

SOLUTION BRIEF

CYBER RESILIENCE FOR COMMERCIAL RAIL FLEETS

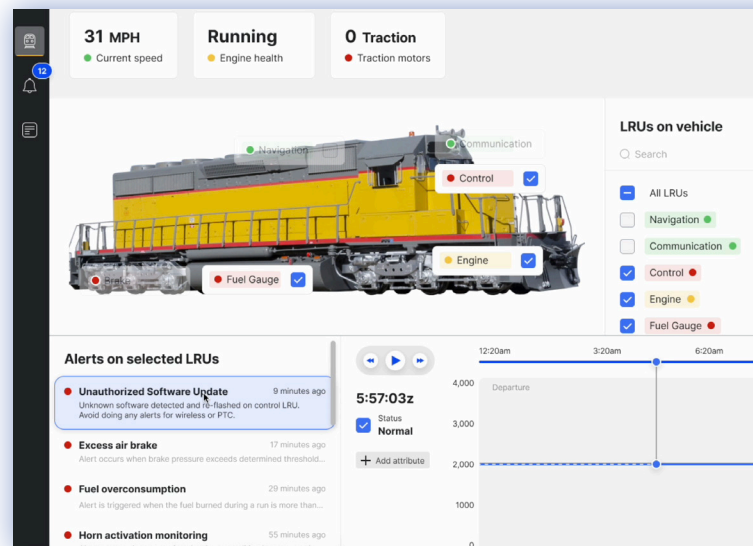


Modern locomotives are extensive technology platforms that rely on a complex web of onboard operational technology (OT) components. These components, designed with a focus on reliability and under the presumption of use in an isolated operational environment, often lack sufficient cybersecurity protections. Today, as OT components become increasingly interconnected with traditional IT systems and external networks, the absence of appropriate defenses creates a gap in cybersecurity that leaves critical assets precariously exposed to potential cyberattacks. Owners, operators, and maintainers must prioritize addressing this unchecked risk to keep their fleets protected.



The Shift5 Cybersecurity Module

Shift5's unique platform is hardware, bus, and protocol agnostic, and can perform passive, full-take data capture from any onboard source – every frame, every bus, every protocol. The platform analyzes data in real-time to detect threats and unlock critical insights for cybersecurity teams, providing the depth and breadth of knowledge needed to understand and manage cybersecurity risks to today's fleets and tomorrow's next-gen assets.





Benefits of the Shift5 Platform

Observability

- Uncover critical operational and cybersecurity insights by accessing, collecting, and retaining every frame of operational technology (OT) data.
- Overcome data collection challenges using a purpose-built platform designed to handle large volumes of data generated by defense and critical transportation assets.

Alerting

- Enhance situational awareness with real-time alerting on suspicious behavior.
- Enable proactive cyber defense by providing data for threat hunting, helping owners/operators mount a more comprehensive defense.

Threat Detection

- Effectively find and mitigate anomalies through continuous monitoring of onboard data.
- Improve detection rates by writing new signatures and rules for observed anomalies.
- Proactively detect new attack methods using advanced machine learning and analytics-based methods.

Automation

- Streamline incident management as real-time alerts trigger response plans and ticketing systems.
- Quickly troubleshoot and update compromised components with data-driven insights.

About Shift5

Shift5 is the observability platform for onboard operational technology (OT), enabling smarter, faster decisions through real-time data access, contextual insights, and actionable analytics at the edge for aerospace, rail, and defense. Shift5 unlocks the complete ecosystem of onboard data for operations, maintenance, and cybersecurity teams for the first time, enabling real-time decision intelligence through complete onboard data access and observability from the asset level to fleet scale. Shift5 delivers modern OT solutions to ensure the security, availability, safety, resilience, and reliability of today's fleets and tomorrow's next-gen assets.

For more information, visit shift5.io.