The New Standard in Industrial Precision: SpechtLab WG Series

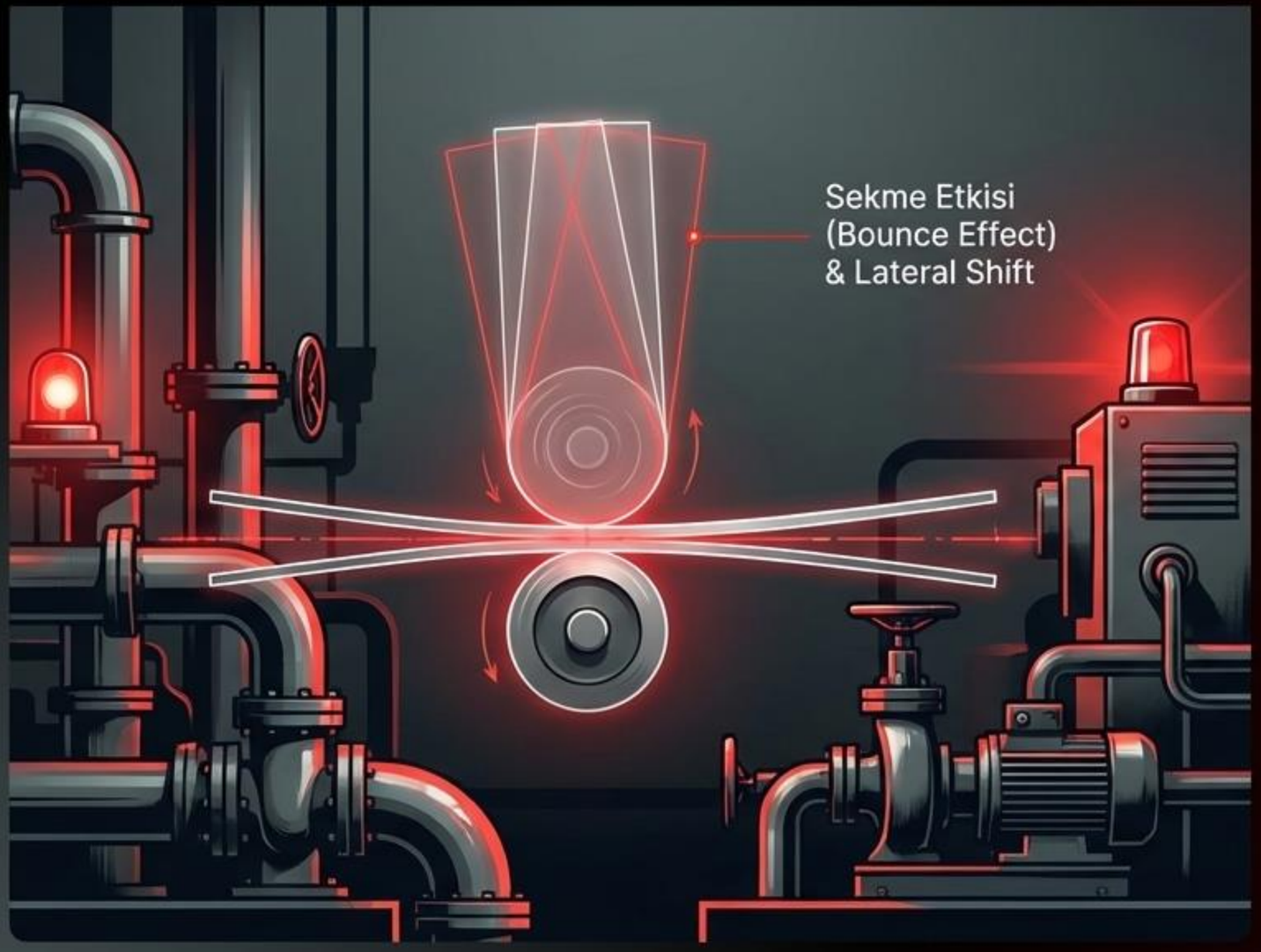
Transforming width control through advanced stereoscopic vision.

Achieving micron-level precision in extreme manufacturing environments.

Enabling the "Zero-Scrap" production reality for modern metallurgy.

Technical Integration: Continuous, non-contact measurement system designed specifically for the rigorous demands of high-speed rolling mills.

