



Smart Connected PIV

Digitally track and monitor PIV assets to achieve safety, real-time visibility, and transparency into Operations

Overview

Smart Connected PIV (Power Industrial Vehicles) solution enables real-time visibility and provides asset intelligence to the entire Asset and Production value chain. This solution provides real-time monitoring, tracking, performance analysis, operational safety and control functionalities to PIV operations on the shop floor and in the warehouses. A cloud-based solution, Smart Connected PIV can be integrated with industrial applications such as Manufacturing Execution System (MES), Planning/Scheduling, and Maintenance to optimize operations and Return on Assets (RoA). The solution, therefore, seamlessly connects OEMs, end-users, and third-party maintenance service providers.



Key Benefits

- Improves shop floor safety by prevention and avoidance of machine and human safety events and incidents / accidents
- Improves PIV efficiency and cost of operations by real-time OEE performance monitoring and analysis
- Improves PIV capacity utilization and operations material flow efficiency through bottleneck and utilization insights
- Improves ROA through asset reliability, operations, and performance intelligence

Key Features



Operations Safety Visualization & Controls

- Real-time monitoring of safety, vehicle abnormal behavior events
- Onboard unit for Driver alerts, alarms, and notifications
- Web application for movement tracking of Machine-to-Human and Machine-to-Machine
- A configurable control strategy to ramp down vehicle speed based on safety event criticality



Asset and Operations Performance insights Dashboards

- A dashboard for OEE monitoring, downtime, speed loss, and quality loss drill-downs
- Interactive dashboards for vehicle routing and scheduling, analysis of vehicle usage, and loading patterns for capacity and utilization insights (AI/ML)
- Breakdown and preventive maintenance alerts and alarms



Seamless connectivity with different PIVs and Business System

- Interfaces to connect different types and makes of PIV control systems
- Interfaces with third-party business apps such as MES, Planning/ Scheduling, and Enterprise Asset Management (EAM)
- Interfaces for seamless connectivity to various sensors and edge-cloud connectivity gateway



Secured end-to-end value-add services

- Enabling end-to-end cloud-connected digital services for OEMs, third-party contractors, and enterprise users -
 - OEMs - Remote diagnostics, spare part inventory management, and reliability and design improvements
 - Third-party Contractors - Preventive and predictive maintenance schedule, and work order planning
 - Enterprise Users - Spare part PO automation, AMS contract management

Our Differentiator

- Implements standardized and open, modular IoT platform architecture to rapidly build, deploy, and scale solution
- Security managed at every level from edge device to the cloud
- Enabling a new and innovative Business Model for the entire ecosystem within the asset value chain
- Flexible pricing model (Hardware/Apps/System integration/Support Service) to align the client's CAPEX and OPEX budget

Success Story: PIV Safety Management for a Global Automotive Customer

For this customer, we connected the PIV with sensors for location and operations monitoring, and motion-control system. The solution is integrated with the IT and OT network to monitor and track the PIV, human movements for early detection of safety events, and prevent safety accidents through responsive controls. We have implemented asset intelligence and insights for traffic planning on the shop floor, warehouse, and PIV and Human movement control for zero accidents, and productivity and cost improvements.

To know more, contact us at digital@birlasoft.com



Resources

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