

JOE BAKER

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OBJECTIVE:

A fast-paced embedded hardware and firmware design position

SUMMARY:

Senior embedded hardware and firmware engineer who gets designs to market on time within budget. Driven to achieve project success by helping others succeed.

EXPERTISE:

| | |
|-------------------------------------|----------------------------------|
| Embedded Controller based design | Schematic & Board Layout |
| Custom RTOS, multi-tasking firmware | DC to DC point-of-load power |
| FPGA/Vivado/Verilog familiarity | Digital, Mixed Signal, A2D & D2A |

HISTORY:

Mobile Technologies, Inc.

Portland, OR 2017

- ARM Cortex Hardware & Firmware design of smart kiosk stand for tablets:
 - USB HID device
 - SPECK encryption
 - high current battery charging
 - Schematic & Layout in Altium with Subversion
 - git/github for FW
 - Prototypes in 5 weeks; DFM/DFT skills took design into pilot production in 12 weeks

RLA Engineering

Portland, OR 2014 – 2017

- Bluetooth personal emergency device using Intel Curie SoC:
 - Ultra low-power HW circuit design
 - Dual-path battery charger
 - Managed BOM, Procurement & Proto
 - FW task supervisor in Zephyr
 - Schematic & Layout in Altium
 - BOM, Procurement and Proto Build
- Bluetooth, Digital, Mixed-Signal, Power and Firmware for specialty coffee maker
 - Bluetooth SoC with PCB antenna
 - Schematic & Layout in Altium
 - Wrote custom RTOS for PIC32MX
 - Prioritized task scheduler
 - Discrete PID control loop
 - Stepper & linear motor drivers
- Firmware design for optical diagnostic devices with PIC32MX
 - Messaging based inter-process, multitasking services, drivers & ISRs for:
 - USB HID & MSD class device
 - SD Card
 - D2A, A2D, SPI, I2C, UART, DMA,
 - TFT Display & Touch Screen
- Hardware & firmware design of a kAmp-hr sensor/accumulator for plating tanks
 - Real time / interrupt based firmware despite Arduino IDE & framework
 - HW design of Instrumentation Amp interfacing to an over-sampled 10-bit DAC
 - FW based charge pump
 - 7-seg LED driver / key switches