Manufacturing is Blind, and it is Costing Billions.

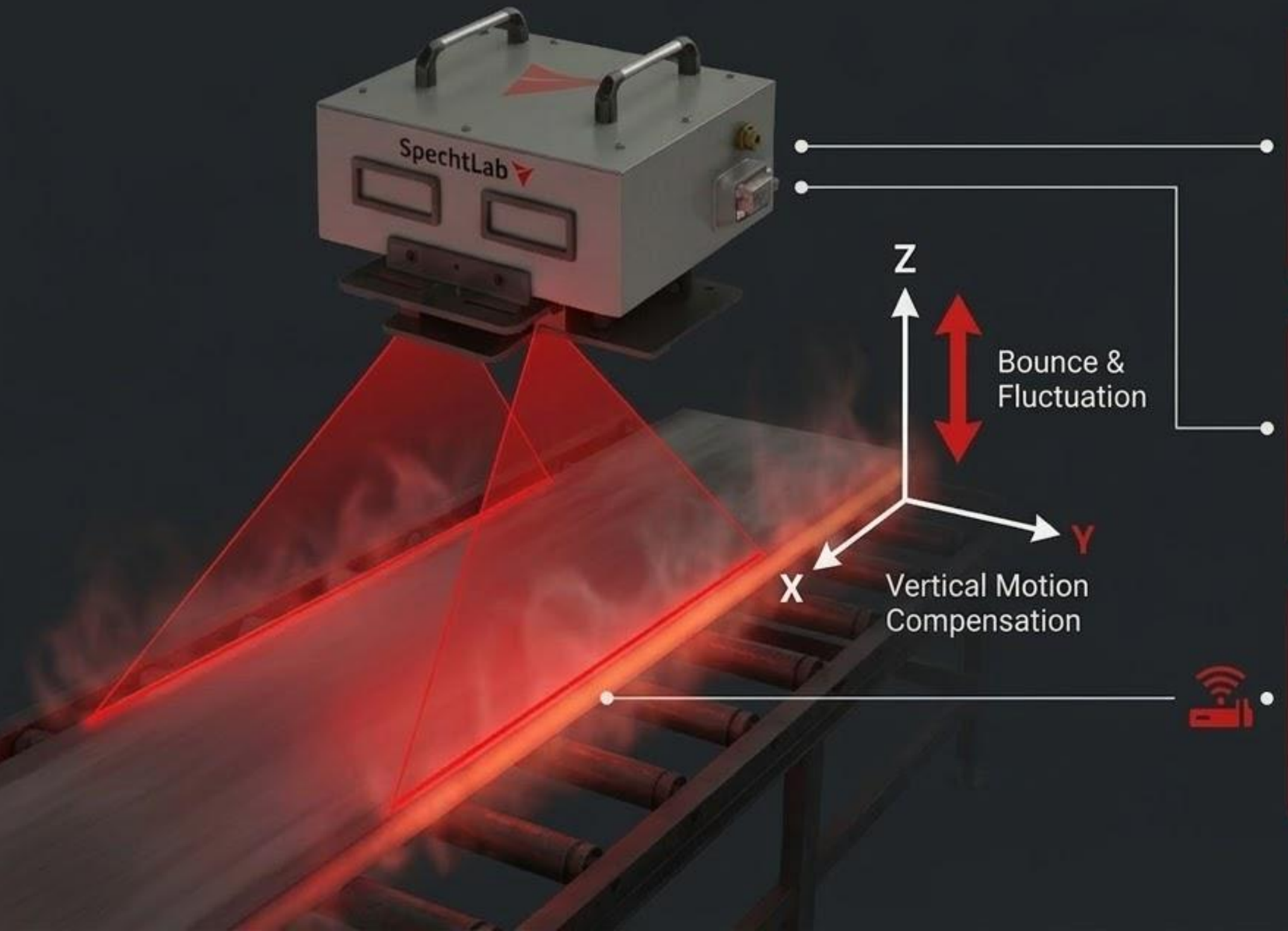


Specht1: High-Speed Volatility: Material bouncing and lateral movement obscure true dimensions.

SpechtRed: Extreme Environments: High temperatures, steam, and scale interfere with traditional optics.

