CT3680 Automated Testing Platform

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Overview and Justification

➤ Testing process was manual, time consuming, and labor intensive.

➤ Needed a more efficient way to test modules for manufacturing defects

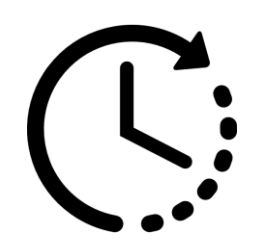*CT3680 audio delay module*

Automated Testing Platform

Solution = Hardware + Firmware + Software

GOAL
5X Reduction

Requirements

Reduce testing time by >5X

No insert/remove damage to module

Power management

Coordinated test steps

- Diagnostic data stream
- Analog voltage control inputs
- Digital control inputs
- Firmware program selection
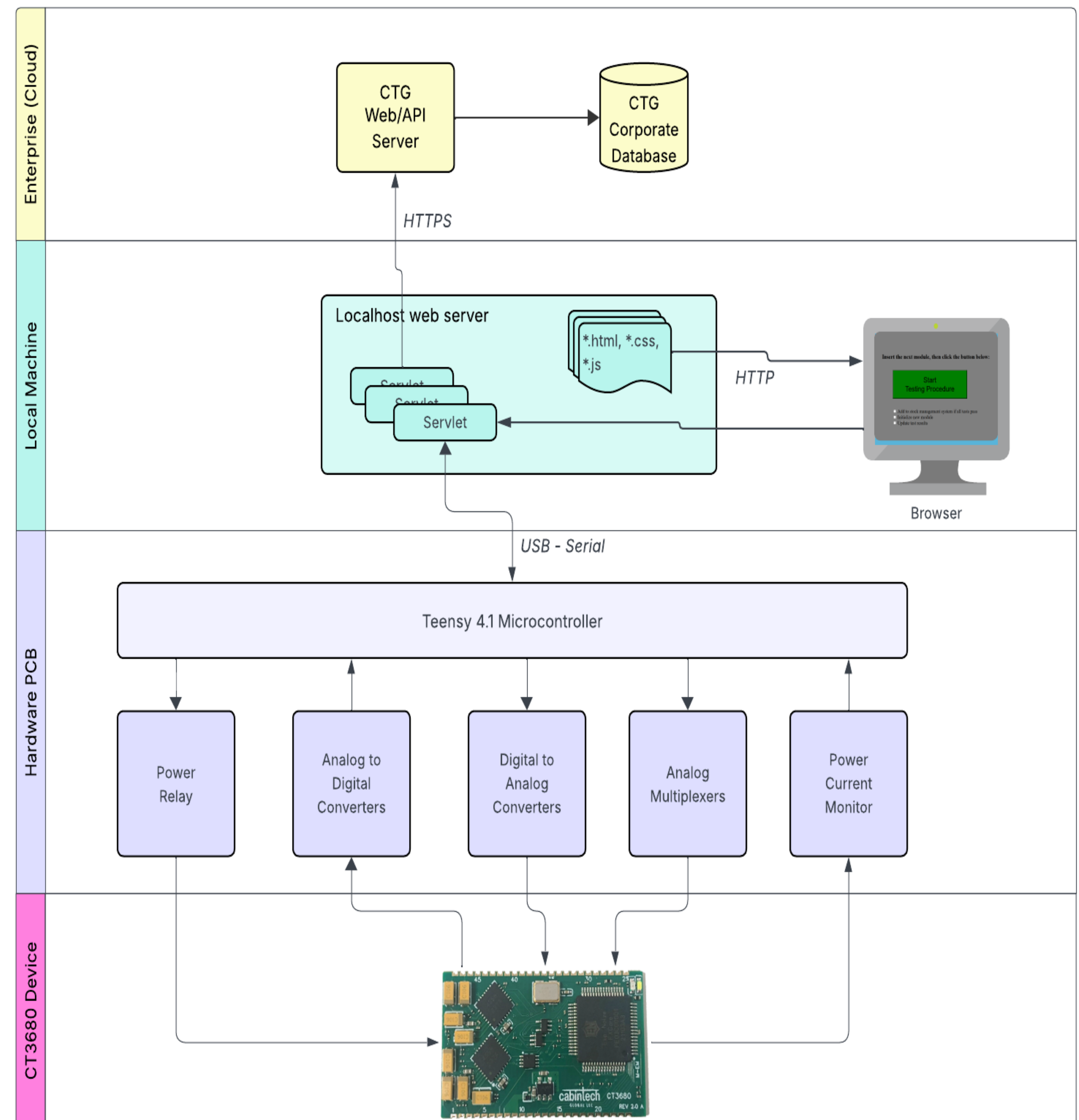- Sampling rates
- Tap Tempo
- Audio passthrough

