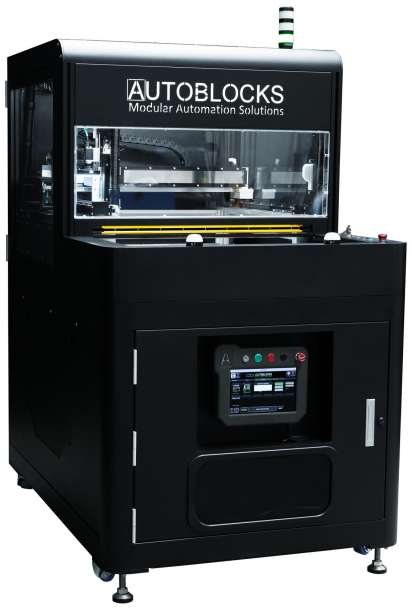
BUILT ON AUTOBLOCKS · CASE STUDY

PCB ROUTER SINGLE-TABLE GANTRY CELL

One Control Block runs all four axes. Reprogrammed from the Pendant, not re-engineered.

EMS DEPANELING · OEM PRODUCT · DISTRIBUTED BY FANCORT INDUSTRIES



4

COORDINATED AXES — 3-AXIS GANTRY + LOAD SHUTTLE

<5 min

PRODUCT CHANGEOVER AT THE PENDANT — NO PLC CODE

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HANDS IN THE WORK ENVELOPE — POWERED SHUTTLE LOADS AT THE DOOR

One table, one gantry, one powered load shuttle — four coordinated axes on a single Control Block. New products are a recipe added at the Pendant, not a re-engineering project. The compact router that scales with your mix instead of locking you to it.

The Challenge / The Solution / The Outcome

PCB ROUTER
SINGLE-TABLE GANTRY
CELL

THE CHALLENGE

EMS contract manufacturers depanel a mix that changes shift to shift — rigid FR-4, flex assemblies, single-up boards and panelized arrays. For lower-volume or floor-space-constrained lines, a full twin-table cell is more machine than the line needs.

But the conventional single-table alternative carries its own costs. Operators load fixtures by hand **inside the work envelope**, and the router itself ships frozen at its delivered configuration — every new product is a vendor service call and a PLC edit, not a setting an engineer can change on the floor.

THE SOLUTION

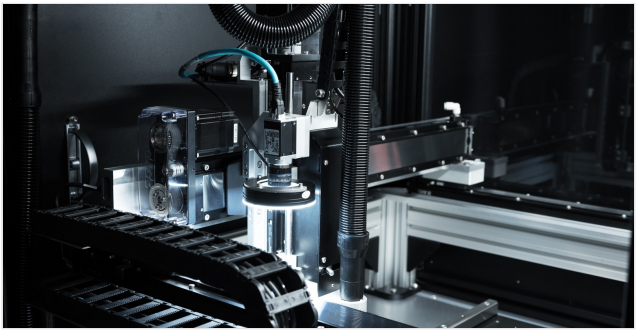
The Autoblocks PCB Router single-table cell puts a three-axis routing gantry and a **powered load shuttle** on one Autoblocks Control Block — four coordinated axes, with no separate PLC, motion controller, or safety PLC. The shuttle draws the fixture out to the operator at the door for hands-out-of-envelope loading, then indexes it back under the gantry; a Cat-3 safety controller mediates the door, light curtain, and shuttle state.

The entire cell — depanel path, shuttle sequencing, bit-life tracking, and status — is programmed in **AutoCode**, Autoblocks' 31-command human-auditable language, so a new product is a recipe added at the Pendant in minutes, not an engineering sprint.

THE OUTCOME

One Control Block runs all four axes; one Pendant runs the line. Most single-table routers ship **frozen** — one fixture, one panel size, one program locked behind the vendor. This cell is provisioned once for the lineup, then changed over from the Pendant: **most product swaps run under five minutes, no PLC code touched.**

Because it is built on the same Autoblocks platform as the twin-table router, an EMS provider can start compact and scale — adding a second table, vision, or dust extraction as a configuration option rather than a forklift upgrade. Sold and supported as a standard OEM product by **Fancort Industries**. That's the difference between buying a machine and buying a platform.



CELL ARCHITECTURE

- **Controller:** Autoblocks Control Block — motion, logic, safety, HMI in one
- **Motion:** 3-axis routing gantry + powered load shuttle (4 coordinated axes)
- **Station:** Single work table on powered load shuttle, hands-out-of-envelope loading
- **Sensing:** Part-presence + shuttle-position interlocks
- **Process:** Routing spindle with bit-life tracking
- **HMI:** Autoblocks Pendant — recipe selection, live OEE / yield / cycle
- **Programming:** AutoCode (31-command, human-auditable) + Autoblocks Studio
- **Safety:** Cat-3 safety controller, perimeter light curtain, interlocked door
- **Scalable to:** Twin-table, vision, dust extraction — per EMS line

OEM DISTRIBUTION PARTNER

fancort industries, inc.™

THE PLATFORM DIFFERENCE

Most single-table routers are **frozen at delivery** — one fixture, one panel size, one program behind the vendor. The Autoblocks PCB Router is configured from the Pendant and built on the same platform as the twin-table cell — so EMS teams add products by editing a recipe, and scale the cell when the mix grows, without buying a new machine.

LEARN MORE
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WATCH IN ACTION
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