

Eco<sup>2</sup>truxure™  
Innovation At Every Level

TANISHQ  
A TITAN PRODUCT

# CONNECTED

APC™

Edge computing helps jewelry retail chain set “gold standard” in customer service

Tanishq (jewelry division of Titan Company Limited), a leading Indian jewelry retail chain, leverages edge infrastructure and remote management to improve in-store customer experience, save space, and reduce costs.

[apc.com](http://apc.com)

Life Is On

Schneider  
Electric



EcoStruxure™ IT Expert is an advanced remote monitoring tool for wherever-you-go visibility and alarms, preventive management, and data-driven recommendations to mitigate security and failure risks of your data center and distributed IT infrastructures. It is part of Schneider Electric's IoT-enabled EcoStruxure architecture.

The worldwide jewelry industry has grown significantly in recent years with expectations to exceed \$480 billion in revenues by 2025 (Statista). Much of that growth is driven by a combination of traditional wealthy consumers who invest in heirlooms and estate jewelry, and "new money" consumers who enjoy wearing jewelry to display their newly acquired wealth. Many of these consumers prefer to buy their high-quality jewelry from brick-and-mortar retail stores which are perceived as more reliable and provide the opportunity to touch and try on the merchandise.

One of the market leaders in India, Titan Company Limited (a division of the \$100 billion Tata Group), with its jewelry brand known as Tanishq, has established a competitive advantage in this marketplace by introducing new ways to deploy cutting-edge technology across its 200+ retail locations.

Tanishq is known for its innovation in the jewelry industry by offering an entirely new standard of business ethics and product reliability. For example, Tanishq was the first retailer to leverage Karatmeter technology (a device using x-rays to determine gold purity characteristics) for customers who wished to obtain an accurate reading of the purity of their gold.

Jewelry purchases often represent a significant family investment and jewelers like Tanishq face several challenges:

- **Offering high levels of service** – In-store salespeople need access to up-to-date quality and valuation information to immediately address any customer concerns.
- **Maintaining ethical business practices** – With mistrust as a noticeable issue across much of India's jewelry industry, a solid reputation for strong ethics helps build a competitive advantage.
- **Ensuring product reliability** – Products must contain the purity levels and high design standards that are advertised.

To address these challenges, the store's supporting IT infrastructure must be reliable and running at all times, providing staff members with the product information they need at their fingertips, and without delay when a customer is ready to purchase.

## Goal

To remain at the forefront of the rapidly-changing jewelry industry, and to improve the in-store customer buying experience while reducing operational costs.

## Story

An Indian retail jewelry chain was modernizing store infrastructure to better accommodate a growing surge in high-end customer traffic. A new edge computing solution was required that could be managed remotely without disturbing staff workflow or the customer shopping experience.

## Solution

EcoStruxure IT Expert software to help remotely monitor the edge computing solution while performing predictive maintenance on an in-store micro data center.

## Results

- Around 15% reduction in maintenance costs
- Up to 20% reduction in energy costs
- Less floor space required to host the edge computing system (reduction from 200 to 100 square feet)
- A solution requiring no on-site IT expertise to manage and operate



### Modernizations needed to improve IT systems uptime

To remain at the forefront of the rapidly-changing jewelry industry, Tanishq and Titan Company Limited executives decided to incorporate more efficient IT and physical infrastructure equipment across their hundreds of retail stores. Their digital transformation and renovation efforts focused on improving the in-store customer experience while increasing operational savings.

Specifically, Palani Kumar, Titan Company Limited Vice President of Integrated Retail Service Group, tasked Schneider Electric and APC Elite Data Center Partner Future Businesstech, with addressing three specific challenges:

1. Providing an edge computing hardware solution to maximize limited retail store space
2. Incorporating edge software to help minimize the time and effort technicians would have to spend on system maintenance
3. Maximizing energy efficiency to meet corporate sustainability goals

### Space and aesthetics considerations

Retail space is limited and managing this emerges as a critical success factor. Every inch of floor space is calculated as an additional cost directly hitting the store's P&L statement. As a result, IT equipment, unless it occupies its own dedicated space, must complement the sophisticated aesthetic of the store design. Therefore, a simplified, seamless IT infrastructure allows retail associates to spend more time connecting with customers and less time managing systems.

Systems within the Tanishq stores which consisted of a rack, public address system, security surveillance system, and local server system, had previously been spread across a back room consuming valuable potential sales floor space. However, allowing the IT equipment to share sales floor space did not seem possible. Traditional IT racks were deemed unattractive and would also create noise that would disrupt the sophisticated atmosphere of the storefront.

