Vladimir Yu. Ivanov

+7·924·320·09·34 | ✉ job@vova-ivanov.info | v.u.ivanov
Saint Petersburg, Russian Federation

SUMMARY

Proficient engineer with a focus on the EECS: 6+ years in embedded systems design. I have built own experience through hardware and software codesign. Strong skills in electrical engineering, computer science and researching. Ability to produce stable results under high pressure conditions. Main areas of interest: consumer electronics, robotics, automotive industry, computer networks, medical equipment.

EDUCATION

Far Eastern Federal University, Vladivostok August 2005 – June 2010
Engineer's degree. Information Systems and Technologies.
GPA: 3.63

Secondary school 51, Vladivostok September 1995 – June 2005
Secondary education. In-depth study of Japanese Language.
GPA: 3.80

EXPERIENCE

TRA Robotics June 2017 – present
Software Developer Saint Petersburg

· Technological startup around industrial robots. Launching of the factory using universal robotic cell.
· Grippers
· Industrial robots

Rhonda Software October 2012 – May 2017
Embedded Software Engineer Vladivostok

· Camera SDK development team member, *Ambarella* SoC (ARM Cortex-A), about 80 participants.
· Designed and implemented data transfer static library, cross-platform (Windows, Linux, ThreadX), multi-protocol (USB, UART, TCP), asynchronous C-style API, plain C (platform- and protocol-specific logic), C++ (transport-specific logic), build system (CMake, Python), CppUTest (UT infra).
· The library was used to autotest SDK functionality in company's QA lab and to test customer's products in factory production lines.
· Boards bringup for customer's projects in electronics factories: *Flextronics* (TX, United States), *AQS* (CA, United States), *Asia Optical* (Shenzhen, China). Close coworking with local engineers (electrical, mechanical, NPI) and customers on EVT and DVT project phases.
· Peripheral domain support as the member of SDK sub-team: embedded Linux and RTOS device drivers, FW burning tool features (Qt application) for QA lab, EE and PCB design review for customer's projects.
· *CSR* contractor. Distributed support of the embedded software for ODM/OEM customers based on *COACH* (Camera On A Chip) SoC with MIPS core. Main brand manufacturers of imaging devices: *Nikon*, *Pentax*, *Garmin*, *Samsung*, *Fujifilm*, *Ability*. Support sites are located in a number of countries: China, Israel, Japan, Russia, South Korea, United States.
· Solving of time critical project issues under customer's pressure. Number of various «MP block» software problems were resolved and processing performance of UI images in customer's projects was improved.

· Peripheral domain support as the member of team. CMOS/CCD image sensors: drivers bug fixing and implementation of new capabilities, support for smear correction driver team. NV memory storages: FS bug fixing, NAND drivers timing optimizations. Display cluster: issues related to video output (LCD, HDMI). Volatile memory storages: DRAM performance measurement and timing optimizations. On-chip peripheral: support for BSP (GPIO, ADC, PWM, RTC, SPI, I2C, UART, USB, function-specific HW units and more). PC-side applied software: bug fixing and new features implementation for FW burning tool (windows forms). Various peripheral-specific algorithms: e.g. dynamic voltage management based on PID-controller.
· SoC software trainings in *CSR Israel* (formerly *Zoran Corp.*): MATAM, Haifa.

Spider Pacific October 2010 – October 2012
Embedded Systems Engineer (full-time) Vladivostok, RU

· Applied hardware development startup company.
· Mechanicalless manipulator prototyping as part of the project management software system: accel- and gyro-based console.
· Transformerless vacuum tube stereo amplifier prototying for headphones: simple SRPP cascade and preamplifier per channel.
· Prototype of the PoE injector (PSE device) designing and manufacturing. IEEE 802.3af full compatible implementation based on the LTC4263 IC by *Linear Technology*. The product was used in a number of computer network projects with different sets of PD devices: *Cisco* routers, IP cameras and more.

SKILLS

- **SW development**

  Embedded C and C++ (source code mixing). C++11. STL. Boost. Interrupt- and event-driven design. Free reading and writing Assembler code areas. Development process automation: Python, Bash. DevOps: Docker (docker-py), Vagrant. Build systems: Make, CMake, NMake, Jom, Buildroot. Multithreading: Atomthreads, ThreadX, Win32, POSIX. Device drivers, LKM. Network I/O: Berkeley sockets, Winsock. USB frameworks: libusb. UT frameworks: CppUTest. Static code analyzers: Cppcheck, PVS-Studio, ReSharper C++. VCS: Perforce, SVN, Git. Code inspection: Code Collaborator, Review Board (rbt tools). Issue trackers: JIRA, Redmine, YouTrack. CI: QuickBuild. Documentation: Doxygen, TEX, MkDocs. GUI frameworks: Qt. iOS apps: Swift. Progressive system languages: Rust, Go. Crash logs analyzing. Remote debugging (customer support). JTAG in-circuit emulation.

- **HW development**

  Digital/analog/tube circuits design and analysis: electrical and thermal calculations, circuits emulation. BOM selection: excellent guided both in through-hole and surface-mount packages. Routing and assembling of prototype PCBA: Eagle CAD, Sprint Layout, KiCAD, Altium Designer. Excellent soldering skills. Strong knowledge of Atmel AVR 8-bit MCUs. Power electronics understanding: linear and impulse circuits. EE lab equipment usage: digital power supply, multimeter, logic/spectrum analyzer, analog/digital oscilloscope, function generator, autotransformer and more.

- **Languages**

  Russian (native)
  English (ability to hold conversation)
  日本語 (elementary on N5 level)

- **Miscellaneous**

  Foundations of project management: Spider Project. Lathe and milling works: Proxxon equipment. Bring up of computer networks. Experience in transferring of knowledges: electronics and software engineering foundations. Driver license: manual and automatic transmissions.

KEYWORDS

1-Wire, ADC, Altium Designer, Atomthreads, AVR, avr-gcc, BAT, Bash, Berkeley sockets, Boost, board bring up, BSP, Buildroot, C, C++11, CAN, CLion, CMake, Code Collaborator, Cppcheck, CppUTest, cross-compiler, customer support, Cygwin, DAC, device driver, DevOps, Docker, Doxygen, DVT, Eagle CAD, Eclipse, Eddystone, eTraxis, EVT, FAT, FileX, GCC, Gerber, Git, GNU toolchain, Go, G-Sensor, gyro sensor, HW&SW codesign, IEEE 802.3af, I2C, IAR, iBeacon, image sensor, iOS, JIRA, Jom, JTAG, KiCAD, libpng, libusb, Linux, LKM, Make, Maxima, MCS-51, macOS, microcontroller, MIPS, Mind Maps, MinGW, MkDocs, NMake, NPI, OOP, OS2000, OSI, Perforce, Perl, PHP, PIC, POSIX, Proxxon, PyCharm, Python, PVS-Studio, Qt, QuickBuild, RAW Bayer, R&D, Redmine, ReSharper C++, Review Board, RS-232, RTOS, Rust, SPI, SPICE, Spider Project, sde, SoC, Source Insight, Sprint Layout, SQL, STL, SVN, Swift, TCP/IP, TEX, ThreadX, UART, UML, USB, V8, Vagrant, Visual Studio, Win32, Windows, Winsock, YouTrack, zlib