DB Update (test results, stock counts)
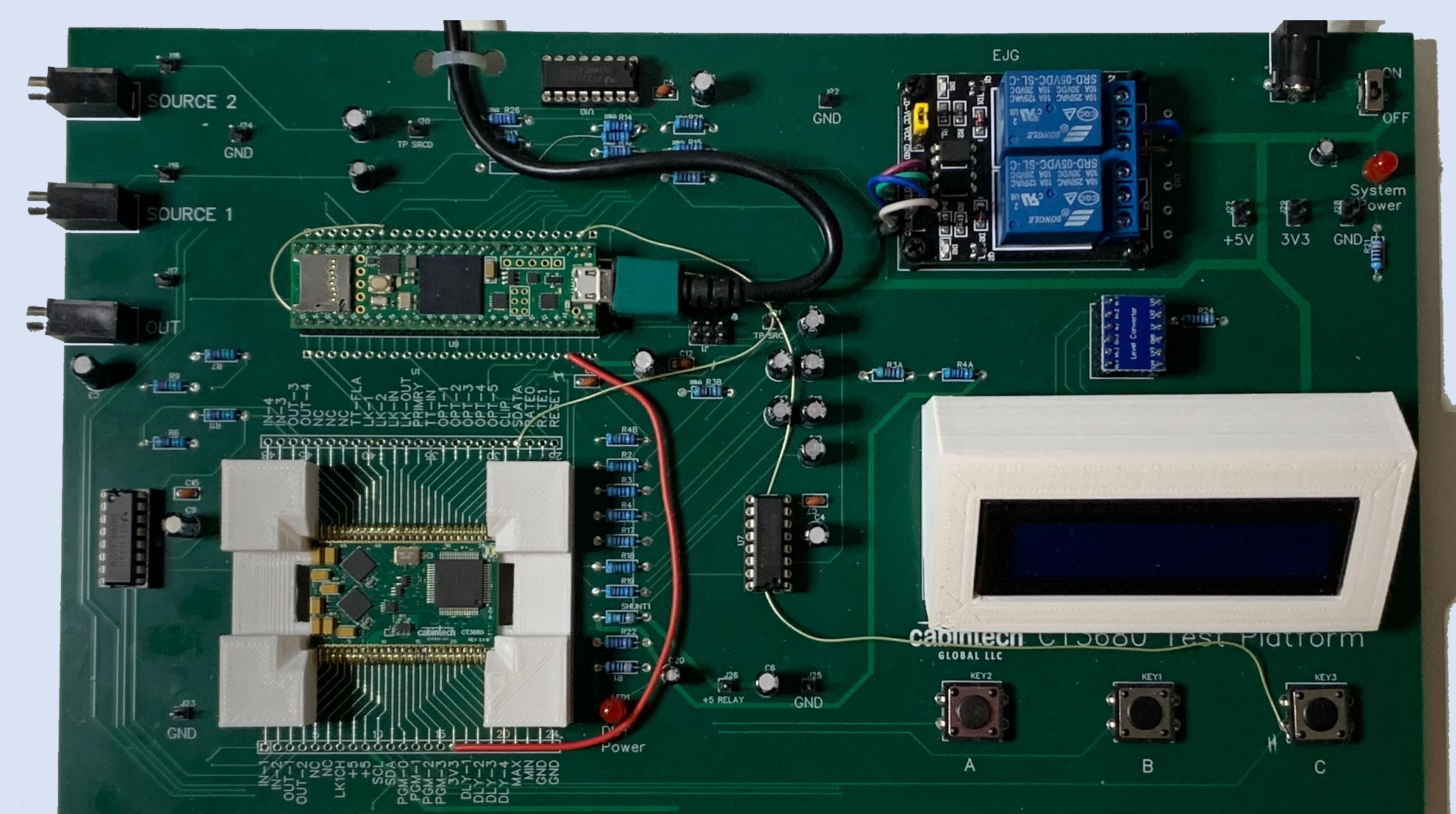
Sponsors

Architecture

Results

Test time reduced from 8 minutes to under 1 minute

Complete system designed, implemented, and verified
- Hardware design
- PCB layout and manufacturing
- PCB assembly and soldering
- Microcontroller firmware (C++)
- Web UI control system (Java, Servlets)
- Interface with corporate cloud services (REST APIs)

PCB developed to test the modules