Embedded C Firmware Developer [Q1-2022]

Kornak Technologies Inc. (www.Kornak.ca) — Calgary, AB

We are hiring two creative intermediate or senior level embedded C firmware developers to join a team designing ARM Cortex-M based microcontroller systems. A detail oriented person with high standards, strong development, communications, and writing skills, and gracious professionalism is required to join an engineering design team with formal but flexible processes.

Duties & Responsibilities:

- Design and implement real-time embedded firmware in C on ARM Cortex-M and other processors. We primarily use STM32, ESP32, and AVR families.

  [New multi-year projects will use STM32U575, STM32F427, STM32F446, & STM32L471]

- Participate in the development of project hardware and software requirements, system architecture, and high-level design. Work as a team member for implementation, testing, and validation.

- Produce well documented requirements, specifications, code, and supporting documentation.

- Be actively involved in team processes producing high-quality firmware including applying coding standards, code reviews, mutual learning, static code analysis, formal testing, and error tracking.

- Maintain existing products and code base to provide customer support and provide ongoing product enhancements. Contribute to new project proposals, architecture development, and designs.

- Manage portions of projects, your own work plus deliverables from other parties, as needed to meet project goals.

Requirements:

- A degree in Electrical/Computer Engineering, Computer Science or a related college diploma with field experience.

- A minimum of five years of embedded software development experience.

- Strong C programming abilities are key. Other hardware and software experience is desirable.

- Must have development experience with microcontroller-based platforms.

- Must be able to read and evaluate schematics and layouts as well as diagnose issues with a hardware team.

- Software design, architecture, and small project management are required for the job. Previous experience in these areas is desirable.

- Excellent verbal and written communication skills are essential.

Kornak Technologies Inc.
Calgary, Alberta, Canada
Tel: (403) 567-9328   www.Kornak.ca

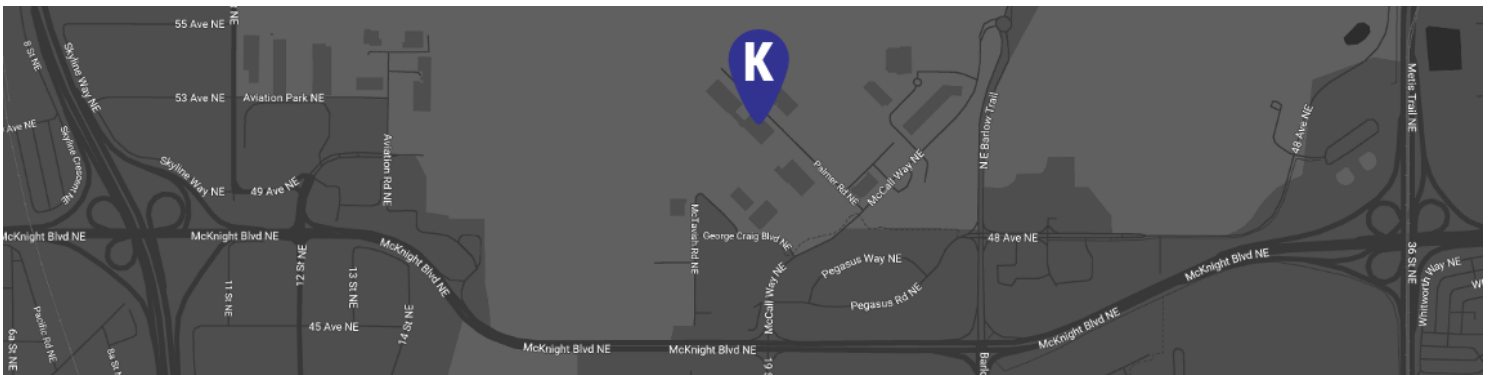**Beneficial Skills & Assets:**

- Development experience on STM32 ARM-Cortex-M MCUs is a strong asset.
- Experience with low-power techniques for STM32 Arm-Cortex-M, Nordic, and ESP32 parts is an asset.
- FreeRTOS, Azure OS, Zephyr, or a similar RTOS expertise is helpful.
- Knowledge of wireless communication systems, data communications & protocols, network conventions, and error detection and correction methods.
- System security and encryption. OTA updates. IIoT systems. MQTT.
- Low-level peripheral driver development experience (serial, SPI, I2C, USB, DMA, and advanced peripherals).
- Knowledge of embedded file systems, robust data storage and integrity management methods.
- Must be comfortable in a lab environment and know how to use common electronics test equipment. Experience using JTAG/SWD debuggers, oscilloscopes, DVMs, logic analyzers, and power supplies an asset.
- Project experience with 8-bit microcontrollers (AVR and MSP430) is beneficial.
- Knowledge of DSP systems and algorithms is helpful.
- Able to work with minimal supervision and manage their own tasks while collaborating with a team. Ability to manage others is an asset.
- An interest in building up, coaching, and mentoring junior colleagues is welcome.

To apply for this position please send a resume and a cover letter to engineering manager Scot Kornak at careers@kornak.ca . In your cover letter please include some personal opinions, observations, or rants on developing quality firmware and security issues for IoT systems. Show us that you are passionate about creating high-quality firmware and know how to manage the process.

For more information on this position, please send an email to careers@kornak.ca .

Kornak Technologies develops microcontroller based event recorder, industrial IoT, and telemetry systems incorporating GPS, sensors, M2M cellular and other wireless communications.

Kornak Technologies Inc. (Office Address)	Kornak Technologies Inc. (Mailing Address)
#270 - 575 Palmer Road NE,	#612 -500 Country Hills Blvd NE, Suite 163,
Calgary, Alberta T2E 7G4	Calgary, Alberta, Canada T3K 5K3
(at the South end of the Calgary airport)	Tel: (403) 567-9328

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