NUVATION ENGINEERING

ACCELERATE YOUR PRODUCT DEVELOPMENT™

ELECTRONIC PRODUCT DESIGN

INNOVATIVE DESIGN SERVICES, FROM CONCEPT TO PRODUCTION

WHAT WE DO

Since 1997 Nuvation has been providing complex engineering design services to organizations for which quality, performance, and reliability are business-critical project requirements. Our services include:

- System architecture
- Board design
- FPGA and DSP development
- Power supply design
- Software development
- Analog, wireless, and RF solutions
- Signal integrity
- NPI, DFx

THE NUVATION ADVANTAGE

We excel at designing "from the ground up," starting with your concept and managing product development from initial architecture through design, development, manufacturing, and volume production. Our deep industry partnerships and reliable supply chain allow you to focus on your core business and minimize your time to market. We deliver:

- **Optimized Performance** – Stringent peer review process that identifies ways to lower your costs and improve the reliability and functionality of your product
- **Accelerated Time to Revenue** – Deeply integrated process of design engineering, manufacturing engineering, NPI, and production management reduces time to market
- **Reduced Project Risk** – Experienced project managers and rigorous methodologies maintain our impressive track record of first time right designs
- **Increased Flexibility** - Diverse expertise allows us to rapidly adapt to the changing skill and resource needs of the project
- **Trusted Results** – Semiconductor industry and ecosystem partnerships give us access to tightly controlled IP and system integration support
- **North American Presence** – All work is done at our ITAR/CGP compliant U.S. and Canadian offices

OUR PARTNERS

Altera Design Services Network · ARM · Atmel · Linear Technology · Texas Instruments · Xilinx

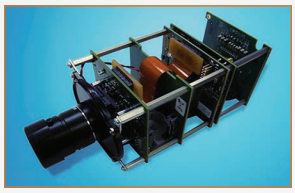
Nuvation blew away our expectations and delivered a better product, in less time, than we considered possible.

- Mike Ichiru, Manager, Netlogic

solutions@nuvation.com **888.669.0828** **nuvation.com**

Silicon Valley Headquarters Sunnyvale, CA, USA **Waterloo Design Centre** Waterloo, ON, CA

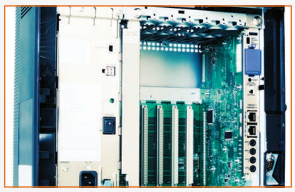
MARKETS



VIDEO
High-definition/4K systems,
real-time streaming,
processing, and interfacing

MEDICAL
Diagnostic equipment,
sensor interfacing,
medical imaging

INDUSTRIAL AUTOMATION
Control systems,
M2M communications, automation,
autonomous vehicle technologies



TELECOM & DATACOM
Network storage, VoIP,
wireless and microwave
communications

DEFENSE AND AEROSPACE
Ruggedized designs,
video capture and
satellite applications

POWER & GREEN ENERGY
Battery management systems,
solar, grid attached storage,
power conversion

INTERNET OF THINGS
Sensor networks,
wireless connectivity,
low-power

CONSUMER ELECTRONICS
IoT-connected devices,
consumer handhelds,
PC peripherals

NUVATION BMS™

Nuvation BMS™ is a modular off-the-shelf battery management system for large-scale applications such as grid energy storage, specialty vehicles and telecom backup power. With support for up to 1250 VDC, its failsafe design includes redundant systems and built-in ground fault impedance measurement to maximize safety and battery protection. Key BMS features:

- Full functionality even with discharged batteries
- Ground fault detection (IMD) for floating ground battery systems
- Supports Wi-Fi, CAN, USB and Ethernet communications interfaces
- Remote data logging and system monitoring
- iPad application and interface available through Wi-Fi

Nuvation is the coolest, cleverest engineering company that we've come across…

-Brian Fuller, Silicon Valley Bureau Chief, EE Times

eRex is a street-legal electric race car designed by Nuvation engineers. It has a top speed of 160mph, and accelerates from 0-60mph in 5 seconds.

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FROM DESIGN TO PRODUCTION

Nuvation provides more than electronic product development services. Our Integrated Design to Manufacturing (IDM) service includes overseeing all phases of the design and manufacturing process from architecture through production. Our innovative methodologies, experienced project engineering team, and tightly integrated partner network enable us to compress development schedules by 30-40%. We deliver products that are solidly tested, professionally documented, and ready for production.

HARDWARE ARCHITECTURE DESIGN

- Complex digital and mixed-signal circuit board development
- Product prototyping and management of volume production
- Standards certification (IEC, CE, FCC, UL)

FPGA ARCHITECTURE DESIGN

- FPGA development, IP integration, and RTL verification
- High-speed communication and memory interfaces
- Image and video processing

ANALOG ARCHITECTURE DESIGN

- ADC and DAC integration, low-noise and low-jitter PLLs
- Signal filtering, sensor interfaces, amplification, simulation
- Control systems, high-voltage power subsystems

SOFTWARE DEVELOPMENT

- Support for SoCs, CPUs, DSPs, FPGAs, MCUs
- Platform porting, device drivers, communications
- Support for most RTOSes / embedded OSes, bare metal

RF AND WIRELESS SOLUTIONS

- Antennas, mesh networking systems, and connected devices
- RFID, UWB, 802.11n / ac, sub-1GHz, NFC
- IEEE 802.15.4, 6LoWPAN, Bluetooth, Bluetooth LE, iBeacon, ZigBee

DSP ARCHITECTURE DESIGN

- Algorithm development and highly parallel processing
- Co-processing with FPGA DSP blocks
- Simulation and verification in MATLAB and Simulink

OUR CLIENTS

Abbott A Promise for Life · AMBRI · AV aerovironment · Boston Scientific Advancing science for life™ · FUJITSU · GENERAL DYNAMICS · grass valley · HARRIS · JDSU · KLA-Tencor · LeapFrog · power-one A MEMBER OF THE ABB GROUP · SIEMENS · SSL · VIRTUAL INSTRUMENTS · Vista system

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