

**Position Title:** Embedded Digital Engineer  
**Reports to:** Vice President of Engineering



## Opportunity Snapshot

Lab X Technologies, LLC, the leading engineering design partner specializing in networked audio/video systems for the professional, commercial, and residential markets, is searching for an experienced Embedded Digital Engineer. This position reports to the Vice President of Engineering and will play a significant role in the continued growth of the company as an industry engineering leader and the continued development of Lab X IP (intellectual property) for the emerging AVB (Audio Video Bridging) IEEE standards. The position will require close interaction with clients (marketing and design personnel) and other Lab X design team members.

- We are recognized as leading edge providers of the AVB solutions audio and video solutions.
- We are committed to establishing long-term, mutually satisfying relationships with both our team members and our clients (world-wide recognized brands!).
- We base our relationships with team members and clients on openness and integrity. You can expect us to provide you with the knowledge and clients to take on challenging engineering projects. In turn, we'll expect you to bring engineering skills and a commitment to client service, as well as a desire to grow and prosper with a solid and dedicated team.

At Lab X, we've coined the phrase "Gateway" to indicate the unique nature of FPGA code and firmware. Currently for this position, **we are looking for an FPGA Gateway "Rock Star"** who also has a wide breadth of expertise incorporating expertise in embedded software/firmware, gateway, and hardware development.

## What You'll Bring to the Table

- Self-motivation and goal orientation
- Solid understanding of audio engineering
- Superior organizational and time management skills
- Bachelor's degree in Computer Engineering or Electrical Engineering (Associate degrees with extensive experience may also be considered)
- 3 years minimum experience in embedded system design of software/firmware, gateway, and hardware

## What's In It For You?

- **Creative environment** -- We value creativity. We develop broad IP platforms and complete product concepts. Our biggest and best customer relationships have come from product concepts that we developed and brought to the manufacturers. We live a culture of innovation.
- **Autonomy** -- With the support of your team and with solid guidelines in place, you'll drive your own success and determine the most effective ways to reach your goals.
- **Pride** -- Lab X truly leads the world in connectivity solutions. When the top A/V component manufacturers think to outsource their digital networking challenges, they think of Lab X first.

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## Your Role

- Overall Design
  - Develop Lab X IP for networked A/V solutions
  - Contribute product concepts for internal and client development
  - Work closely with client development and/or marketing teams
  - Translate client requirements into product specifications
  - Develop conceptual system designs
- Gateware (FPGA HDL and firmware)
  - Identify and elicit requirements to determine partitioning and selection of appropriate programmable logic devices (FPGAs, CPLDs)
  - Design HDL code and synthesis for programmable logic devices
  - Generation of test benches for simulation of gateware designs
- Software
  - Development of conceptual embedded software system architecture
  - Participate in the design, plan, and implement software used in embedded systems
  - Identify and elicit requirements from client and tracks those requirements are being addressed throughout the software design.
  - Represent needs and concerns of software engineering in the hardware design.
- Firmware
  - Embedded firmware design and coding for general purpose microcontrollers
  - DSP experience (preferably for Analog Devices' SHARC or Blackfin processors)
  - Code management (handling of code releases, version control)
- Hardware
  - Specify, design, and develop digital audio platforms
  - Debug initial target hardware platforms
  - Select components and assemblies
  - Schematic capture
  - BOM management
- Project
  - Provide time and material estimates for projects, including task breakdown and job quote generation
  - Participate in project management by providing status on tasks and revising current time to completion
  - Oversee prototype development (support outside PCB layout, BOM management, contract manufacturing, part sample procurement)
  - Design evaluation

## Keys to Success

Exceeding expectations is not only the key to our company's success but also the key to your success within this role. At a fundamental level, your performance will depend on the satisfaction of your client, profitability of your projects, the timeliness and accuracy of your reports, and your capacity for effectively collaborating with your teams both within the organization and those involved in your projects. Your primary mission as Embedded Digital Audio Engineer will be to develop truly satisfied clients by providing unparalleled customer service. Within this market, you will represent our organization as consistently willing to go "above and beyond" to meet the needs of our clients. Additional keys to your success include:

- **Ability to "rise to a challenge"** -- as in any complex project, challenges arise in our environment, and we will look to you to remain flexible, communicate openly regarding obstacles you encounter, and to develop creative strategies to overcome those obstacles.
- **Excellent communication, negotiation, and interpersonal skills** -- you'll need to build solid relationships with a wide range of personalities and skill levels in order to understand your requirements and to effectively leverage available resources.
- **Self-motivation** -- in an environment with little to no micro-management, we'll depend on you to be highly driven, efficient, and organized as you manage competing priorities and work independently to accomplish your goals.
- **"Team player" attitude** -- we employ an exceptional group of professionals, each with their own specialty that is essential to the success of the team. We'll expect you to not only work with those around you in a respectful fashion, but to also be willing to step in and support the team when your skills are in demand.