

# Embedded Software Engineer - CTBC

## Ihre Aufgaben

As a member of the Digital & Data Solutions Embedded Software team (DDS eSW) within ContiTech, you own the application layer across our device family: the C and Python services that ingest sensor data, run detection logic, buffer results, and deliver them to the cloud pipeline.

You inherit an existing codebase and keep it alive while implementing new features and algorithm specifications on top of it. Your second scope is the device-side web UI – a browser-accessible Angular/PHP/C interface for configuration, status, and diagnostics served directly from the device. Your third mandate is algorithm implementation: translating signal-processing and decision-logic specifications from the DDS engineering team into working, tested code running on constrained hardware.

Your API boundary between the application layer and the platform layer below must be explicit. You define interfaces before you implement, document what you expose, and ensure your services are independently testable. The engineering team provides algorithm specifications and the CI pipeline structure; your job is to translate those specs into working, tested code and keep the pipeline healthy.

## You

- Maintain and extend C/Python application daemons under systemd on embedded Linux; sensor data reception, detection pipeline, local buffering, and event reporting
- Read and extend the existing device-side web UI (Angular/PHP/C); add features, fix bugs, and progressively take full ownership
- Translate algorithm specifications (signal-processing, detection thresholds, calibration procedures) from the DDS engineering team into implemented, tested code
- Maintain cloud connectivity via MQTT to AWS IoT Core; implement offline buffering and schema conformance; handle reconnect and packet-loss scenarios
- Integrate OPC/UA client and MODBUS application layer for industrial data ingestion
- Define and document the clean API contract between the application layer and the platform below, ensuring dependent layers can test against it independently
- Assemble and wire your share of the HIL rig from parts and PCBs; participate in plant management sign-off; maintain it as hardware and firmware evolve
- Keep application-layer CI builds green; versions current; test coverage maintained

## Ihr Profil

- Embedded Linux application development – C and Python daemons



Job ID  
**REF95958D**

Arbeitsbereich  
**Informationstechnologie**

Standort  
**Timișoara**

Leadership Level  
**Leading Self**

Job Flexibilität  
**Hybrid Job**

Rechtliche Einheit  
**ContiTech Thermopol Romania S.R.L.**

under systemd; IPC; file-based and in-memory data buffering; can trace what a running service actually does

- Codebase inheritance – has taken over an existing, unfamiliar embedded codebase: understood the design, fixed bugs, added features without rewriting it
- Algorithm implementation – has implemented a signal-processing or decision-logic specification in C or Python on constrained hardware
- Web interface work at the embedded device end – has worked on a browser-accessible interface served from a device (PHP, REST/JSON, lightweight JS, or equivalent); Angular experience is a significant plus
- Cloud connectivity – MQTT, offline buffering, schema validation, reconnect behaviour
- Python – tooling, test scripts, CI integration; fluent, not just familiar
- Git / GitHub Actions – CI/CD pipeline as normal working environment
- Clean API discipline – defines interfaces before implementing; documents what is exposed
- Desirable: Angular or equivalent frontend framework; OPC/UA; MODBUS; AWS IoT Core / Greengrass; numerical methods for signal processing; pytest and fixture design

## Unser Angebot

What we offer:

The 13-th salary - Paid once a year, in December;

Meal tickets - With a value of 40 Ron;

Private Health Insurance - Health is the most important, so we offer you a medical subscription through Signal Iduna;

Referral bonuses - We encourage colleagues to refer new candidates to us and, at the same time, to get the chance to receive a bonus;

Bookster - Feed your body and your mind. You can borrow books and you'll receive them at the office;

Sports benefits- It's important to stay active, so we offer you the 7Card;

Discounts at our partners - We collaborate with different vendors, and we receive discounts for various products/ services like rubbers, restaurants, kindergartens, etc;

System for Rewarding Improvement Ideas - We have an internal improvement program (Continental Idea Management) that gives you the opportunity to come up with ideas and to be honored with an attractive bonus (this is established by the CIM team according to your improvement idea);

Happy days - If you or your child is getting married, or you become a parent, you receive some extra free days;

Life events celebration - If your family is growing, we praise your newborn with a bonus;

Unfortunate events - In case of unhappy events in your life, we support you by offering you free days and financial support (handled on a case by-case basis);

Extra vacation days - You begin with 22 vacation days/year, and starting with the 3rd year with us, we offer you 1 more day of vacation and. We reward employees who reach 15 and 20 years within the company with another day of vacation, reaching a maximum of 29 days.

Transport from the Timisoara area - You can choose to come with the bus provided by the company if you'll work from the plant location/office;

Professional development - Many opportunities to develop yourself

within the company;

Diversity and multicultural mindset - We encourage you to join us no matter who, where, or what you are. We have colleagues from different nations and a variety of languages are spoken in our company.

Ready to drive with Continental? Take the first step and fill in the online application.

## **Über uns**

ContiTech Business Hub in Timișoara in a key location for ContiTech hosting various functional teams

ONE ContiTech - The first choice for material driven solutions. Contitech Industries is part of Continental Holding. Headquartered in Hannover, Germany, the division contributes to 4B+ to the revenue.

Are you interested in shaping the future of ContiTech together with a great team? Please join us and contribute to our goals with your new role as Embedded Software Engineer (Application Layer + Platform Features)