SpechtRed: The Cost of Delay: Post-process manual checks lead to massive yield losses and unplanned downtime.

WG Series: Non-Contact Stereoscopic Width Inspection



Dual Camera Architecture

A depth map is extracted using images from two cameras. Vertical bounce or fluctuation of the material does not disrupt the measurement.

Flexible Lighting Scenarios

Backlight or frontlight illumination based on environment and material characteristics for edge detection.

Instant Data Transfer

Transmission of width values measured in milliseconds to DataPool and Level-2 systems over Ethernet/RS485.

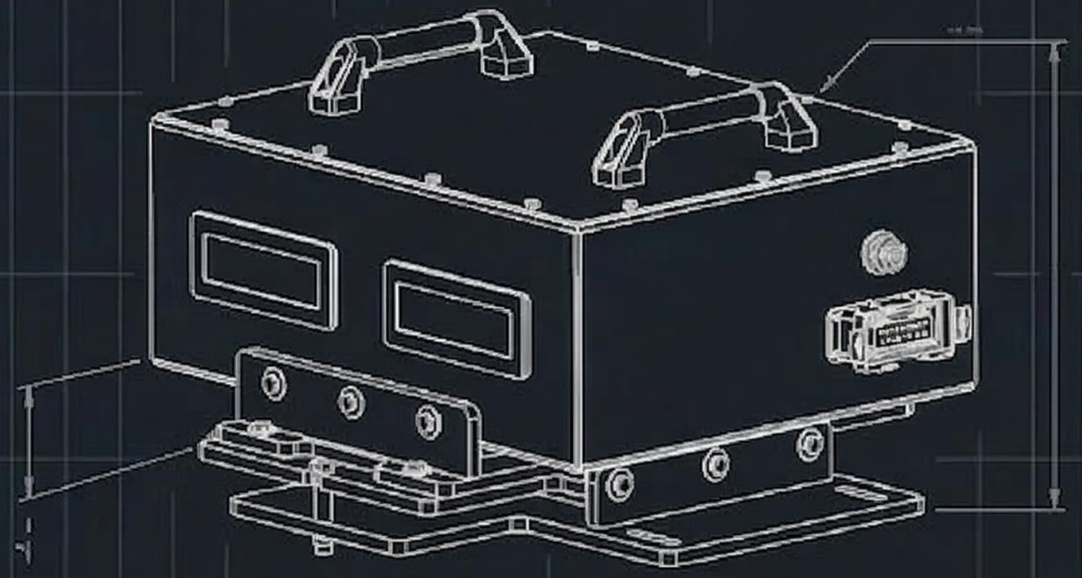
Mechanical Stability: Millimetric Calibration

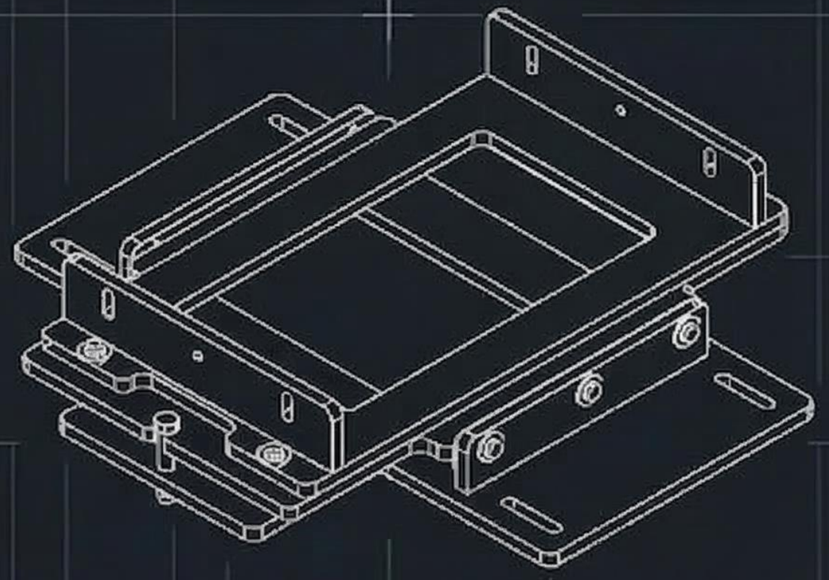
Massive bridge vibrations and mounting tolerances in the factory environment are eliminated with the Three-Degrees-of-Freedom Bracket.

