

# CASE STUDY

APAC CEDIA Award-Winning Innovation: The Beachside Smart Shed Project 2025

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### **ABOUT**

Application Type: Residential

Location: Mount Manaia in Northland Whangārei

New Zealand

### PROJECT PLAYERS

SI = Automation Associates Limited

Distributor = Techstyle

## PROJECT CHALLENGE

Our client embarked on an ambitious project to build an 8-bay shed on a beachside farm, with the 8th bay serving as a temporary "tiny home" before the main house was constructed. This shed, designed by the architect to resemble a 16-pin IC, reflected the client's connection to the electronics industry. The project presented several challenges, including off-grid living, space constraints, remote site management, and the need for a robust entertainment system, with particular attention to power conservation, therefore, automation was key.

The client was also keen to explore full-spectrum and human-centric lighting, making it an integral part of the initial design phase. In the past, we set up a Vantage automation system at the old "Shack" which managed the building's lighting, heating, and AV systems, while also integrating various farm systems, and these needed to connect with the new system at the shed, too. Once again, the Vantage automation system selected for this project effectively addressed all these challenges, delivering a seamless and integrated solution.

#### THE SOLUTION

The Vantage automation system implemented at the shed provided a comprehensive solution that addressed the unique challenges of the project, ensuring simplified operations for both the client and future guests. In terms of lighting control, the system controls various lighting elements, including high CRI warm white and RGBCW LED strips. The alarm fires a Vantage command to activate path lighting if it is dark. Keypads in all areas control lights and other loads, with the top button always corresponding to the light in the immediate vicinity. The Vantage EQ73 touchscreen provides control over the lights in the room as well as all other lights on the property, and the Vantage EQ App is available on all iPhones and iPads for convenient lighting control. Timers help manage the complexity of the RGB lighting, and cupboards and wardrobes are fitted with recessed RGBWC strips set to warm white by default, adjusting brightness based on the time of day.



Shades were installed to manage light and privacy, especially given the shed's glass end facing the setting sun. Keypads in all areas with blinds offer one-button shade control ("up", "stop", "down", "stop"). One-touch presets on the touchscreen and app provide specific settings like "cooking", "movie", and "sunstrike". Shade groupings for the lounge and kitchen, as well as an "all" group for the "warm" and "away" modes, simplify control. HVAC was also covered: temperature sensors were linked to the thermostat driver that controls the valves and recirculation pump activation. Room temperatures were set using the Vantage thermostat widget and schedules. The multi-zone sprinkler system with a rain detector and the irrigation schedule is managed via the Vantage timer widget. The Vantage system also manages the power distribution to the hot water cylinder and spa pool, ensuring efficient use of excess power generated by the RE system. The control UI features location and task-based profiles, making it intuitive to find and use controls. Remote monitoring and control included the ability to open the house for contractors or prepare it for visitors.



#### PROJECT BENEFITS

Enhanced functionality, ease of use, and overall living experience in the off-grid, multi-functional shed.

The overall project design included provisions for future upgrades and expansions. The Vantage system's flexibility ensured that the client's evolving needs could be met without significant rework.

# PRODUCTS INSTALLED

DIN controller

Dimmers: combination of faze control, 0-10V and DMX Relay: shades, sprinklers, LED lights, pumps and valves

White RP touch keypads

EQ73TB

IRX-II

Audio & video integration



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