

CUSTOM MOTOR CONTROLLER FOR CONSUMER DEVICES



THE CLIENT

The client is a consumer device vendor.



BUSINESS NEED

The client envisaged to develop a next generation firmware to control and upgrade the firmware of the L2L motor controller module based on TI/Luminary Micro Stellaris series Microcontroller - LM3S5632-IQR50-A0 devices using the USB CDC class drivers on various Windows and Macintosh platforms.

The L2L device firmware has to implement all the motor functionality present in 1.0 while still using the USB CDC class driver and support DFU. It also needs to support Macintosh platform.



TECHNOLOGY USED

- OS: Windows 7 64 bit, Vista and XP
- Hardware Setup: L2L motors using a test setup
- Tools: CodeRed
- Languages/Skills used for automation: C Programming on Linux
- Team Size: 3 Engineers



SOLUTION DELIVERED

- The L2L device was modeled as a CDC class device and motor control commands were re-implemented to handle multiple commands without dropping any command.
- Additional features such as battery measurement, LED control, Power save modes and new motor pre-defined patterns were implemented.
- Firmware upgrade feature was implemented ground-up using DFU protocol and Stellaris libraries.



BUSINESS BENEFITS

- Multiple motor functionality implementation
- DFU Support

ABOUT ALLEN CALSOFT LABS

ALLEN Calsoft Labs is a next gen digital transformation, enterprise IT and product engineering services provider. The company enables clients innovate, integrate, and transform their business by leveraging disruptive technologies like mobility, big data, analytics, cloud, IoT and software-defined networking (SDN/NFV). ALLEN Calsoft Labs provides concept to market offerings for industry verticals like education, healthcare, networking & telecom, hi-tech, ISV and retail. Headquartered in Bangalore, India, the company has offices in US, Europe and Singapore. ALLEN Calsoft Labs is a part of ALLEN group, a leader in technology consulting and engineering services.

www.altencalsoftlabs.com



business@altencalsoftlabs.com