Automotive Rework Bay

Turn Rework into Lean Work with Vehicle Detection and Status Indication

- Improve coordination and takt time visibility with real-time feedback from Andon systems, tower lights, and status displays
- Prevent delays and overfill with reliable vehicle detection across any bay configuration
- Turn real rework bay events into insight-enabling data to spot delays, expose inefficiencies, and drive continuous improvement

BANNER®

Vehicle Detection

Overhead

Challenge

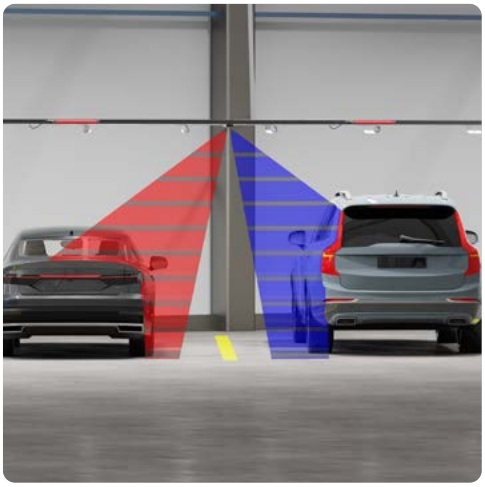
Unreliable or inconsistent monitoring of rework bays can lead to overfill, increasing rework cycle times and creating a bottleneck effect that slows production, disrupts planning, and delays shipment.

Solution

- A T30R Radar Sensor, mounted above each bay, reliably detects vehicle presence as soon as a bay is occupied, preventing unnoticed arrivals that lead to overfill and rework delays
- Configured in retroreflective mode to monitor a defined sensing area on the bay floor, the sensor switches its output when a vehicle blocks the return signal, regardless of surface angle, triggering a connected TL50 Tower Light to indicate the bay is occupied

T30R Radar Sensor

TL50 Tower Light



Overhead Two Vehicles

Challenge

While effective monitoring of individual rework bays provides a powerful tool for enhancing efficiency, the ability to monitor two adjacent bays with a single sensor would simplify inventory and reduce complexity.

Solution

- A single Q90R2 Radar Sensor uses two independent detection zones to monitor adjacent rework bays, detecting vehicles—regardless of size, shape, color, or finish—while eliminating the need for dedicated sensors and reducing inventory
- Banner Measurement Sensor Software enables quick setup and allows adjustments for tailoring detection zones to specific bay configurations and adapting to changing needs

Q90R2 High-Power Multipurpose Radar Sensor

WLS27 Pro LED Strip Light

Under vehicle

Challenge

Installation constraints—such as overhead tooling, robotic arms, or the need to keep the bay clear for specialized equipment—can make it difficult to mount or wire overhead sensors in rework bays. This often leaves technicians performing manual spot checks or relying on error-prone tracking methods to confirm vehicle presence, increasing the chance of missed arrivals and delayed repairs.

Solution

- M-GAGE sensors install directly into the floor, requiring no overhead space or mounting clearance—ideal for bays with suspended tooling or specialized equipment
- Self-powered and wireless, M-GAGE eliminates the need for cable runs or external power, simplifying deployment in constrained or retrofit environments
- Magnetic sensing reliably detects vehicle presence, replacing manual spot checks and ensuring consistent detection throughout rework operations

M-GAGE Sensor

DXM1200-X2R1 Industrial Controller

Notification

Andon with Status Display

Challenge

Without real-time visual status indication in rework bays, technicians often rely on manual methods to communicate status—delaying response to part requests, increasing takt time, and reducing overall efficiency.

Solution

- A TL50 Tower Light with five segments, controlled by an LCA130T Andon box, provides at-a-glance indication of status such as parts needed, work complete, or technician request
- An SD50 Status Display shows real-time status text such as takt time, occupancy, or support request

SD50 Status Display

TL50 Tower Light

LCA130T Andon Control Box

Takt Time with Visual Indication

Challenge

Bringing the value of takt time indication into rework bays would give technicians and planners at-a-glance insight into cycle timing, supporting better coordination, reducing variation, and helping ensure rework stays aligned with production goals.

Solution

- A WLS27 Pro Strip Light, using the timer option, provides visual indication of takt time using progressive animations and color shifts—giving technicians an immediate sense of elapsed time
- An SD50 Status Display shows takt time in clear, bright-white characters legible from 10 meters, providing immediate visibility to help maintain rework consistency and support more efficient decision-making

SD50 Status Display

WLS27 Pro LED Strip Light

Illumination

On-Demand Inspection with Localized Control

Challenge

The ability to complete some inspection tasks directly in the rework bay would reduce process complexity, but inspection lighting needs to be adjustable to match the task, whether checking for paint, surface finish, or alignment defects.

