- Digital Radios
- Dolby Digital 5.1 Decoders
- DTS Decoders
- Audio Preamplifiers
- Audio Power Amplifiers
- Speaker Design
- Systems Integration
- Home Theater Systems
- AM/FM/TV Tuners
- Power Conditioning
- Video Switching

Overview

iLAB America , pronounced "eye-lab", is short for Integration Laboratories. iLAB America was founded in 1998 to develop state of the art Consumer Electronics integration products. Our primary market is the design and development of products for OEM clients specializing in digital audio and digital radio.

It's also common for iLAB America to develop products in advance to offer OEMs a "turn key" solution that can be inserted into their product lines. These "stock designs" are usually minimally changed to match the clients current product styling. We can also provide additional design services to add features to suit a clients needs. Stock designs can save clients many months of lost time to market since the bulk of the development is completed. This proactive approach to serving our clients needs demonstrates our commitment to keeping your product line advancing with evolving technology.

iLAB America also offers complete concept to production solutions to deliver product designs that are tested , boxed and ready to ship to the customer. This is ideal for companies with already over-burdened production capacity.

Our strategic development agreement with iBiquity Digital for HD Radio reference designs enables us to better serve your digital radio product requirements.

Project Management
Project management and staffing are essential components of the product development and production process. We are often contracted to assist our clients throughout the entire process to assure successful production of their products. We can also assist clients seeking approvals such as UL, CUL, FCC , Dolby Laboratories , DTS and HD Radio.

Product Development
iLAB America can provide technical services within specific areas of a project or we can develop the entire product for you. Products development costs are either a fixed fee or charged on the basis of the time used.

Software Development
iLAB America specializes in the design and production of microprocessor and microcontroller products. Our focus is on control , communications, data acquisition and Digital Signal Processing.

Hardware Development
iLAB America offers turn-key product designs including schematics, bill of materials, parts sources, circuit board layout, electronic packaging and enclosure , production, and testing.

Production Services
iLAB America offers complete production and test services through our ISO 9002 certified strategic partners. This greatly simplifies the process of reaching the market for our OEM clients by providing a complete design to production solution through a single source.

The iLAB America Research and Development Center serves OEM customers in the Consumer Audio/Video markets. With over 15 years of design experience in this market, this makes us one of the most technologically diverse R&D facilities available. Our efforts range from DSP based audio processors to RFID, from the multiroom audio/video to Home Theater. Our long standing relationships with key IC suppliers, as well as with overseas suppliers and vendors, allows us to provide solutions and answers quickly.

Depending upon your needs, we can work on a per project basis or as a retained consulting firm. Some clients engage us to function as an outside design department. Other clients have their own in-house staff , with whom we work as a team. In each case, our expertise allows us to contribute a new perspective to the project at hand. Making our customers successful is iLAB's primary mission. We do this by teaming with them on multi-generation product developments; helping them achieve global growth, especially in advanced audio technology; and working with them to attain the highest level of quality and performance.
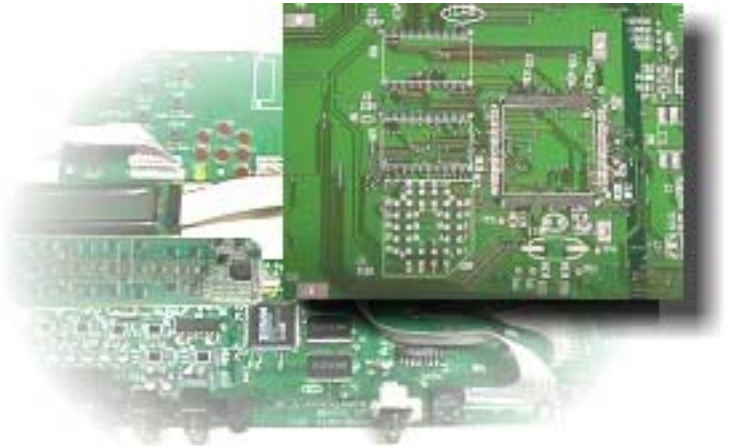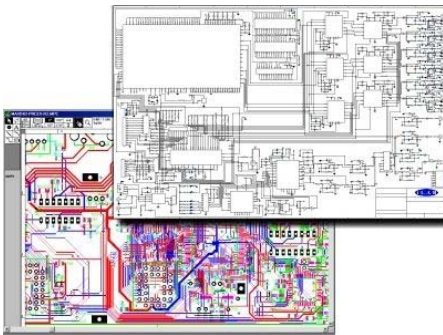
Product Development