Roll: Surface parallelism adjustment.

Yaw: Line flow angle alignment.

Pitch: Vertical calibration of the camera's Z-axis.

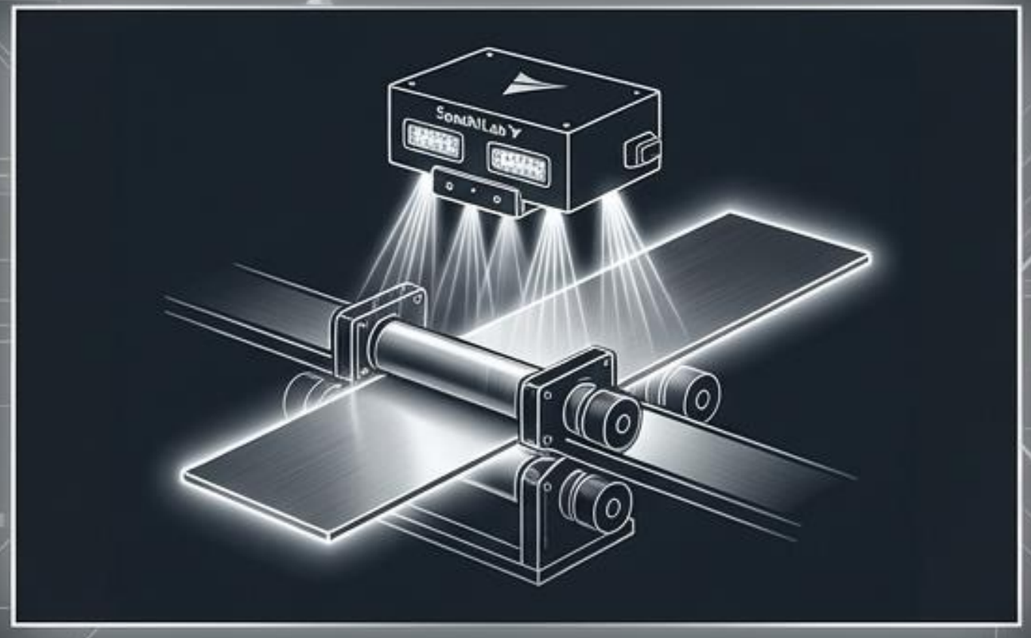




Takeaway: Full stabilization against post-installation vibrations and zero bridge error.

Engineered for Extremes: Adaptive Optical Configurations

Cold Rolling Configuration



Utilizes high-intensity Frontlight and Backlight illumination for crisp edge contrast.

