

Microtronix Datacom Ltd.

Secure Media Streaming Solution – High quality media distribution solution with digital rights management.

STEP Networks Software Development Advantages

Provided specialized development skill sets for short durations

Recommend technology and solution for optimum result

Filled a void in expertise

Met stringent FIPS 140.2 level 3 security requirements

Developed Solution within timeline allocated

Challenge

Microtronix, an expert in Datacom, Embedded Linux and FPGA design required additional engineering capacity to fulfill a customer's requirements for engineering design services contract of a complex high-security software application. The project involved a new development environment incorporating three independent design teams, a rigid requirement specification and a tight development schedule. With STEP Networks on board, Microtronix was able to accept the contract with the assurance they could fulfill the requirements for quality and timelines of delivery.

Solution

STEP Networks worked as an extension of the Microtronix development team in order to build a highly confidential secure media streaming solution. The solution consisted of a server, implementing an industry standard wire-protocol as well as a custom protocol in order to interface with a Security Manager. The solution made use of many technologies including SSL (TLS 1.0) and integrated with multiple FPGA's.

What our customers say...

"I have found your staff to be very competent and professional and would welcome the opportunity to work together with you in the future."

Norman McCall
President, Microtronix

Embedded Application Development Expertise

STEP Networks' experience and the ability to work with Freescale Coldfire microprocessors and embedded Linux were central to the project while advanced skills in C++ coupled with a thorough understanding of security software were critical in producing code destined for FIPS 140.2 level 3 certification.

Optimization

The team at STEP Networks identified performance issues within the original specification and worked with the customer to craft superior strategies. These changes were accepted by the customer and integrated into the final product.

Technologies Used to Develop Application

C/C++	Linux	Cold Fire Processor	Watermarking	NFS
XML	LTIB	X509 Certificates	Embedded Dev	TFTP
SSL (TLS 1.0)	FPGA	Digital Signing	OpenSSL	

Unit Testing

- Application Tests code functionality for acceptance or failure.
- Cross compiling: Compiling code that is designed for a different application than the one that is currently being worked on.

Project Management

- Design specification reviews
- Solution validation testing
- Status Report and customer meetings

Customer Support:

By acting as a member of the customers development, quality testing, documentation and implementation team, STEP Networks provided Microtronix one seamless support structure to the customer.