# Andrey Loshchilov

Embedded Engineer / Tech Lead

## Profile

Experienced HW Engineer with 3+ years in Embedded development, 7+ years of experience in Automated Production Test Systems architecture design and developing, soldering skills.

Skills and technologies, I work with:

- **C**/C++, Python.
- UART, I2C, SPI, JTAG, Boundary Scan, Ethernet, BroadR-Reach, Bluetooth Classic, BLE.
- STM32Fx/Gx/MP1x, ATSAM V7, NXP i.MX8, RK3588x, QCC302x.
- AOSP, U-Boot, Kernel, Drivers, Test Firmware, FW updaters, Control and Monitoring, statistics and data analysis software.
- Network Vector Analyzers, Spectrum Analyzers, Oscilloscopes, Logic analyzers, Signal generators, SDR.
- Schematics, PCB layouts: Zuken CR-8000, P-CAD.

## Employment History

### Principal SW Developer at SWTecNN, Nizhny Novgorod / UAE

October 2021 — Present

- AOSP porting to custom boards, configuration and development.
- uC Firmware for Microchip, Qualcomm QCC302x SOC.
- Schematic diagrams analysis.

Completed projects:

- Bluetooth media controller FW.
- Audio Modules monitoring suite FW.
- Firmware for LTE Modem and Navigation Receiver interfacing controller.
- AudioHAL Synchronous Audio output, DTB Overlay support U-Boot.

### Lead Engineer (Production Test) at Topcon Positioning Systems, Moscow

May 2015 — September 2021

May 2015 – 2018: Engineer; 2018 – Present: Lead Engineer.

- Automated test & measurement stand architecture design.
- Discussion and coordination of architectural and design solutions.
- Taking part in the new products bring-up process.
- Developing SW & HW for Board-level production tests and for design verification purposes.
- Developing Test Firmware for SPARC (LEON) and ARM CPUs.
- Developing test software for OS Windows, Linux.
- Development of schematic diagrams.

### Details

Telegram: @aduff
Email: aduff@ya.ru

Date of birth
20.02.1990, 34 y.o.

### Links

https://github.com/adufftpc
https://gitlab.com/aduff

### Skills

Teamwork

Readiness for local/international business trips

Soldering

Diagnostic

Problem Solving

Time Management

Hard Working

Ability to Learn Quickly

Ability to Multitask

### Languages

English

### Hobbies

Cycling, Skateboarding, Hiking, Ultimate Frisbee, Playing guitar.

- Diagnostic and investigation of failed devices, modules, components, and parts.

Completed projects:

- Debug access API for LEON CPU (UART, JTAG).
- GNSS Simulator System (Control and monitoring, signal distribution network), providing enhanced repeatability of RF Tests.
- Complete software set for STM32MP1 based test adapter (U-Boot, Linux, User-level software, and periphery drivers).
- Service utilities for safe FW components update.
- SDR (NI USRP) based simulator of Satellite-Based Augmentation System signals (Omnistar / Terrastar).

### SW Engineer at Freelance / Pet Projects

2017 — Present

- Drone based gas leak detector data acquisition (gas detectors, GPS Receiver, Camera) system for ARM micro-PC.
- Mobile gas leak detector data acquisition system for Windows PC.
- Temperature monitoring data analysis and visualization utility for metallurgical plant usage.
- STM32F7 based HIL (Hardware-in-the-loop) system for RF devices automated production test and qualification with TCP Server.

### Engineer at Research Center SiriNN, Nizhniy Novgorod

April 2014 — May 2015

- Automated test & measurement bench architecture design.
- Developing HW and SW for RF-test equipment.

### Field Application Engineer at Macro Group, Saint Petersburg

October 2013 — April 2014

- Consulting customers on the use of their products of interest (area: RF and microwave technology)

### RF Engineer at Kvarz, Research Institute, Nizhniy Novgorod

July 2011 — October 2013

- Design and assembling of microwave passive devices, design of microwave structures.

## Education

### Master of Engineering, Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Nizhniy Novgorod

2007 — 2013

**Master of Engineering.** Radio Engineering

**Bachelor of techniques and technology.** Design and Technology of Electronic Means.