Hot Rolling Configuration

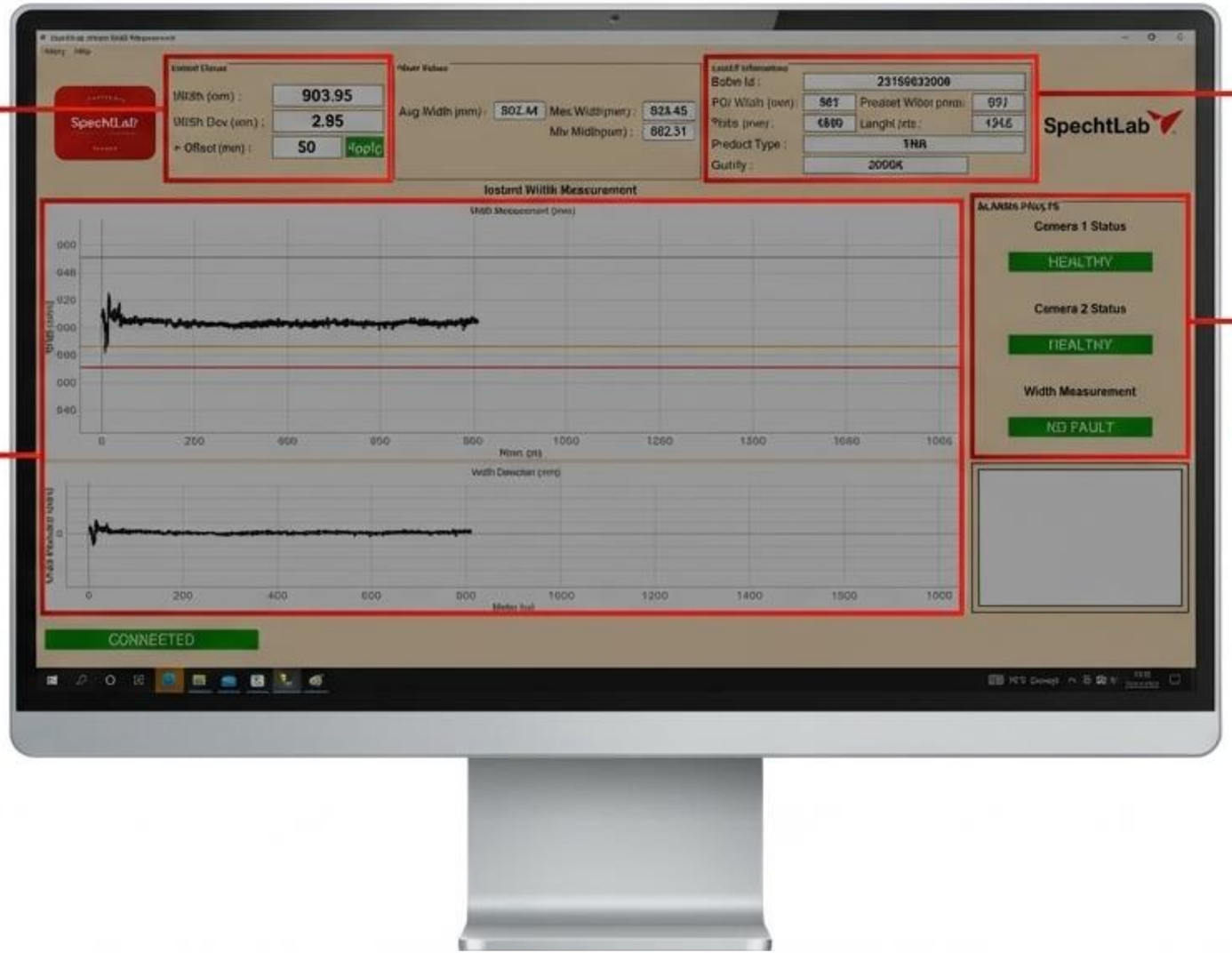
100% Backlight-Free operation.

Thermal Radiation Utilization: Capitalizes on the glowing steel's own infrared signature for flawless high-temp edge detection.

SpechtLab Operator Interface

Instant Alarms:
Configurable +Offset and -Offset parameters. Visual and audio alarms immediately notify operators of tolerance faults.

