

CONNECTIVITY

Embedded Network Connectivity Module

Embedded Firmware

Network Connectivity

Driver Integration

CLIENT

A US-based technology company developing networked embedded products.

THE PROBLEM

The client had an embedded product that needed to join their customers' standard IT networks — both local and wider connections — but the system had no networking hardware or software of its own. Writing a networking stack from scratch wasn't the right call for their timeline; what they needed was a proven networking foundation, properly integrated and adapted to their specific hardware and application, that they could trust in the field.

WHAT WE BUILT

We selected and integrated a network controller suited to the client's hardware, and took the manufacturer-supplied networking stack as our starting point rather than writing one from the ground up — the right call given the timeline and the maturity of the available stack. The integration work was where the real effort went: adapting the stack to the client's specific application, making sure the range of standard application-level protocols it supported actually worked correctly with the client's system end to end, and validating the whole thing over a standard wired connection under realistic conditions.

WHAT IT DOES

- ✓ Integrates a network controller and a proven, manufacturer-supplied networking stack into the client's embedded system
- ✓ Supports a wide range of standard application-level network protocols, validated against the client's specific application
- ✓ Connects over standard wired local and wide-area network infrastructure
- ✓ Adapted and tested for the client's exact hardware platform rather than a generic reference design
- ✓ Gives the client a networking foundation built on a mature stack rather than custom code carrying integration risk

OUTCOME

The client's product gained reliable connectivity to standard IT networks on a timeline that wouldn't have been possible building a networking stack from scratch, while still being properly adapted and validated for their specific hardware rather than left as an unintegrated reference design.