



INDUSTRY BRIEF

Automotive

Robot and line control that keeps production safe, traceable and at rate.



Control system engineering, integration and analytics since 1997
ISO 9001 certified • Cyber Essentials • CHAS • Constructionline • SafeContractor

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YOUR PRIORITIES

What matters most

Automotive plants run to takt time, with little slack between a fault on the line and a missed delivery. Their control systems must let robots, conveyors and people work safely side by side, deliver consistent quality with full traceability, and absorb new models and changes without stopping the line.

Uptime at line rate

Lines run to takt, and a stoppage costs output by the minute. Control systems must be reliable, with faults that are quick to diagnose and recover from.

Robot and operator safety

Robots, conveyors and people share the same space. Cells need guarding and safety functions that are designed, validated and documented to current standards, and that operators have no reason to bypass.

Quality and traceability

Every part must be traceable to the process that made it, with the process data your customers and your IATF 16949 audits expect to see.

Launches without disruption

New models, variants and engineering changes arrive on tight timelines. They have to be brought in during short shutdowns, without putting current production or quality at risk.

WHAT WE WORK ON

Systems we engineer

- Robot cells and robot integration
- Assembly and conveyor line control
- Machine and robot safety systems
- Part tracking and traceability
- Line HMIs, alarms and production reporting
- Maintenance reporting and diagnostics

PROJECT EXPERIENCE

Automotive robot control

Matrix delivered robot control and integration for an automotive production process. Every project we deliver follows the same approach: requirements and standards agreed up front, logic tested against a simulation before site, and full documentation at handover.

What this means on your project

Production cannot wait for commissioning. We prove robot cell and line logic against a simulation before site, then install and commission in planned shutdowns, with agreed fall-back positions. Your engineers get the documentation and training to keep the line running and to make changes safely.

STANDARDS

The standards that shape your project

Customers ask us first about standards. These are the ones we meet most often in this sector, and what they mean in practice.

Standard	What it covers	How we work with it
IATF 16949	Quality management for automotive production and service parts organisations, built on ISO 9001.	Control systems that support your process control, traceability and change management, with records to match.
ISO 10218-1 and -2 (2025)	Safety of industrial robots, and of robot applications and cells, including collaborative applications.	Robot cells, guarding, safety zones and interlocks designed to the requirements for the robot application.
BS EN ISO 13849-1	Safety-related parts of machine control systems, rated by performance level (PL).	Safety functions designed to the performance level your risk assessment requires, then validated and documented.
BS EN 60204-1	Electrical equipment of machines: wiring, control circuits, emergency stops and documentation.	Our electrical and panel designs follow it, from protective bonding to stop categories.
VDA 6.3	The German automotive industry's process audit, used by many manufacturers to assess suppliers' production processes.	Process data, alarms and traceability designed to give your auditors the evidence they look for.
OEM controls standards	Vehicle manufacturers' own specifications for PLCs, robots, HMIs, safety and code structure.	We work to the OEM standard your project calls up, alongside your own site conventions.

The standards listed are those most often relevant to control-system work in this sector. Which apply to your project, and how, is agreed with you at specification stage.

The evidence you receive at handover

✓ Functional design specification	✓ I/O list and cause-and-effect	✓ Alarm list and HMI interface
✓ FAT and SAT records	✓ As-built drawings and source code	✓ Method statements for common faults

ABOUT MATRIX

Standards-led, fully documented control systems that you own and can support.

Matrix International (UK) Ltd has designed, built and supported industrial control systems since 1997. We take projects from specification and electrical design, through PLC, DCS and SCADA software, to installation, commissioning and long-term support, and we build the analysis software that shows how a plant is really performing. We are ISO 9001 certified and hold Cyber Essentials, CHAS, Constructionline and SafeContractor accreditation.

Siemens TIA Portal, S7 and PCS 7 • Rockwell • ABB • Schneider • Mitsubishi • Beckhoff • Emerson DeltaV • Honeywell • GE • WinCC, Ignition, AVEVA (Wonderware), FactoryTalk, iFIX and Citect SCADA

HOW WE DELIVER

From specification to long-term support

01 Specify

Requirements, applicable standards and risks agreed with you up front, itemised into a clear plan.

02 Design

Electrical and control design, PLC/DCS and SCADA software, to your standards and ours.

03 Test

Logic proven against a simulated plant, then factory acceptance testing before anything reaches site.

04 Commission

Installation, commissioning and site acceptance testing, planned around your operation.

05 Hand over

Full documentation, method statements for common faults, and training for your team.

06 Support

Maintenance, upgrades and analysis for the life of the system, with 24/7 cover under a support agreement.

WHY MATRIX

Why customers choose us

Standards first

An ISO 9001 certified quality system, designing to the standards your sector demands, plus any you specify.

You own the system

Clear structure, open interfaces and complete documentation, so you can support it yourself or with any vendor.

Tested before site

Control code is version-controlled and tested against a simulated plant before factory and site acceptance.

Multi-vendor

Siemens, Rockwell, ABB, Schneider, Mitsubishi, Beckhoff, Emerson, Honeywell and GE platforms.

In it for the long term

For us a project is not finished until the control system is decommissioned. 24/7 support is available under a support agreement.

OUR PROMISE

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Talk to us about your project

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