



Turn to the Experts.™

## Case Study – Shopko®

EDUCATION / HEALTH CARE / LODGING / MANUFACTURING / OFFICE BUILDING / RETAIL / SPECIAL



### Centurion® and Weathermaker® Rooftop Units with i-Vū® Controls Help Major Retailer Go Green

#### Project Objectives

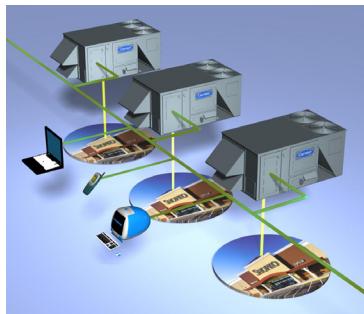
Shopko, headquartered in Green Bay, Wisconsin, has 142 stores in 13 states. As multi-department retail stores, they are committed to offering quality merchandise, services and value to their customers. Shopko's corporate vision is to provide a clean, comfortable and environmentally sensitive shopping experience. To help achieve this vision Shopko needed a solution that improved the efficiency and operation of its existing rooftop units and energy management systems while being environmentally responsible.



#### Solution

For new construction and replacement projects Shopko selected high efficiency Centurion rooftop units with Puron® refrigerant. For larger applications, Shopko chose Weathermaker rooftop units, also with Puron refrigerant. The rooftop units are equipped with *ComfortLink*™ controls which can easily communicate to a single server at the corporate headquarters. The Shopko facility manager uses the i-Vū integrated control system by Carrier to monitor and control rooftop operation from any mobile or stationary web-enabled device.

*The Centurion and Weathermaker rooftop units with i-Vū controls allow Shopko to manage each store's operation from the corporate facility management office or from any remote web-enabled device, increasing customer comfort while reducing maintenance and energy costs.*





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AIRSIDE / APPLIED / CONTROLS / SERVICE / SPECIAL SOLUTION / TOTAL SYSTEM / UNITARY

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*Gary F. Vande Hei,  
Facilities Manager,  
Shopko*

### Project Synopsis

In 2007, when the heating, ventilation and air conditioning (HVAC) equipment serving Shopko stores began to show its age, the facility management team began evaluating replacement options. Shopko set aggressive goals to reduce operating and maintenance costs and ensure environmental responsibility.

Since Shopko's 142 stores cover a large geographic area and range in size from 20,000 to 105,000 square feet, individual store HVAC requirements vary substantially. To find a solution, Shopko leveraged its 25 year relationship with Carrier distributor, Temperature Systems Inc. (TSI) to replace 1,500-1,700 tons of cooling per year. “Key elements we were looking for included standardization, high efficiency, R-410A refrigerant, ease of maintenance, parts availability, and excellent customer service” said Gary F. Vande Hei, facilities manager for Shopko.

Kevin McGarry, sales manager for TSI, recommended using premium efficiency Centurion® rooftop units with Puron® refrigerant and *ComfortLink*™ controls. These units qualified Shopko for energy rebates through programs such as Wisconsin's “Focus on Energy”, a program designed to protect the environment and control the state's growing demand for energy. When larger capacity units were required, TSI recommended the Weathermaker® rooftop units, also with *ComfortLink* controls.

Temperature Systems Inc. also suggested the i-Vū® integrated control system to optimize the operation of Shopko's HVAC and lighting systems. Using the i-Vū system, Shopko can manage each store's operation from the corporate facility management office or from remote web-enabled devices. With the i-Vū systems' custom programming capability, Shopko is able to reduce energy consumption at stores when usage approaches threshold limits set by local utilities. Vande Hei was pleased with the i-Vū system saying “the graphic interface and open-protocol communication make it extremely easy to use.”

With the significant reduction of operating and maintenance costs achieved using the i-Vū system's control capabilities Shopko currently plans to install PremierLink™ controllers on remaining rooftop units to communicate with the i-Vū system. “The use of PremierLink controllers makes complete sense because the retrofit installation of the controller on an existing rooftop unit costs less than a single repair to DDC components and now these units can also be monitored through a single system,” said Shane Lyle, TSI automation manager.

An important benefit with the new system is the ability to have equipment and controls supported through a single solution provider. “One phone call gets both equipment and controls issues resolved and response times are measured in minutes” said Lyle.

The Shopko team is extremely pleased with the results. “Being able to look at unit performance, identify problems, handle store manager complaints on comfort, energy, and lighting - this is the reason we chose TSI and Carrier” said Vande Hei.

### Project Summary

**Location:** Headquartered in Green Bay, Wisconsin. Store locations throughout the Midwest and Pacific Northwest.

**Project Type:** Equipment replacement, controls retrofit.

**Building Size:** Ranges between 20,000 to 105,000 square feet.

**Building Usage:** Retail store.

**Objectives:** Replace aging equipment with more efficient, environmentally sound equipment and controls. Centrally manage locations to reduce operating costs.

**Main Decision Drivers:** Tenant comfort, the environment, state rebates, reduced operating cost.

**Equipment:** Carrier Centurion and Weathermaker rooftop units.

**Controls:** i-Vū for central equipment and lighting control; *ComfortLink* controls for new

rooftops, PremierLink controls for rooftop retrofit.

**Project Cost:** \$1.5 million 2008, \$1.1 million 2009.

**Project Date:** 2008-2009

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