- Dolby Pro Logic, Dolby Digital 5.1 , DTS surround sound processors
- Audio Preamplifiers , single through multi-channel
- Audio Power Amplifiers , single through multi-channel
- Audio and Video Switching Systems
- Real-Time Embedded Systems
- USB Audio
- AM/FM/TV/Digital AM/FM Radio Tuners
- RFID Systems
- Speaker Design
- AC Power Conditioning Products
- Multiroom Audio/Video Systems
- Communications Systems

Manufacturing Consultation and Production Services

- Circuit Board Design/Layout
- Component Sources
- Component Purchasing
- PCB Assembly
- Automated Test
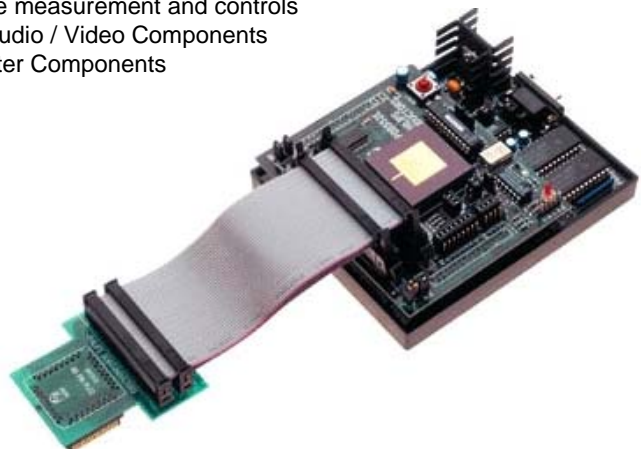- Production QA/QC Consultation

Custom Hardware & Software Design

- Digital Circuit Design
- Analog Circuit Design
- Data Acquisition
- Signal Processing
- Data Communication
- Remote Controls
- Temperature measurement and controls
- Multiroom Audio / Video Components
- Home Theater Components

Project Management

- Project Planning
- Requirement Specifications
- Design Reviews
- Test Plans
- Product Documentation
- Production Support
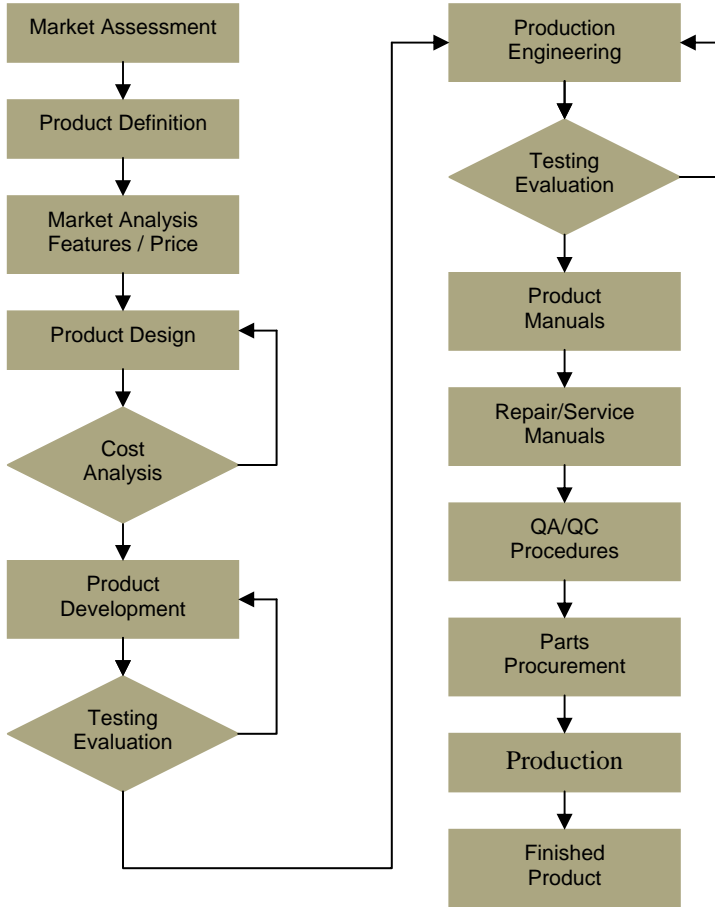
Significant Products Developed

