

Adhi Dharma Maharsi Satriya Kartika

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Education

Universitas Kristen Satya Wacana

Computer Engineering, Embedded Engineering.

Thesis: Implementation of RISC-V Architecture on Embedded Device

Relevant Coursework: Embedded System, Hardware Description Language, Electrical Circuits.

Salatiga, Central Java

16/11/2023

SMA Negeri 1 Salatiga

Salatiga, Central Java

2018

Experience

PT Solusi Dua Empat

Tujuh

Embedded Engineer

Yogyakarta, DIY

Yogyakarta

January 2024 – Present

- Designed embedded systems using STM32 & Raspberry Pi for ROV and IoT applications
- Developed a Prototype ROV using common R/C components such as outrunner BLDC, ESC and power distribution board.
- Built multi-port programmer to improve flashing and debugging time
- Reverse-engineered industrial backplane from photo references, preserving signal integrity
- Developed analog, RF, and high-speed mixed-signal PCBs
- Conducted environmental testing (saltwater, temp, humidity) using DoE & DAQ setups
- Debugged hardware using oscilloscope, multimeter, and logic analyzer
- Created firmware templates in C/C++ and MicroPython for internal testing
- Managed BOM sourcing, vendor communication, and production QC
- Documented design processes, test results, and integration procedures.

Key Projects

- **Industrial Pi HAT** – Sensor interface board with ESD protection, used in 10+ online fish scale.
- **Marine HID Device** – Rugged USB module, cut saltwater failure rates by 30%.
- **AIS System Upgrade** – Redesigned for long-term maintainability and hardware support.
- **4-Channel Synth Board (AD9599)** – Custom DDS board, reduced R&D costs.
- **Multi-Port Programmer** – Streamlined production line flashing.
- **Industrial Backplane** – Rebuilt from visuals, met full electrical specs.
- **Prototype ROV** – Designed using off the shelf R/C component.

Private Project

Yogyakarta, DIY Yogyakarta

2024 – Present

- **ESP32-S3 Audio Sampler/Sequencer** – Custom music device for real-time audio playback
- **ADAU1702 DSP Board** – Flexible audio board for sound manipulation and effects
- **Headphone Amplifier** – High-fidelity analog amp for mobile and studio use

Skills & Interests

Technical:

- **PCB Design & Layout:** KiCAD, EASYEDA, Proteus, Saturn Toolkit.
- **Embedded Programming:** C/C++, MicroPython for STM32/ESP32 platforms.
- **R/C & Marine Electronics:** Knowledge of ESC, BLDC motors, and servos
- **Testing & Troubleshooting:** Oscilloscope, Logic Analyzer, Multimeter, DAQ, environmental stress testing.
- **Product Development:** BOM management, vendor coordination, QC, and field deployment.

Language:

- Indonesian (Native)
- English (Fluent)
- German (Basic)

Testing & Debugging:

- Oscilloscope
- Logic Analyzer
- Multimeter
- Audio Analyzer

Interests:

- Audio Engineering
- Music
- 1/10 Offroad R/C Racing
- Paintball.