Roy Ward

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Principal Hardware Engineer | Embedded Systems, Board Design & NPI

CAREER SUMMARY:

Principal Hardware Engineer with extensive experience leading complex electronic product development, from hardware design and board bring-up through NPI and high-volume production. Proficient in hardware design consulting, design reviews, product research, cost-down, and root-cause analysis for high-volume, low-margin consumer electronics. Proven quick learner, comfortable in fast-paced, multitasking work environments. Self-motivated team player experienced in collaborating with, managing, training, and mentoring colleagues, vendors, and customers, both domestically and internationally.

TECHNICAL PROFICIENCY:

1 Mentor Xpedition, Cadence, Altium
2 SPICE, HyperLynx, Verilog
3 C/C++, Assembly (AVR, 8051, BSP™)
4 ARM and x86-based embedded system design
5 Spectrum, network, logic, and bus analyzers
6 Bus design (PCIe, USB, DDRx, SPI, MIPI)
7 Li-ion battery charging circuits
8 Rework equipment (hot air, 0201, etc.)

WORK EXPERIENCE:

RW TECHNOLOGY, Redmond, WA 2018 - current
Principal Consultant

- Hardware design consulting and reviews.
- Product research and competitive analysis.
- NPI and board bring-up at Jabil Cuidado Chihuahua facility in Chihuahua City, Mexico.

Kuiper Systems LLC, Redmond, WA Dec. 2021 – Apr. 2024

Hardware Engineer – Antennas Group, Sector Lead

- Developed satellite phased-array antenna sector board (22-layer, RF substrate, LEO environment).

MetaPower, Seattle, WA July 2020 – Mar. 2021
Electrical Design Lead

Commscope, Redmond, WA (Purchased ARRIS) Jan. 2019 – May 2020
Distinguished Hardware Engineer – Project EE lead, responsible for product electronic design and sustaining support.

- Developed gateway products (2.5GBASE-T, Wi-Fi 6, USB 3.1, DDR, VoIP, DOCSIS 3.1, GPON) based on Broadcom or Intel SoCs, with 1M+ annual unit production.
- Supported NPI at CM partner facilities in Asia through mass production and beyond.
- Developed product requirements for ODM projects.
- Demonstrated ability to predict, solve, and address design issues before they impact build schedule.

ARRIS, Kirkland, WA (Purchased Digeo) 2009 - 2019
Distinguished Hardware Engineer – Project EE lead, responsible for product electronic design and sustaining support.

- Developed DOCSIS 3.1 gateway products (2.5GBASE-T, Wi-Fi 6, USB 3.1, DDR, VoIP) based on Broadcom or Intel SoCs, including NPI support at CM partner facilities in Asia.
- Moxi HD DVR gateway and IP set-top box hardware development (1.5 million-unit installed base).
- Contributing member of CableLabs Energy Star, Reduced Energy Set-top and Gateway Working Groups.
- Developed Atmel processor-based capacitive touch control hardware and firmware.
- Developed tools to speed common tasks (C++, PHP, JavaScript, SQL, Bash, Perl).

Digeo, Kirkland, WA 2007 - 2009 A
Paul Allen-backed company developing HD DVR cable set-top boxes and the Moxi™ user interface.
Principal Hardware Engineer – responsible for coordinating ODM hardware design.

- Developed and managed Broadcom- and Intel-based hardware designs with ASUS (hardware ODM).
- Managed and communicated technical interactions between local software development and ASUS hardware engineers.
- Contributed to CableLabs OpenCable hardware ECR working group.
- CableLabs M-UDCP (retail set-top) certification (allowing M-UDCP self-certification).

Peltronic, Bellevue, WA 2006 – 2013
Partner – formed and managed partnership LLCs (WA and CA) providing continuing software support for the EQUATOR BSP™ Processor.

- Provided continuing support for Equator customers to complete designs.

Pixelworks, Seattle, WA (Formerly Equator Technologies) 1999 – 2006
Sr. Customer Support Engineer – Lead support engineer, responsible for providing technical customer support, training, and custom development on Equator media processors, reference boards, software tools, libraries, and drivers. Developed and maintained customer support team tools. Managed factory application engineering team (2001-2002).

EDUCATION:

B.S. Electrical Engineering with digital design emphasis, University of Washington, Seattle

EE588 Advanced Laser Engineering, University of Washington, Seattle

Graduate seminar courses in EE and CSE topics, including MEMS and configurable computing, University of Washington, Seattle