Solution

- WLB72 LED Strip Lights provide bright, uniform illumination with high color accuracy—ideal for identifying paint flaws, surface inconsistencies, or alignment issues. An optional eye shield accessory enhances glare control and creates a zebra striping effect to improve visual contrast during inspection
- A K50 I/O Touch Control with Display gives technicians localized, glove-friendly control of light intensity, with real-time output values shown on the display to match lighting levels to each task

WLB72 LED Industrial Strip Light

K50 I/O Touch Control with Display

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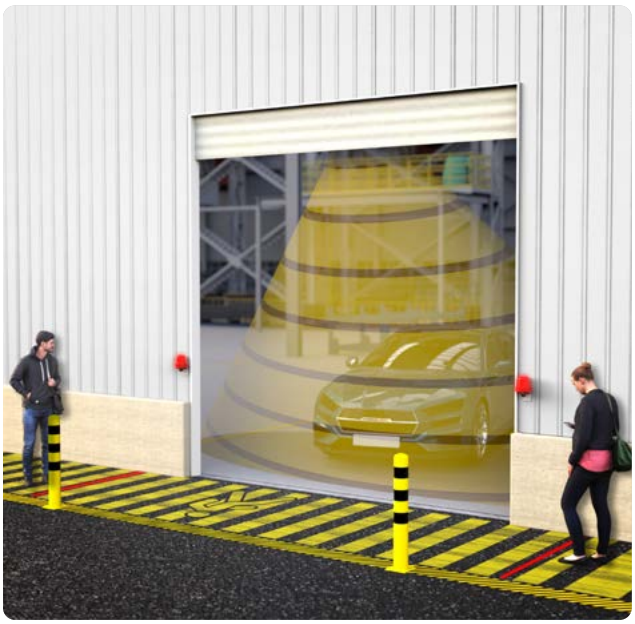
Collision Avoidance



Vehicle-Triggered Alert at Bay Exit

Challenge

A rework bay door opens directly onto an area with cross-traffic. As vehicles exit the bay, they cross over a designated pedestrian walkway. Structural obstructions prevent drivers and pedestrians from seeing each other, and distractions such as mobile device use, surrounding activity, and environmental noise reduce awareness and increase the risk of collision.

Solution

- The Q90R2 Radar Sensor's 120° × 40° field of view is configured to detect approaching vehicles that exceed a defined signal threshold, providing reliable detection at bay doors
- Two K100 Beacons with Audible, mounted outside the bay door, provide vivid daylight-visible indication and optionally emit a continuous 2.5 kHz tone at 101 dB SPL, ensuring the warning is noticeable even in noisy environments
- Q90R2 is easily configured to the specific layout using Banner's Measurement Sensor software, which provides a visual interface for defining the sensing field, tuning signal thresholds, and filtering targets based on motion and direction

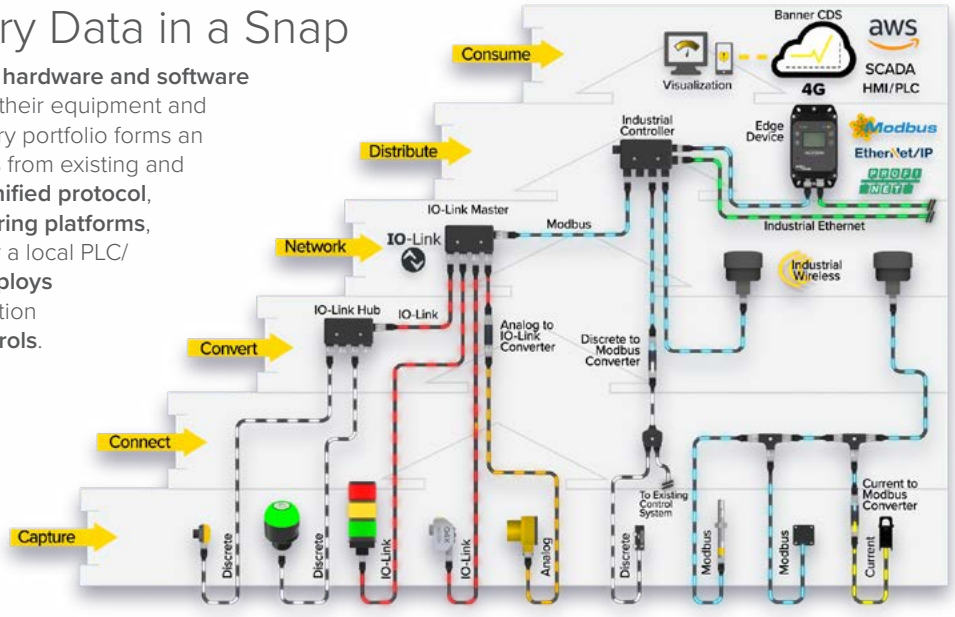
Q90R2 High-Power Multipurpose Radar Sensor

K100 Beacon with Audible

SNAP **SIGNAL** IIoT Made Easy

Monitor Your Factory Data in a Snap

Customers use **Banner's Snap Signal hardware and software** to instantly unlock valuable data from their equipment and increase productivity. This smart-factory portfolio forms an **overlay network by capturing signals** from existing and new devices, **converting them to a unified protocol**, and then **distributing them to monitoring platforms**, such as SCADA systems, the cloud, or a local PLC/HMI for consumption. The solution **deploys easily** by leveraging available information **without disrupting your existing controls**. This helps you **save money, reduce downtime**, and **optimize** your **operations**.



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