CAPABILITY BRIEF

On-Premise AI

Every model runs on the cell, on your floor; no inference, no skill, no part data ever leaves the plant.

Cloud inference is a non-starter on regulated floors. ITAR-controlled parts, classified programs, and proprietary process IP cannot be streamed to a vendor's datacenter for a verdict. Connectivity drops stall the line; round-trip latency breaks real-time control; and any model that phones home is an exfiltration path your security team will not sign off on. Most robotics vendors assume a fat pipe to their cloud. That assumption fails here.

Relling runs every model on the cell itself. Perception, planning, and the full skill library execute on local edge compute behind your firewall, air-gapped if you require it. No frames, no telemetry, no part geometry leaves the plant. The cell is qualified at Relling HQ before it ships, then operates as a closed, self-contained node on your floor. Your data stays your data, and your sovereignty is structural, not a setting.

AT A GLANCE

Footprint	~2 × 2 m
Payload	12.5 kg
Reach	1.3 m
Placement	±0.05 mm
Power	Single-phase
Install	≤ 2 weeks

01 The work we take on

THE TASK PROFILE

A

Local inference

All perception, planning, and policy models execute on the cell's onboard compute. No request ever crosses the plant boundary to reach a model.

B

Data sovereignty

Part geometry, process parameters, and captured imagery stay on your floor. You own the data, the weights, and the hardware they run on.

C

Offline operation

The cell runs fully air-gapped. No internet link, no vendor tunnel, no dependency on uptime you do not control. Pull the cable; it keeps working.

D

Low-latency edge

Closed-loop control runs at the cell, not over a network. Perception-to-actuation stays in single-digit milliseconds, immune to WAN jitter or outages.

E

Local skill library

The full learned skill library lives on the cell. Reconfiguring for a new part loads a local skill, not a call to a remote service.

02 Why now

THE CASE FOR MOVING NOW

Defense and ITAR demand it

Controlled technical data cannot leave the facility, let alone the country. On-premise inference keeps ITAR-governed parts, classified programs, and CMMC-scoped work inside the boundary, removing the cloud dependency that disqualifies most automation vendors from this floor.

Your IP stays yours

Process recipes, fixture geometry, and tribal knowledge are the asset. Relling never streams them to a shared cloud or trains a vendor model on your output. The skill library is yours, runs on your hardware, and stays behind your firewall.

Connectivity is not a dependency

Plant networks drop, and WAN latency is fatal to real-time control. Running every model at the edge means the line does not stall when the link does. The cell is deterministic, offline-capable, and unaffected by outages beyond your walls.

OEMS WE WORK WITH

BECKHOFF · Rockwell Automation · SIEMENS · FANUC · KUKA · ABB · YASKAWA

03 What the service covers

TASKS ON THE LINE

A — On-cell models
All vision, grasp, and motion models run on local edge hardware inside the cell.

B — Air-gap mode
Operate with no network connection at all; nothing is required to reach outside the plant.

C — Local skill store
The skill library is stored and served on-premise; new parts load from disk.

D — Sealed data path
Imagery, geometry, and logs are retained locally; none is transmitted off the floor.

E — Package updates
Model and skill updates arrive as signed offline packages, not live telemetry links.

F — ITAR / CMMC fit
Architecture aligns with ITAR handling and CMMC controls for controlled and defense work.

G — IP containment
Proprietary process knowledge stays inside your firewall, never exposed to a vendor cloud.

H — Deterministic latency
Inference timing is fixed by local compute, not subject to network round-trips or congestion.

WHAT A CELL HOLDS

≤ 2 wk	±0.05 mm	100%
Install to running on your floor, not months of integration	In-hand placement for fit- and safety-critical parts	Inspection on every part — checked, not sampled

Representative configuration. Final specs are issued with the proposal.

04 Working with us

FROM YOUR PART TO A QUALIFIED CELL, IN ~TWO WEEKS ON-SITE

A · SCOPE & PO

We start with your part

We work from your part, volumes, takt, and the line you'd deploy on. A short scoping engagement confirms fit, defines acceptance criteria, and puts a fixed scope and price in writing — capital purchase and robotics-as-a-service, side by side.

B · PRE-BUILD AT RELLING HQ

We build & qualify it first

We build the cell on our own production floor and run it against your parts until it meets the acceptance criteria. The trial-and-error happens here, not on your line — so what ships is already proven.

C · ON-SITE CONFIGURATION

It arrives pre-built

The qualified cell shows up ready. On-site work is tuning, not assembly: under two weeks to integrate with your line, MES/ERP, and safety, followed by a supervised run on real product.

D · ACCEPTANCE & FIRST UNIT

Proven, then handed over

We run supervised until your safety engineer signs off and the cell hits its numbers. Your technicians operate it day to day; maintenance and software updates are covered.

05 Let's talk

We started Relling to help this country make more of what it needs. If you have a task that's hard to staff or hard to automate, send it over — we'll tell you straight whether a cell fits, and scope it if it does.

Talk to us: jai.relan@rellingsystems.com · rellingsystems.com

EXCEPTIONAL ENGINEERING, TEAM FROM

SPACEX · NASA · BOEING · TESLA · RIVIAN · ANYSIGNAL · coinbase