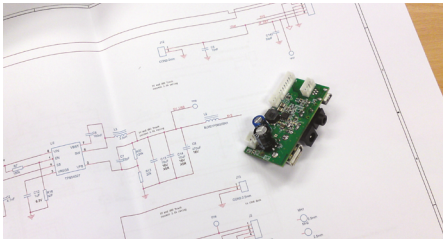


Case Study: Multi-sensor device development to enable BACnet/Modbus integration

Project Summary

Partner Electronics were approached by our clients to design a smart building sensor for environmental monitoring that integrates multiple sensing functions with HVAC control outputs.

The project focused on delivering a high-performance, low-cost design suitable for volume manufacture, while enabling compatibility with both modern and legacy building management systems.



Key Capabilities & Tools

- Hardware and firmware design
- PCB design for volume manufacture
- BACnet MSTP and Modbus RTU interfaces for diverse connectivity
- RS485 transceiver design for reliability in noisy environments

Project Outcome & Impact

Enabled cost-effective deployment of multi-sensor devices across mixed building management environments.

The system supports integration with BACnet and Modbus networks, allowing deployment across both new and existing infrastructure without additional interface hardware.

A single device consolidates multiple sensing and control functions, reducing system complexity and installation requirements.

The design supports reliable operation in electrically noisy environments while maintaining measurement accuracy and flexibility.

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