“In Schneider Electric, we found a true partner for connecting our in-store IT support infrastructure to ensure uptime and security in an aesthetically-pleasing, compact edge computing solution.”

- Palani Kumar,  
Vice President,  
Integrated Retail  
Service Group,  
Titan Company Ltd.



### Remote edge management requirements

As part of the digital transformation of their business, Titan Company Limited executives determined that to avoid latency issues, updated edge computing systems were required in each retail store. When in-store financial transactions occurred (e.g., customers purchasing merchandise), the goal was to ensure that the customer experienced no delays. Point-of-sale systems and in-store server failures had to be avoided to reinforce a positive customer experience.

Typically, individual stores do not have on-site IT staff, so a centralized monitoring solution was needed to permit remote management of systems distributed across numerous store locations. A system that could issue alerts in a predictive manner, before system failure, emerged as an essential requirement.

### Maintenance and repair service considerations

When in-store IT systems fail, it can lead to frustrated customers and lost sales. Normally at these stores, the air conditioning systems shut down between 10 PM and 10 AM. With no ventilation and no air circulation, the server systems within the stores, which are left operational at night for

security system purposes, are subjected to overheating inside the rack as the temperatures rise during the night.

As a result of excessive heat and instability of many local power grids (which increases the wear and tear on the systems' uninterruptible power supply (UPS) and its batteries), systems are constantly at risk for a potential breakdown. Whenever there was a problem, technicians were forced to make multiple visits to fix equipment during store hours when customers were considering jewelry purchases.

### Energy efficiency and sustainability

Titan Company Limited and Tanishq also placed high priority on energy management and sustainability. An innovative energy monitoring system at the corporate office helped the organization reduce energy costs while lowering their carbon footprint. Executives wanted to make sure that their retail outlets would also be energy efficient. By having a connected edge system deployed, centralized IT teams would now be able to capture energy data remotely from each of the retail sites, and make the adjustments necessary to optimize energy consumption.

### Innovative solution includes remote systems support

Given these challenges, Titan Company Limited and its executives decided to opt for a single vendor solution that could provide efficient and reliable products with high quality service response capabilities. They turned to Schneider Electric and their Elite Partner [Future Businesstech](#).

After surveying several of the stores and studying the Titan Company Limited's requirements, the joint Schneider Electric/ Future Businesstech team proposed an innovative solution custom designed to support Tanishq's retail customer experience and improve operational efficiencies. The solution consisted of the following key components:

- **Micro data center** – Integrates [uninterruptible power supplies](#) with cloud-based management and remote monitoring to ensure in-store IT systems are always available.

“Thanks to the ability to monitor system performance remotely, maintenance visits are down and related costs have been reduced by around 15%.”

R. Vivekanandan,  
Head-IRSG Projects  
Execution & Maintenance

- **NetShelter™ CX rack** – Houses the micro data center with a 38U soundproofed APC NetShelter CX rack that is designed to look like elegant furniture.
- **APC Smart-UPS™** – Protects equipment and provides battery runtime should utility power temporarily fail. Should a system restart be required, Smart UPS units with SNMP communication cards are provided to allow all edge systems to be remotely rebooted by technicians.
- **EcoStruxure™ IT Expert** – Provides a hosted software for do-it-yourself remote monitoring and device management.
- **EcoStruxure Asset Advisor** – Offers 24/7 remote monitoring and support from Schneider Electric for faster remediation and greater visibility.
- **APC Netbotz™ physical security** – Includes a CCTV surveillance system and key-card rack access system that guards against environmental or physical threats.

**Benefits include lower operational costs**

Together, these edge computing solution elements provide Tanishq with several operational and customer experience benefits:

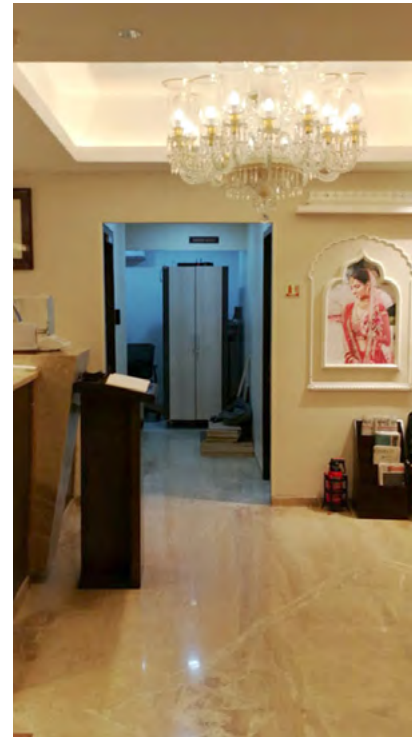
- **Space savings** – Where the previous system would occupy around 200 square feet of floor space in a separate room, the edge computing solution now only

occupies 100 square feet. This increased the space for additional inventory and customer interaction in the store.

