



## A44 COMPANY — Contractor CV

Principal Controls, Software & Systems Consultant

### Profile

Multi-discipline consultant specialising in control systems, IQAN MC43/MD4, hybrid traction, HV systems, CAN/J1939 architecture, BMS logic, HMI/Qt, full-stack development and AI-accelerated engineering workflows. Experienced across rail, off-highway, agricultural and industrial machinery.

### Core Technical Expertise

IQAN MC43/MD4 architecture and logic

HV traction logic, regen and torque arbitration

CAN J1939 frameworks and diagnostics

BMS SoC modelling, thermal and protection logic

HMI & UI development using Qt and MD4/MD5

Full-stack tools: React, TypeScript, Electron, Node.js

AI-assisted debugging and workflow tooling

### Consulting Services Offered

Control systems development and review

Hybrid traction logic & HV architecture

CAN/J1939 network design & diagnostics

HMI/Qt development for industrial/off-highway

Internal tools & automation systems

AI tools & ChatGPT API integrations

Project rescue & deep diagnostic investigation

### **Condensed Case Studies**

Clayton Equipment – Hybrid Locomotive Control System

TAFE – Hybrid Tractor VCU Development

AVL – BMS & Hybrid Powertrain Integration

JCB – Electric Teletruk Control System

AKL/Efteling – Remote IQAN Support (Current)

### **Technical Tools**

IQAN Design, IQANsimulate, IQANrun

Qt Creator & Designer

React, TypeScript, Node.js, Electron

Python, MATLAB, C, C++

CANalyzer, CANoe, Picoscope

Git, GitHub Actions, CI/CD pipelines

### **Rates & Availability**

£100/hr remote engineering support

£650–£750/day engineering projects

£900/day international on-site

Weekly invoicing – Net 14

Outside IR35 • PI Insured

### **Contact**

A44 Company

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