

Job Opening // Senior Embedded Engineer with Hands-on FW coding & Architecture

Ahmedabad (India)

[Job Code: SEE02]

Are you a passionate engineer with a flair for innovation? Does the realm of Smart City, IoT, and cutting-edge embedded systems ignite your enthusiasm? Do you want to be at the forefront of developing advanced solutions that shape the future of smart street lighting? Join our dynamic international team based in India and the Netherlands, where you'll help design and develop embedded solutions that power our global smart city initiatives.

Senior Embedded Engineer

We are looking for Sr. Embedded engineer with hands-on 80% coding experience and 20% activities will require you to participate in code-reviews, problem-solving and processes. Your role will involve designing and developing wireless product portfolio (devices and gateway) for intelligent lighting and smart sensor applications. Position will be decided based on skillset and experience brought on board.

Key Requirements

- Hands on experience in **developing firmware architecture** and **component selection** as per application needs like selecting MCU, EEPROM and other sensor interfaces. In-depth knowledge in defining Embedded software Architecture, gathering user requirements and converting into Software design HLD and LLD, comfortable working with UML use-case diagram, class-diagram and Sequence diagram to depict System architecture.
- **Should have spent at least 4 years in bare-metal programming** on 32-bit ARM cortex Microcontroller programming **on STM32** and should be aware of using STM32 peripherals such as **ADC, TIMERS, UARTs, NVIC configuration, Interrupt priority** understanding, power-saving Modes etc. Should be familiar with STM32 development tools, STM32 cube IDE, STM32 Libraries, debugging etc
- Should be hands-on with coding in **Embedded-C programming on STM32**. Skilled in ARM assembly programming and decoding. Knowledge of python language in embedded coding for testing is an added advantage.
- Hands-on experience on communication protocols like **SPI, I2C, UART, WIFI, DALI, 1-wire, MODBUS** and UART.
- Should have knowledge working with any wireless stack such as **BLE-MESH** or Zigbee and should have worked on at least one project using one of these wireless stacks.
- Familiarity with NB-IOT or LORAWAN or similar LPWAN protocols is an added advantage.
- Should be familiar with TDD (Test-driven-development) in Embedded software and knowledge in using either **FREERTOS or THREADX like RTOS for EMBEDDED**.
- Should be able to debug Hardware to get embedded software working on it along with good electronics knowledge and **knowledge on using tools like logic-analyzer, CRO, Multi-meter, Signal-generator**, etc.
- Exhibit problem-solving and analytical thinking abilities. Should be system-level thinker. Able to learn and apply new state-of-the-art tools and techniques and thereby showing experience in quick prototyping methods followed by structured implementation.

Be Familiar with

- Reading schematics, datasheets, technical reference manual and Silicon revision sheets.
- Using tools like Logic Analyzer, DSO/CRO, Spectrum Analyzer.
- SW development tools: Confluence, JIRA, GIT, bit-bucket, SourceTree etc.

Professional Qualities

- No 9-to-5 thinking; should be goal driven with solution-oriented mindset and should meet deadlines with customer first attitude.
- Entrepreneurial spirit and a team-player showing capability and flexibility to work in a multi-cultural team environment.
- Open to travel to Netherlands or other locations of TVILIGHT or its customers when required.

Suitable Qualifications

- Masters or Bachelors in Electronics/Embedded-ICT Software from reputed Engineering Colleges/IITs/BITS-Pilani.
- Suitable Experience range: **10-12 years**

Benefits

- Competitive salary and performance-based incentives.
- Comprehensive group medical insurance (for self, spouse and 2 kids).
- Flat hierarchy that emphasizes creativity and excellence.
- Opportunities for professional development and career advancement.
- Work in a dynamic and innovative environment focused on Smart City, IoT and AI solutions.

About Tvilight

TVILIGHT is a leading provider of Smart City solutions, specializing in intelligent lighting controls and IoT applications. Our mission is to create safer, more sustainable, and connected urban environments. With a global presence and a commitment to innovation, Tvilight is at the forefront of the smart city revolution. Intellikonnnect Solutions Private Limited is a TVILIGHT affiliate company. For more information, visit us at: www.tvilight.com

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