

VENSTAR®

PALOMAR OBSERVATORY RELIES ON VENSTAR'S SKYPORT TO REMOTELY MANAGE HVAC FOR CLEAR VIEWING OF STARS

CHALLENGE:

Remotely Manage HVAC System and Keep Telescopes Cool

Owned and operated by Caltech, the iconic Palomar Observatory is home to seven active research telescopes, including three large research telescopes: the 200-inch Hale Telescope, the 48-inch Samuel Oschin Telescope and the 60-inch telescope.

To produce sharp images, temperatures inside the telescope domes must be closely controlled to reduce turbulence at the telescope level. When air turbulates in the path between a telescope and a star, the star will appear blurry or distorted due to the mixing between hot and cold air.

Rick Burruss, superintendent for Palomar Observatory, wanted to find a control system that would help keep the telescopes cool to ensure optimal viewing conditions. He also wanted to be able to monitor the temperatures generated by the HVAC systems across the facility.



Nick Koon Photography

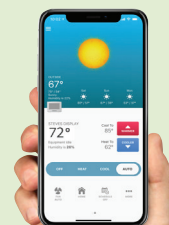
Rick Burruss chose Venstar Skyport Cloud Services to remotely manage thermostat temperatures and keep the observatory's telescope domes cool for optimal viewing conditions.

About Skyport

Venstar's free Skyport Cloud Services allow users of Venstar's Wi-Fi® thermostats to use Venstar's free Skyport Mobile App on their Apple iOS® and Android™ mobile devices or directly from the Web to instantly access and control multiple thermostats at numerous locations from virtually anywhere.

About ColorTouch

ColorTouch Commercial models offer 365-day programming or can be used as nonprogrammable thermostats. They include security features and setpoint limiting. ColorTouch can remotely control, monitor or average temperatures with the remote sensor.



“Venstar’s Skyport Cloud Services gives me extensive control so I can ensure the proper telescope conditions for ideal star viewing.”

– Rick Burruss, superintendent for Palomar Observatory

SOLUTION:

Venstar Skyport Cloud Services and Wi-Fi Thermostats

To remotely monitor and control temperatures in the telescope domes, Burruss chose Venstar's Skyport® Cloud Services and Venstar ColorTouch Wi-Fi® thermostats. With Skyport, Burruss has the ability to remotely view, access and control all of the thermostats across the facility. This includes monitoring the temperatures in the telescope domes, critical equipment buildings, laboratories, office and recreation space, museum and astronomer living quarters.

Utilizing the Skyport Cloud Service, Burruss can now see the current temperature inside each telescope dome and remotely make any changes to the settings. He uses setpoint limiting to ensure that temperatures stay within the pre-set parameters, keeping the domes from getting too hot or too cold. In addition, Skyport instantly alerts him via email when temperatures go above or below parameters so he can immediately take action from virtually anywhere.

RESULTS:

Skyport Ensures Consistent Temperatures in Critical Applications Including Thermostat Domes

Using Skyport Cloud Services, Burruss is able to ensure consistent temperatures in the telescope domes. Minimizing turbulence is essential for ideal viewing of the stars for researchers, visitors and other telescope users.



Nick Koon Photography
Rick Burruss can easily manage the thermostats using Skyport on the website or from his iPhone.

Results include:

- Enables clear viewing of stars by keeping telescope domes the right temperature
- Provides alerts when temperatures inside the domes are outside the pre-set parameters
- Empowers remote access and control using Skyport Cloud Services via website or mobile device
- Facilitates setpoint limiting of temperatures throughout the facility

About Palomar Observatory

Palomar Observatory, located on top of Palomar Mountain in north San Diego County, California, is an internationally renowned center of astronomical research that is visited by tens of thousands of researchers and visitors each year. Conceived almost a hundred years ago, it is owned and operated by Caltech.



Nick Koon Photography
Rick Burruss uses setpoint limiting to ensure that temperatures stay within the pre-set parameters, keeping the domes from getting too hot or too cold.

"I highly recommend Venstar's Skyport Cloud Services. It has exceeded my expectations with its user-friendly interface that allows me to quickly view and control the thermostats from virtually anywhere."

– Rick Burruss, superintendent for Palomar Observatory

About Venstar

Venstar, founded in 1992 and based in Southern California, designs and builds a broad variety of innovative thermostats with more than 10 million installed. Venstar's Skyport Cloud service provides businesses a secure and private powerful cloud service for command and control of HVAC systems from anywhere in the world.

The company's Surveyor® Energy Management System allows retailers, restaurant chains and other multi-location businesses to remotely monitor, manage and control energy consumption while reducing maintenance expenses. Currently, Surveyor is used to control more than 100,000 HVAC systems and building lighting in more than 30,000 retail locations throughout North America.

Venstar is a wholly owned business unit of Daikin Comfort Technologies North America, Inc. (Daikin), a subsidiary of Daikin Industries, Ltd. (DIL), the largest manufacturer of HVAC systems worldwide.

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