



Job Specification – Embedded Systems Programmer

Location: Olifantsfontein

Type: Permanent

Equipment: Underground Mining Equipment

Role Overview

We seek programmers to develop, integrate, and support **embedded electronic control systems** for underground mining equipment. The role covers programming IFM and Deep Sea controllers, managing CAN bus data, and developing HMI dashboards—contributing to machine reliability, diagnostics, and performance monitoring.

Key Responsibilities

- Develop and test software for IFM & Deep Sea controllers.
- Integrate CAN bus engine data into control logic and HMI displays.
- Design HMI dashboards for operators/maintenance.
- Troubleshoot controller/communication issues (workshop & field).
- Collaborate with engineers on logic & safety interlocks.
- Document code, wiring diagrams & integration procedures.
- Support commissioning and field trials.

Requirements

Senior Programmer

- **Education:** BEng/BTech Electrical, Electronic, or Mechatronics Eng.
- **Experience:** 5+ years in embedded programming (heavy equipment/automation/mining).
- **Technical:** IFM/Deep Sea expertise, CAN bus (J1939, CANopen), HMI development, C/C++ & Embedded C, real-time systems.
- **Soft Skills:** Leadership, problem-solving, mentoring.

Junior Programmer

- **Education:** BEng/BTech Electrical, Electronic, Mechatronics, or Computer Eng.
- **Experience:** 0–3 years (graduates with strong embedded projects considered).
- **Technical:** C/C++/Embedded C, microcontrollers (STM32, PIC), basic CAN bus, exposure to HMI/GUI, hardware/software integration.
- **Growth:** Willingness to learn IFM/Deep Sea & grow into senior role.



Desirable (Both Levels)

- Mining/heavy equipment control systems experience.
- Knowledge of hydraulics & mobile machinery control logic.
- Familiarity with RTOS (FreeRTOS, etc.).
- Field commissioning experience.

What We Offer

- Competitive salary package.
- Work on cutting-edge mining solutions.
- Training & mentorship for juniors.
- Exposure to local & international mining tech.

 **Submit your CV to:** cv@rham.co.za

Join us in shaping the future of underground mining equipment with advanced embedded systems solutions.