John Ash

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Professional summary

Electronic Hardware Design:
- Extensive experience designing and building electronic projects from scratch.
- Creating BOMs and ordering electronic components to satisfy design requirements.
- Assembly of small run prototypes towards production.
- Worked with older microchips (including 4100 CMOS and discrete components) and newer development board technologies (Arduino, Raspberry Pi, ESP32 and FPGAs).
- Experience taking electronic designs from prototype concept to UL pre-approval production including custom PCB design, SMD and thru-hole electronics assembly and plastic injection mold design.

Embeded Systems software:
- Firmware programming in Python, C++, Arduino and Lua.
- Experience ordering pre-programmed microcontrollers for production.

3D Modelling:
- Experience with most major design and modelling software including: AutoDesk AutoCAD , SolidWorks, SketchUP , OpenSCAD and Fusion360.
- Created production drawings for plastic injection molding.

3D Printing:
I have a long experience with many levels of 3D printing and rapid design as well as owning my own small 3D printing farm.

Work authorization

US work authorization

Work experience

Transport Network Engineer

Verizon, Inc. | White Plains, NY

April 1997 to Present

As a Network Engineer for Verizon planning, designing and building new fiber optic transport infrastructure is my main focus. My current Engineer team is regional and stretches from north New Jersey to Virginia. Long experience in telecom/ Internet infrastructure helps me to identify congested sectors and build relief equipment within a budget. I sit at the center of the campaign so strong Project management skills with respect to time-lines, keeping the project moving and expenses is where I shine.

My past role at Verizon involved design and placement of Central office and Data Center network element equipment. I was at the Network Implementation position for over 15 years and I have a recognized full MST certification and credential to build for Verizon. I have extensive training and practical working knowledge of:
- DWDM and NGROADM transport technologies
- Long-haul, Regional and Metropolitan Area Networks
- Switched Ethernet services
- fiber optic handling and management

Over the years, I have gained the respect of management and I have been consistently rated as a top performer in my group.

Hardware Developer Lead
BitBike. | Skyllingsheia, Norway
January 2025 to February 2026

I was tasked with creating an electric battery health monitoring and GPS tracking device.
- Envision and design the entire hardware platform by selecting GPS tracking radio, microcontroller and sensor electronics.
- Create schematic and Gerber design documents for small-run PCB production.
- Select and order electronic components to satisfy design specification.
- Construct 1st and 2nd article prototypes using SMD component techniques such as re-flow and hot-plate.
- Create custom firmware in C++ for ESP-32 to communicate with uBlox LEXI R520 GPS radio.

Assembler / Quality Control
Lex Products | Shelton, CT
December 2019 to March 2020

I worked for Lex during a large scale project involving assembling large steel frames with electrical and electronic components used for power distribution in commercial and industrial settings. The work involved power tools and moving heavy units. The interior contained electrical components that were wired according to a detailed wiring and assembly diagram.

After the project was completed, I was asked to stay working for Lex in the Quality Control department. The work involved checking, testing and inspection of complex electrical cables and components. Quality was tracked using computer manufacturing software as well as spreadsheet software.

My employment ended amicably because of Covid-19 sales loss.

Product Developer
Basic6, Inc. | Westport, CT
March 2015 to October 2018

My most significant accomplishment with Basic6 Inc was the development of a Bluetooth mesh, connected building system which included multiple devices such as:
- LED Lumiere remote control with dimming and LiFi modulation
- wall switches
- movement detectors
- daylight compensation sensors.

I was included on multiple patent applications and the technologies used were featured at CES 2016. I was heavily involved in the development of the entire project, as there was a very small engineering team. Directing development of :
- embedded firmware (C)
- electronic schematic diagrams(EAGLE)
- plastic enclosure design(Fusion360)
- product presentation documents
- moving the design into a viable and economical production phase.

Education

Mechanical Engineering (B.S.)
City College of New York | New York, NY
August 1996 to June 2001

Skills

SolidWorks | GPS Technology | Research & development | DWDM | HTML | AutoCAD | Javascript | PCB Design | Linux | Python | 3D modeling | Embedded Systems | NGROADM