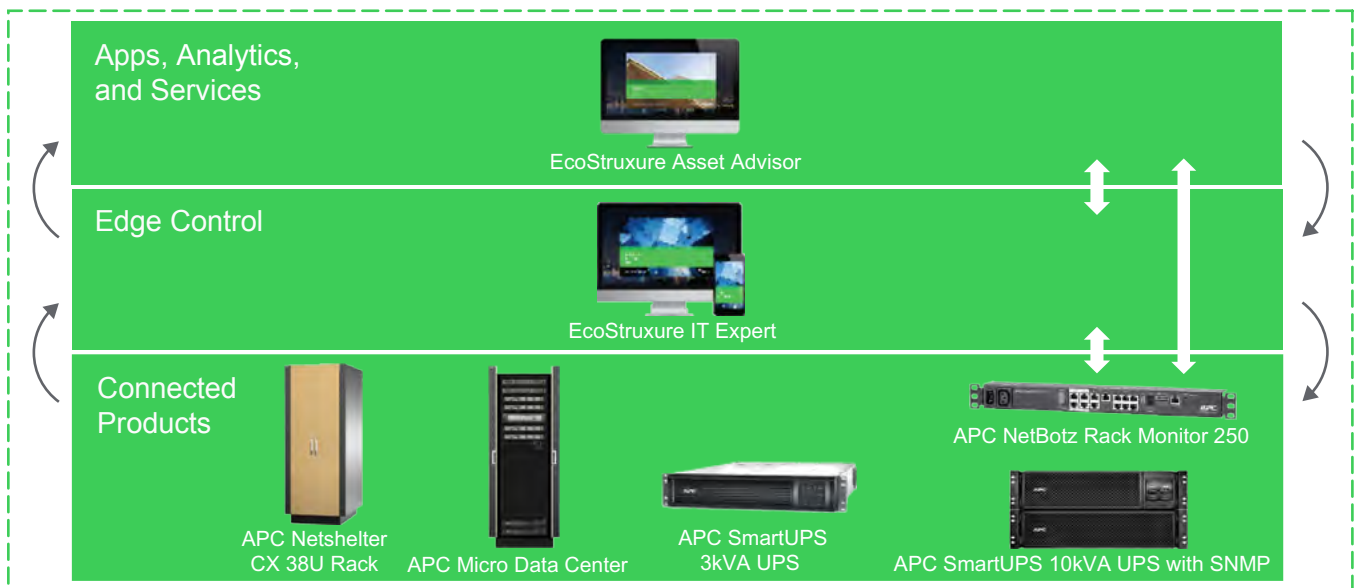
- **Energy savings** – The energy consumption at each store was reduced up to 20%, which boosted sustainability efforts. Support technicians now have a dashboard that regularly tracks how much power is being consumed by each micro data center in each store.
- **Lower maintenance costs and higher resilience** – Thanks to the ability to monitor system performance remotely, maintenance visits are down, and related costs have been reduced around 15%. Early alerts allow for potential problems to be detected before any unplanned downtime occurs.

According to Palani Kumar, Vice President, Integrated Retail Service Group, Titan Company Limited, “In Schneider Electric, we found a true partner for connecting our in-store IT support infrastructure to ensure uptime and security in an aesthetically-pleasing, compact edge computing solution.”

Learn more about how to successfully manage edge computing sites by visiting the EcoStruxure IT resource site.



**EcoStruxure™ for IT**  
Innovation At Every Level



EcoStruxure™ Architecture

Life Is On



Explore APC Solutions at

[apc.com](https://apc.com)

**Schneider Electric**

Boston ONE Campus  
800 Federal Street  
Andover, MA 01810  
USA Phone: + 1 978 794 0800

[www.se.com](https://www.se.com)

October 2021

©2021 Schneider Electric. All Rights Reserved. Life Is On Schneider Electric, EcoStruxure and APCi are trademarks and the property of Schneider Electric SE, its subsidiaries and affiliated companies. All other trademarks are the property of their respective owners.  
998-21519456