



Martin Aucher

Embedded Electronic Systems Engineer

Profile

Passionate about embedded electronics and industrial computing, I developed solid expertise in space telemetry at ArianeGroup for 6 years, from measurement chain qualification to HF transmitter development. Currently at Thales AVS, I work on avionics equipment support and production.

Personal Technical Projects

RS422 Interface on Zynq-7000 (FPGA/SoC)

RS422 acquisition system with precise timestamping (1µs).
VHDL development (PL) and bare-metal C (PS), AXI interface.

WiFi Shutter Control System (IoT Full-Stack)

Control of 9 shutters with custom hardware (ESP12F, relays, 3D enclosures). Secure Python MQTT/FastAPI server (HTTPS/HMAC), Flutter mobile application.

Bluetooth Multi-Speaker System (In Development)

Bluetooth audio hub 1 to 4. Master-slave architecture 5×ESP32, FreeRTOS, I2S/Bluetooth A2DP streaming. 4-layer PCB, Li-Ion power path. Target latency <10ms.

→ More details and other projects on my Portfolio <https://martin.aucher.xyz>

Professional Experience

Product Support Engineer

Thales AVS - CSC, Châtellerault (86), France
January 2025 to Present

- Support for repair and production of avionics equipment: cockpit displays and flight computers (CDVE, FM, Autopilot)
- Intervention on civil and military aircraft and helicopters: Airbus A320 to A380, A400M, Mirage 2000

Telemetry Engineer

ArianeGroup, Saint-Médard-En-Jalles (33), France
September 2018 to December 2024 • 6 years 4 months

- **Equipment Technical Lead (2022-2024):** Technical Leader for IRIG telemetry encoder on space launcher, test campaign management, industrial monitoring. Participation in S-band HF transmitter development
- **Test and Development Engineer (2021-2022):** Validation and qualification testing of telemetry chain and embedded experiments on space launcher
- **Apprentice (2018-2021):** Telemetry chain qualification, embedded equipment testing (sensors, 1553 bus, IRIG encoder, HF transmitter)

Repair Technician Apprentice

Thales AVS - CSC, Châtellerault (86), France
September 2016 to August 2018 • 2 years

- Repair of avionics equipment
- Development and implementation of automated test bench

Technical Skills

Electronics & Embedded

- Microcontrollers (ESP32, STM32, AVR)
- Protocols (RS422, SPI, I2C, 1553)
- FPGA/VHDL (XC7A/XC7Z, EP2/EP4)

Hardware Design

- Schematic / PCB (KiCad)
- RF (Rx/Tx, S-band)
- 3D Modeling (Inventor, 3D Printing)

Software Development

- Python (Scripting, algorithms)
- C/C++ (Bare-metal, RTOS, embedded)
- VHDL (IP design, testbench)
- Shell scripting, MATLAB

Project Management

- Industrial monitoring (milestones, reviews)
- Technical documentation
- Validation & qualification
- Client/subcontractor interface

Personal Information

Address

86380 Ouzilly, France

Phone

+33 6.34.45.11.99

Email

m.aucher@live.fr

Website / Portfolio

<https://martin.aucher.xyz>

Education

2021 - Engineering Degree

Embedded Electronic Systems
ENSEIRB (33)
Apprenticeship Program

2018 – DUT GEII

Electrical Engineering and Industrial
Computing
IUT Poitiers (86)
Apprenticeship Program

2016 – BAC PRO SEN

Electronic and Digital Systems
Jean Moulin High School Thouars (79)

Languages

English - B2 Level

Technical and professional

Interests

- DIY Electronics (PCB, prototyping, home automation)
- 3D Printing — functional parts and project enclosures
- Automotive Mechanics — routine maintenance to complete restoration (4L F6)
- Simulation Games
- Science Communication
- Astronomy