



IR Thermometers

Project Timeline: 11 Months



DESIGN AND DEVELOPMENT

Mechanical Design

- Designed and tooled injection-molded components
- Complete case design with mold flow analysis
- Mechanical design optimized for manufacturability

Electronics Design

- Custom electronics with 16-bit microprocessor, backlit LCD, sensor, and analog ASIC
- Rechargeable NiMH battery and dock with USB charging
- Bluetooth capability (later removed at customer request)

Software Development

- Embedded C and assembly for multi-processor support
- Custom communication protocols and calibration tools in Visual Basic, C, and C#
- Full source code control

Design Verification & Qualification

- Automated and semi-automated test fixtures
- In-house DVT and qualification to customer specs
- Calibration with custom black bodies and ongoing design updates
- All components reviewed and sourced by Keytronic

New Product Introduction (NPI)

- Multiple iterations with PP, PR, and MR builds
- Managed extensive design and tooling changes throughout development



OVERVIEW

The Infra-red Ear Thermometer (IRT) is produced in high volumes, with millions of units manufactured across multiple models and feature sets. Designed for both professional and consumer use, it delivers best-in-class accuracy and reliability. Optional accessories include a dock with a rechargeable battery pack for the professional model and a protective cradle for added convenience and durability.



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