

Venstar Case Study: Yosemite National Park Vacation Home

On June 30, 1864, President Abraham Lincoln signed the Yosemite Grant Act setting aside the Yosemite National Park for enjoyment by future generations. In the 1940's, many vacation homes were built in this beautiful national park. Flash forward to the 21st century, and the homeowners of the Yosemite vacation homes have run into a problem of how to remotely control and monitor their existing millivolt gas and electric baseboard heaters to control energy usage and costs.

When the old thermostats were originally installed, the contractors ran just two low-voltage wires inside the wall from the thermostat to the furnace on the other side of the room. Because these homes only have two wires in the wall, homeowners had few options for upgrading the old mechanical thermostats.

Challenge: Update the Wiring for Installation of Digital Wi-Fi Thermostats

Fletcher Tyler is a homeowner of one of Yosemite's vacation homes. His four-bedroom, two-story home has six electric baseboard heaters and a single back-up propane wall furnace. Since his home is a vacation rental, he is not on-site to control the energy usage. One month last year, he received a \$600 electric bill when the heating was left on after a guest's departure. Tyler knew it was time to be able to remotely control the temperatures of the electric heaters using a digital, Wi-Fi thermostat. Tyler turned to Venstar, a leading thermostat manufacturer and maker of ColorTouch, Consumer Reports' top-ranked digital programmable thermostat, to find a solution.

Solution: Venstar's Two-Wire Kit and ColorTouch Thermostats With Skyport Wi-Fi Services

Tony Albers, Venstar's regional sales manager for the western states, recommended Venstar's Two-Wire Kit (ACC0436) to enable Tyler to solve the wiring problem and allow the installation of Wi-Fi ColorTouch thermostats at his vacation home. Using Venstar's Two-Wire Kit solved Tyler's problem of not having enough wires. This kit supplies the additional 24-volt power wires to the new digital thermostat via a small plug-in wall transformer.

As long as there is an electrical outlet near the thermostat, a contractor can plug in the 24-volt transformer, and the thermostat will come to life. The existing wires that were already in the wall are isolated from the new 24-volt transformer by a small isolation relay that is included in Venstar's Two-Wire Kit. Once this relay is placed inside the wall, it isolates the furnace's old signal from the new 24-volt power. With Venstar's Two-Wire Kit, older millivolt heating systems can easily and affordably be converted for usage with a modern digital thermostat.

Using Venstar's Two-Wire Kit to resolve the wiring issue enabled the installation of Venstar's award-winning ColorTouch digital Wi-Fi thermostats, which also come with Yosemite background themes to celebrate the 150th anniversary of the Yosemite Grant. ColorTouch also comes with dozens of other background themes focused on nature, scenery, pets, space and more.

Results: Venstar's Skyport Mobile App for Remote Control of Thermostat

Venstar's Two-Wire Kit enabled the installation of ColorTouch digital Wi-Fi thermostats at Tyler's Yosemite vacation home. These thermostats connect to the home's Wi-Fi via the Internet router, so they will communicate information, including current temperatures inside and outside the home, usage history, and more.

Using Venstar's Skyport mobile app or by using Venstar's Skyport Cloud Services from virtually any computer or mobile device, Tyler can remotely access his ColorTouch thermostats to monitor, program, change, or simply view the settings. Using Skyport, he can control heating energy costs by establishing setpoints for his guests, so no one can set the heat too high or leave it on when they are gone. He can also program the system to send him email alerts if the indoor temperature drops below his pre-determined setpoints.

Since the ColorTouch thermostats were installed, Tyler has been able to manage the energy usage at his Yosemite vacation home and reports that his average monthly costs for heating are less than \$130 per month, a significant savings over the \$600 bill without the Wi-Fi thermostats.

Tyler said, "Venstar's Two-Wire Kit enabled me to quickly and affordably bring my Yosemite vacation home's thermostats into the 21st century without having to cut into any walls or make any major changes to the HVAC systems. Using Venstar's ColorTouch with Skyport Wi-Fi Key allows me to ensure that that the home's temperature is comfortable while staying within my own setpoints. I also appreciate that it empowers me to use my laptop computer to make changes to the thermostat from virtually anywhere, allowing me to resolve temperature issues quickly while helping manage energy costs."

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