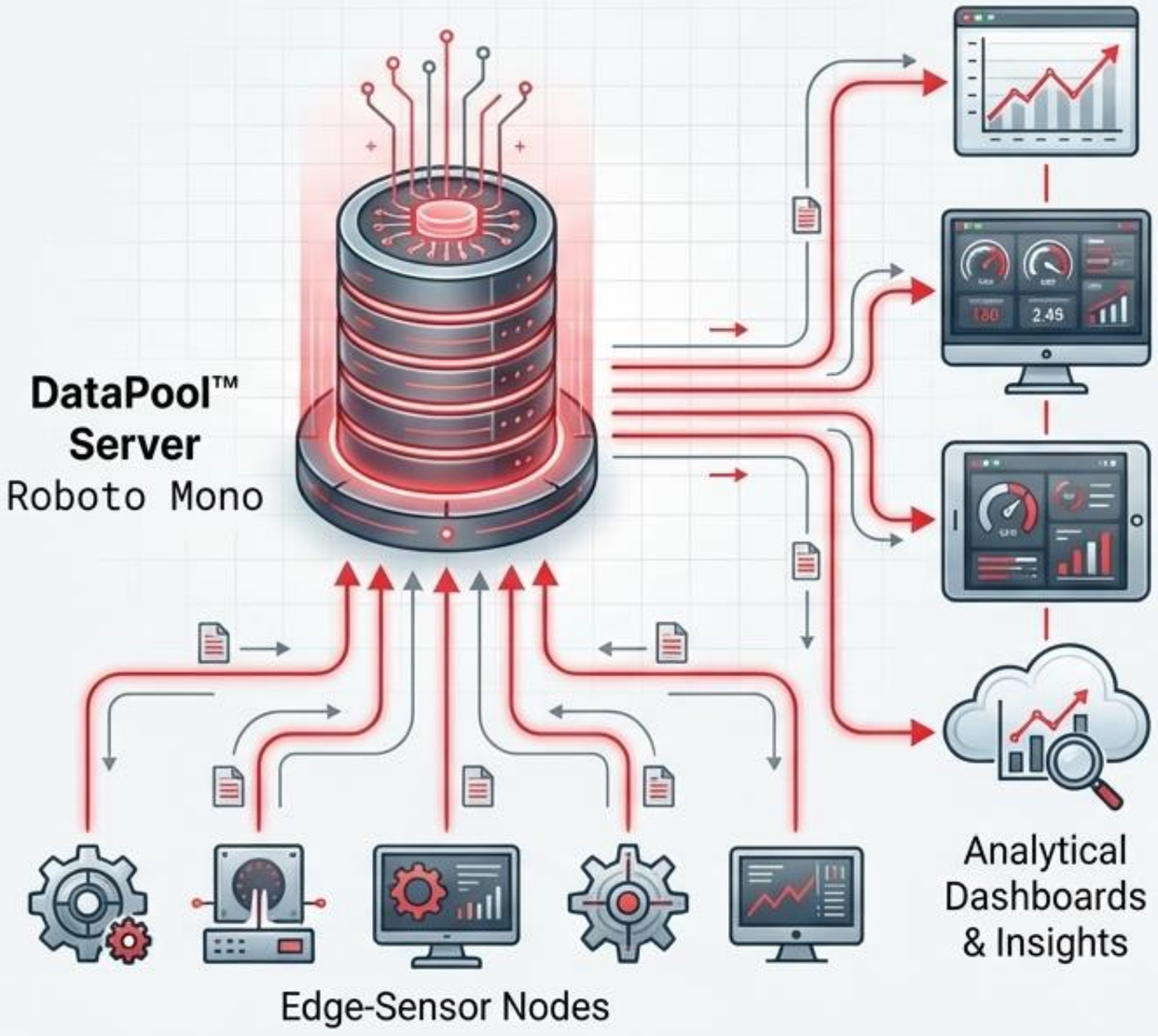
Real-Time Visualization:
Continuous X/Y graphing of material length vs. width and centerline deviation.



Production Tracking:
Direct integration with Level-2 system data for batch-level logging (Coil ID, Product Type).

System Health:
Constant visual verification of camera status and network connectivity with definitive HEALTHY / NO FAULT indicators.

DataPool™: The Centralized AI Management Suite



Real-Time Monitoring

Instant visibility into fleet-level production metrics.

Predictive Maintenance

Analyzes longitudinal width trends to predict mechanical degradation (e.g., blade wear in slitting lines or roller misalignment).

Quality Tracking

Integrates OCR roll-identification to attach width profiles to specific product IDs, ensuring a zero-defect audit trail.

