EMS Platform

Online Live ESD Monitoring System

100% live ESD compliance. Zero compromise.

RDL's EMS continuously reads operator wrist-strap resistance and verifies grounding integrity across ESD-protected work surfaces in real time. Every operator and every workstation stays monitored, so faults are caught the moment they happen — not after a batch of components has already been put at risk.



RDL Industry Command & Control Center — live enterprise operations view

25V
is enough electrostatic charge to permanently damage an integrated circuit

$0.5–5B
estimated yearly industry losses attributed to unmanaged ESD damage

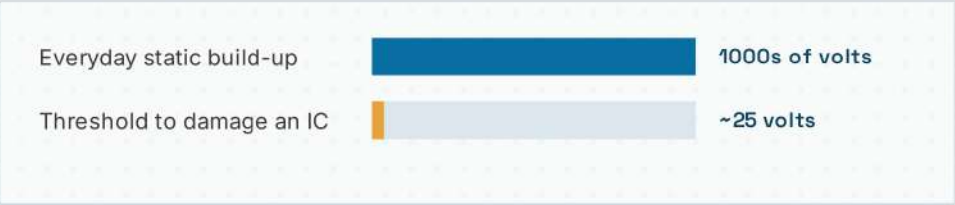
100%
continuous monitoring of personnel and workstation grounding, live

S20.20
built to support the ANSI/ESD S20.20 control program standard

Why live ESD monitoring is required

The risk hiding in plain sight

Equipment, furniture, clothing and other everyday items on a shop floor can hold a static charge of thousands of volts. A component only needs a fraction of that to fail — and because the damage is often invisible at the time, it's easy for SMT businesses to under-price the risk until it shows up as a field return.



A single discharge event rarely announces itself — which is why continuous, automated monitoring matters more than a once-a-shift manual check.

How ESD damages a semiconductor

Electrostatic discharge is a sudden transfer of charge between two objects at different potentials — usually triggered by contact, a short, or dielectric breakdown.

1. Contact, a short, or dielectric breakdown triggers a **sudden discharge** between two charged surfaces.
2. Current travels across the **PN junctions** inside the integrated circuit on its way to ground.
3. The surge can **burn a visible hole** in the die, with heat damage to the surrounding area.
4. Repeated low-level events **degrade components over time** — even where no single event is fatal.

What the EMS platform gives you

12 capabilities, one dashboard

Fault alerting with location
Pinpoints exactly which strap or station failed.

Earth resistance measurement
Accurate, continuous readings, not spot checks.

Bonding & grounding status
Live connectivity state for every ground path.

History & fault prediction
Grounding trends flag failures before they happen.

Automatic alternate ground
Switches source the instant primary ground drops.

Maintenance alerts
Scheduled reminders before compliance lapses.

Modbus, MQTT, JSON, FTP
Speaks the protocols your plant already runs.

Real-time network status
Live state on the network, not a delayed log.

Visual & audio signals
Immediate on-floor indication of a failure.

Modular, extendable design
Add stations and sensors as the line grows.

Simple to configure
Set up and maintain without specialist tooling.

Centralized SQL storage
One data store for audits and reporting.

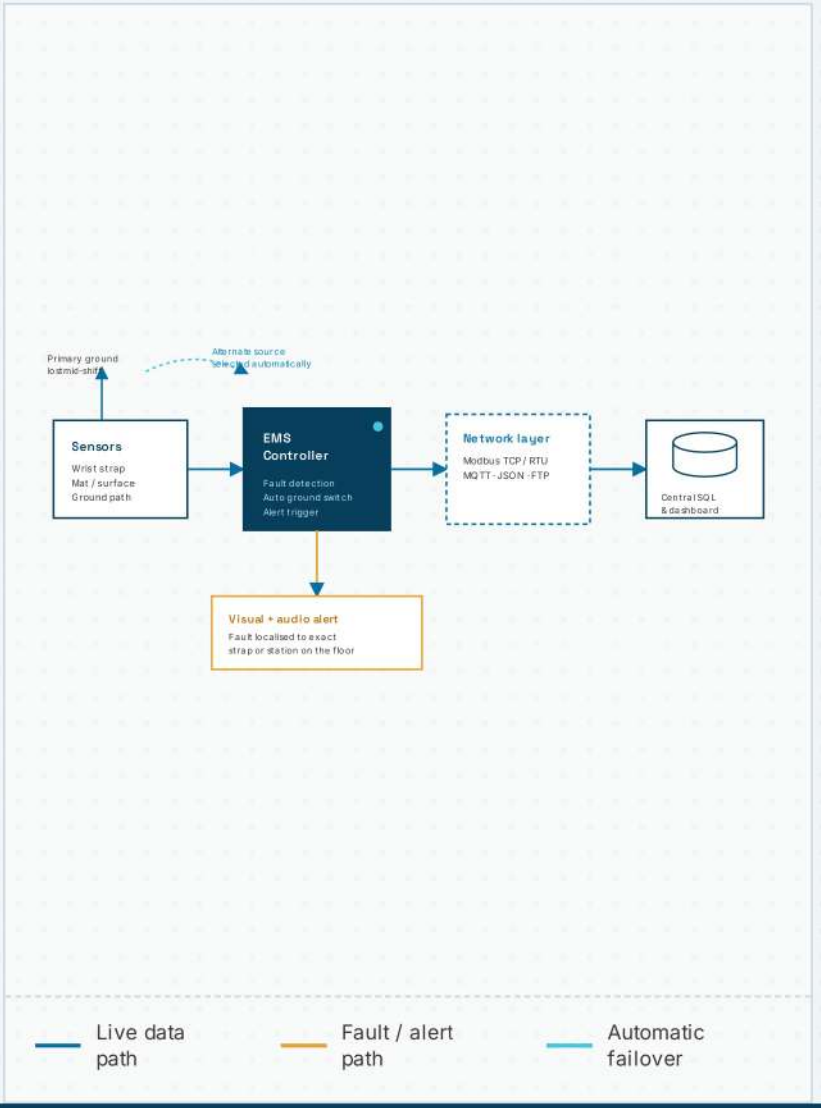
ANSI/ESD S20.20 control program

The industry benchmark across telecom, aerospace, automotive and electronics for protecting working environments from charges of 100V or more.

- Builds ESD awareness across the organisation
- Raises the standard every process is held to
- Cuts failure rates and rework costs
- Keeps you aligned with industry peers
- Gives clients proof of your quality system
- Strengthens your market position

EMS supports S20.20
Continuous audit-ready records

System architecture, end to end



See it on the floor

Scan to open a real deployment case study — how an electronics manufacturer rolled out live ESD monitoring across its SMT lines.

Case study

Partnership programme — reseller and integration partners wanted. Get in touch to bring EMS to your region.

Offices

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Branch Office — Oberle Towers, Balmatta

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rdltech.in / esd-monitoring-system
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Datasheet

Full technical specifications, wiring diagrams and protocol details are available in the EMS datasheet on request.