved  
standing seam metal roof

**Number of Roofs:**

27

**Roofs Measured:**

each roof measures  
~ 52m x 16m

**System Size:**

2.46 MW

**S-5! Products  
Supplied:**

- PVKIT® MidGrab (26,600)
- S-5-H™ Mini (26,600)
- DynoBond bonding jumpers (2,250)
- Burndy ground lugs (800)



### The Project

This project, located just one hour from the bustling Port of Cortés – Honduras' largest seaport – is the largest curved roof solar PV installation in Central America.

Spanning over 129,135m<sup>2</sup> of industrial space, with an additional 109,625m<sup>2</sup> currently under development, the free trade industrial zone offers a prime location for businesses. Companies operating here benefit from tax exemptions on merchandise related to imports and exports, along with significant reductions in the bureaucratic processes.

The industrial warehouses are equipped with rooftop solar PV systems, allowing tenants to reduce electricity costs while enhancing their sustainability with the "green footprint" of solar energy—an attractive incentive for businesses operating in tax-free zones.

Ten buildings, housing industries such as food, textiles and technology, feature 27 curved standing seam metal roofs. The installer, DICOMA Corporation, utilized the PVKIT® Direct-Attach™ solar mounting solution, paired with the S-5-H™ Mini, to secure the 2.46 MW rooftop solar arrays.



## The Challenge

Installing any rooftop solar system on these curved roofs is inherently challenging due to their self-supporting design and lack of underlying structural support. Therefore, the project required a thorough preliminary structural analysis, prior to installation, to ensure the roof could safely support the added load of a solar PV system.

The building owners did not want to modify the existing roofs, mandating a lightweight solution capable of being supported by existing construction. With no structural framing beneath, the project was subject to strict weight limitations, and rail-based systems were not a viable option.

Additionally, no more than three workers could be on a roof at any given time. Pre-assembly and staged installation were essential to evenly distribute weight and prevent overloading any one area.

The roof's curvature further complicated the task, making it difficult to maintain the required ~10 cm clearance between the modules and the roof surface.

Waterproofing was also a critical concern, as some tenants required fully sealed environments to safeguard their products from potential damage. The risk of leaks was unacceptable.

Furthermore, the solution had to be aesthetically

pleasing, adapting to the roof's curvature without compromising performance or visual appeal.

## The Solution

The S-5! PVKIT direct-attach solar mounting solution, paired with the S-5-H Mini, was selected for this project over alternatives due to its key advantages.

Featuring just three components, the PVKIT is 85% lighter than traditional

rail systems, with total mounting system weight below 1.6kg/kW compared to 8.6 kg/kW for railed systems, providing 25% better load distribution.

By using a lightweight, preassembled system that met the roof's weight restrictions, workers could transport components more efficiently and install them without overloading specific roof points, ensuring a safe, effective installation. This approach not only improved safety but also improved workflow efficiency by reducing installation time and minimizing the need for rework.

To optimize load distribution and attachment points for better system stability, the PV column spacing was set at 5-6 meters to align with the roof's design and support overall system efficiency.

The S-5! solution ensured the necessary module-to-roof clearance while adapting to the roof's curvature. This low-profile, aesthetically pleasing design seamlessly blended with the roof's appearance and did not penetrate the roof, providing the watertight solution required for the project.

## How Did S-5! Products Help?

- Proper module-to-roof clearance, ensuring adequate clearance despite the roof's curvature and maintaining structural integrity
- Significantly reduced system weight, making installation on the self-supporting roof feasible
- Faster installation by allowing for simultaneous attachment of the mounting system and the modules
- Enhanced mobility for installation teams, who could only traverse the roof along its ridges due to the curvature
- Eliminated the risk of a voided roof manufacturer warranty—no holes/no damage

“The Dicoma team experienced exceptional versatility with the S-5-H Mini and PVKIT solar mount during installation. Our crew of three installed 148 modules per day. The safety and durability the system offered when mounting on self-supporting, curved metal roofs marks a significant advancement for the solar industry.

By using S-5!, we were able to streamline the process, attaching the mounting system while simultaneously installing the modules, reducing installation time by at least 30% compared to traditional rail-based systems. Using fewer attachment components reduced the mounting system weight by up to 85%, ensuring the project's feasibility from the design phase to project completion.”

— Xavier Jara, Energy Coordinator, DICOMA Corporation



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