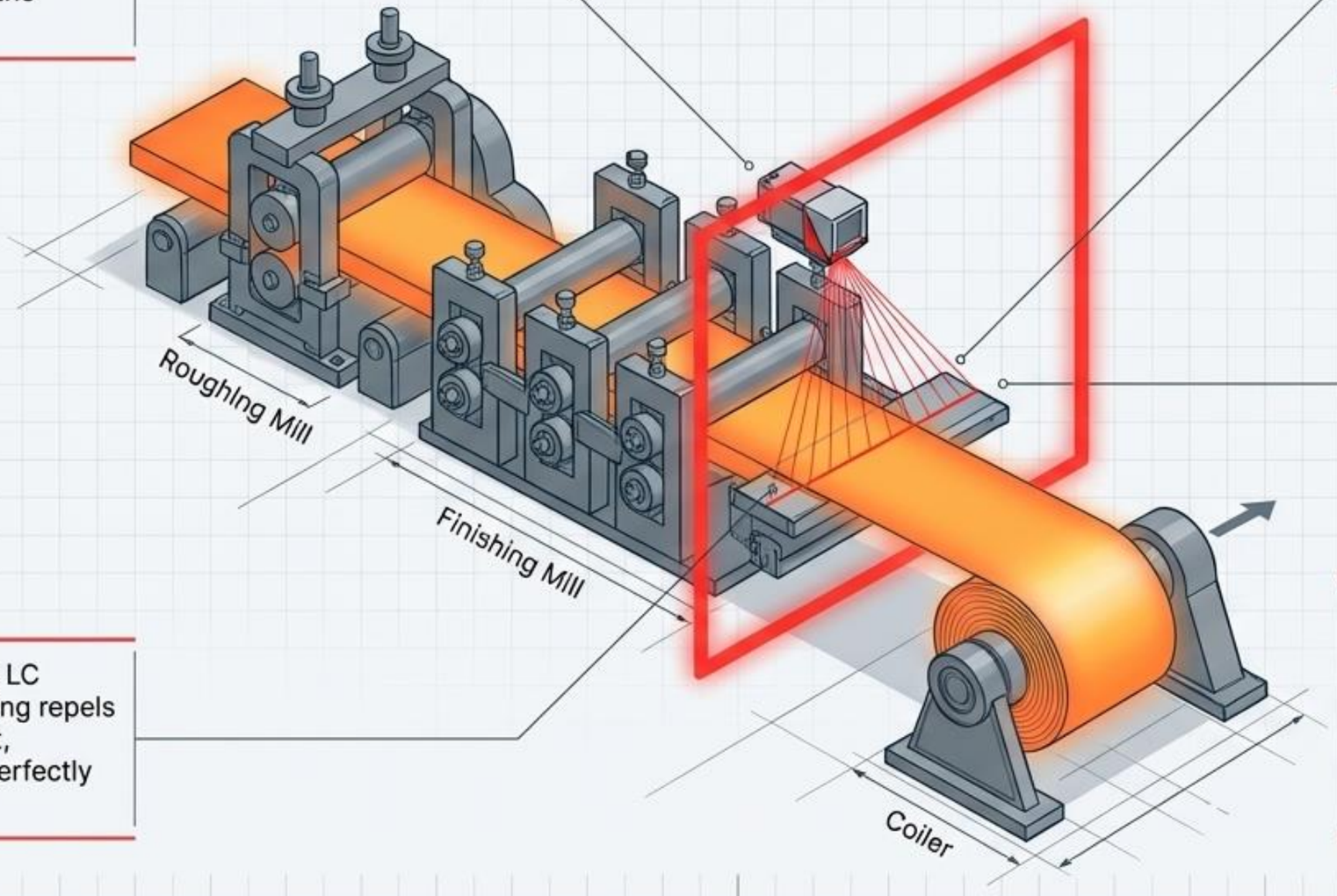
Automated Alarms

Millisecond-response alarm generation triggering downstream PLC actions when tolerances are breached.

Application Use Case: Steel Rolling Mill Integration

1. The Mount: The WG Series is positioned directly above the hot strip exiting the finishing mill.

2. The Defense: The LC Liquid-Cooling housing repels extreme radiant heat, keeping the optics perfectly calibrated.



3. The Measurement: Stereoscopic triangulation ignores the strip bouncing off the exit rollers, calculating true width.

4. The Control: Sub-10ms algorithmic data is fed directly to the Automatic Gauge Control (AGC) and Automatic Flatness Control (AFC), allowing real-time, fully automated roll readjustments before coiling.

Production Benefits: Engineering Your ROI

Improved Product Quality

- Strict adherence to the tightest dimensional tolerances.

Scrap Rate Eradication

- Instant deviation alarms prevent miles of defective coiling.

Process Stability

- Total elimination of manual, subjective measurement errors.

Maximized Efficiency

- Increases Overall Equipment Effectiveness (OEE) by allowing lines to run at maximum speeds without sacrificing quality control.

Measure the Unmeasurable. Control the Uncontrollable.

Drastic Scrap Reduction: Catch and correct deviations in milliseconds, not miles.

Automated Quality Assurance: Eliminate operator dependency and hazardous manual measurements.

Increased Line Uptime: Proactive alarming prevents cobbles and catastrophic line failures.

Discover the World of Measurement.

- ✓ Consult with our Metallurgy Experts.
- ✓ Schedule a Custom Integration Audit.
- ✓ Upgrade to SpechtLab DataPool™ Analytics.

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