- HD Radio , IBOC , multicasting, alarm clock radio
- Dolby Digital 5.1 processor for PC applications
- Dolby Digital 5.1 / DTS / 7.1 (8 channel) processor for Home Theater
- Dolby Digital 5.1 processor for headphones
- 10 outlet AC power conditioner with current sense turn on
- 12 channel multiroom amplifier (12 x 85W = 1020W)
- Premium 5 channel audio power amplifier (5 x 200W = 1,000W)
- 5 channel audio power amplifier (5 x 200W = 1,000W)
- Premium 3 channel audio power amplifier (3 x 200W = 600W)
- 5 channel audio graphic equalizer
- 3 channel audio graphic equalizer
- Bi-directional wall mounted multiroom remote control.
- Bi-directional hand held infrared remote control .
- Flat panel resistive LCD touch screen for interface to multiroom system.
- Flat panel infrared touch screen for interface to multiroom system.
- 8 in/ 3 out Audio and Video switcher with 2 in/ 3 out RF switcher.
- Computer interface for multiroom system.
- Modular FM stereo, Am stereo, Short-wave or CATV(FCC, HRC, IRC) and off-air through UHF tuner for multiroom.
- Dolby Digital 5.1(AC-3), Dolby Pro-Logic, LucasFilm THX surround sound decoder and preamplifier.
- Universal infrared code library and transmitter for multiroom system.
- Learning infrared control unit for multiroom system.
- 8 in/ 8 out Audio and Video switcher with 3 audio preamplifiers for multiroom system.
- 8 in/ 8 out Audio and Video switcher with 8 audio preamplifiers for multiroom system.
- 10 outlet AC control for multiroom system.
- Multiroom system interface to Pioneer 100 disc CD changer. Allows the disc, track and other status to be sent/received.
- 8 in/ 8 out super VHS switcher for multiroom system..
- Modular audio/video multiroom system for simultaneous/independent operation of up to 8 A/V sources to 64 rooms max.
- Portable RFID transceiver for remote data collection
- Flexible RFID loop antenna
- 6 Channel audio preamplifier for Home Theater

Applications

- Audio Preamplifiers
- Audio Power Amplifiers
- Dolby Pro Logic Decoders
- Dolby Digital 5.1 Decoders
- DTS Decoders
- Speaker Design
- Embedded Control Systems

- RFID Systems
- Systems Integration
- Multiroom Systems
- Home Theater Systems
- Microcontroller/PC based Control Systems
- AM/FM/TV Tuners
- Power Conditioning
- Video Switching

Client's Typical Product Development Cycle

Market Assessment

↓

Product Definition

↓

Market Analysis
Features / Price

↓

Product Design

↓

Cost
Analysis

↓

Product
Development

↓

Testing
Evaluation

→

Production
Engineering

↓

Testing
Evaluation

↓

Product
Manuals

↓

Repair/Service
Manuals

↓

QA/QC
Procedures

↓

Parts
Procurement

↓

Production

↓

Finished
Product

Client's Product Development Cycle with iLAB Stock Design

Market Assessment

↓

Product Definition

↓

Production
Engineering

↓

Testing
Evaluation

↓

Finished
Product