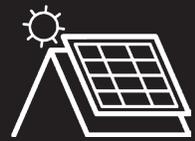




# Case Study — STAPLES Center—now Crypto.com Arena Los Angeles, California

## Facet™ Mount



### At-A-Glance

**Project Name:**

STAPLES Center  
—now Crypto.com Arena

**Location:**

Los Angeles, California

**Industry:**

Commercial

**Project Size:**

~350 kW

**Project Partners:**

- Solar Power Inc  
— original developers of Facet Mount
- Cupertino Electric
- AEG Worldwide
- Engineering by John Martin



### The Project

STAPLES Center – now Crypto.com Arena – is one of the busiest and most iconic sports and entertainment venues in the world. Located in downtown Los Angeles, the arena opened in 1999 after a \$407 million construction effort and quickly became home to four major professional franchises: the Los Angeles Lakers, Los Angeles Clippers, Los Angeles Sparks and Los Angeles Kings. With a seating capacity of 20,000, it hosts more than 250 events and nearly four million guests annually, including NBA, WNBA and NHL games, the Grammy Awards, world-class concerts and other global events.

Since its inception, the arena’s leadership emphasized efficiency, innovation and environmental responsibility. AEG formalized its corporate sustainability program in the mid-2000s, and the STAPLES Center operations team became early adopters of cutting-edge technologies, from electric vehicle charging stations to high-efficiency lighting, water-saving fixtures and advanced energy-management systems. These initiatives culminated in the arena becoming the first U.S. venue to receive ISO 14001 certification in 2010.

It was within this culture of innovation and environmental leadership that AEG sought to install one of the largest rooftop solar arrays ever attempted on a major sports arena—an ambitious project intended to reduce energy consumption, showcase renewable technology and reinforce the venue’s role as a sustainability pioneer.

### The Challenge

Despite its sustainability goals, the arena’s roof presented extraordinary engineering and operational constraints. The building relied on load-bearing walls that supported a cantilevered perimeter roofline extending approximately 30 feet, while a central dome housed a complex system of pulleys and cables that suspended interior elements. Any additional weight on the roof could directly influence the delicate balance of this suspended structure, requiring precise load distribution and absolute control over point loading.

Water intrusion was another non-negotiable concern. As the story famously circulated internally, a senior executive warned that if a single drop of water reached the court, the consequences would be severe. This meant that traditional penetrations were unacceptable, and waterproofing performance had to be flawless.

Initial feasibility work revealed that the original vision of a 1.5 MW system – approximately 3,500 panels – could not be supported without rethinking everything from the array layout to the mounting technology. The engineering team ultimately reduced the allowable panel count to 1,208 to remain within structural limits and solving the project's combination of weight, load and waterproofing challenges required a product capable of operating where standard attachments could not.

## The Solution

The breakthrough came from an engineering redesign that paired an optimized layout with the capabilities of an innovative flat-roof attachment: **Facet™ Mount**. This high-pressure cast aluminum mount proved uniquely suited to the arena's demands. It delivered exceptional performance – shear strengths of more than 6,750 lbs. and uplift resistance exceeding 12,750 lbs. – using a 7-inch round footprint that effectively distributed loads across the cantilevered roof structure.

Facet Mount also addressed the roof's strict waterproofing requirements. Its waterproof washer and flashing cover passed stringent industry testing for water infiltration, adhesion and wind, and the raised crown design reduced

the risk of pooling or penetration. It can be installed with preformed PVC or TPO flashings made from the exact roofing used, or alternative roof material can be easily sealed using fluid-applied membranes. This ensures reliable long-term protection on a roof where failure was not an option, reducing the risk of pooling or water penetration/intrusion.

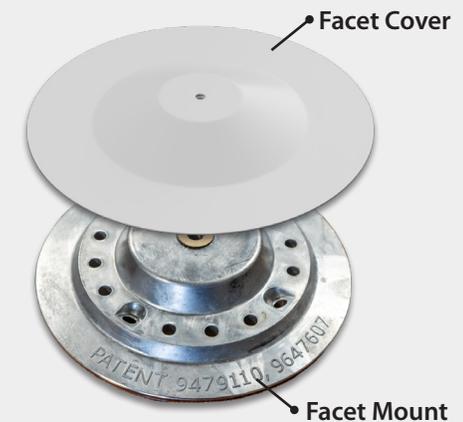
The product's innovative flexibility further enhanced the project. Facet Mount features 16 potential attachment points, a versatile mounting interface and broad compatibility with nearly all roofing materials and solar racking systems. It allowed the racking layout to be finalized before the mount locations were set—saving time and simplifying installation. Each mount could be installed in under six minutes, including membrane welding or flashing. The mount's performance was also independently verified: it is Los Angeles Department of Building and Safety tested and approved, verified to ASTM E2140 for watertightness, and it carries a 25-year warranty.

As a result of the optimized design and the reliability of Facet Mount, the project not only overcame its structural and waterproofing constraints—it surpassed expectations. The final system reached 1,727 installed panels, exceeding the revised scope while functioning safely on one of the most structurally complex and high-profile roofs in the world.

The rooftop solar array remains a flagship example of Facet Mount's ability to solve complex engineering challenges and help major venues meet ambitious sustainability goals.

## How Did Facet Mount Help?

- **Simple, quick installation:** Installs in under six minutes per mount, including membrane heat-welding or fluid-applied flashing.
- **Flexible layout:** Lets crews complete racking layout before final roof attachment, speeding alignment and reducing rework.
- **Multiple connection options:** 16 mounting point options – 12 vertical and four slanted – to meet engineering specifications and complex layouts.
- **Guaranteed durability:** Tested and approved by the Los Angeles Department of Building and Safety with a 25-year warranty.
- **Verified watertightness:** Tested to ASTM E2140, the most demanding water penetration test in the industry.



## Long-term Outlook

Long term, the arena's solar array is built to last. Facet Mount keeps loads distributed and the roof watertight, enabling decades of reliable, low-maintenance operation on a highly sensitive structure. As equipment reaches end of life, the same attachment platform supports straightforward repowering or efficiency upgrades, preserving performance gains while continuing to underscore the venue's sustainability leadership.



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