

Case Study: **Electronics Development for Intelligent Heating/Cooling System Demonstration**

Project Summary

As part of this project, Partner Electronics assisted with the development of the technology behind an intelligent heating/cooling system, enabling our client to demonstrate its capabilities to potential customers.

The client had already designed the thermal system, optimising energy usage and ensuring efficiency. The focus for Partner Electronics was to develop a control platform to manage the heating and cooling functions, integrate with building management systems, and provide a clear user interface.

The solution needed to balance functionality with low development cost, using readily available components where possible.



Key Capabilities & Tools

Embedded C/C++

BACnet interfacing, Ethernet

Modbus interfacing

User Interface Developments using
TouchGFX design tools



Project Outcome & Impact

Delivered a cost-effective electronics platform suitable for system demonstration and further development.

A development kit with an integrated LCD display and Ethernet connectivity was selected to reduce design time and meet key interface requirements. A custom plug-in PCB enabled connection to temperature, humidity, and air quality sensors, as well as fan control, allowing flexible system configuration.

The completed electronics were successfully integrated into the wider system, enabling control of heating and cooling via both a local display and remote Ethernet interface.

This approach allowed the client to demonstrate the system's capabilities to potential customers without the need for a fully custom hardware design at an early stage.

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