



Violet 800

The intelligent edge powering the Violet IoT Platform

Rail operations generate an enormous volume of data. What matters is understanding it. Violet 800 brings together Locomotive Data Acquisition and Recording (LDARS), Event Recording, Digital Video Recording, and a certified Crash-Hardened Memory Module (CHMM) into a single, unified edge platform built to make that understanding possible.

As the foundational edge layer of the Violet IoT platform, it captures high-integrity, time-synchronized locomotive, event, and video data and connects it securely to cloud-based intelligence, analytics, and operational workflows. One extensible platform. Reduced complexity. A data foundation built for scalable insight, compliance confidence, and continuous operational improvement.

Platform capabilities (IoT foundation layer):

- LDARS-based acquisition of locomotive operational data
- Integrated event, video, audio, and sensor data capture
- Certified crash-hardened memory for regulatory and investigative integrity
- Secure edge processing to contextualize and prioritize data
- Remote health monitoring and diagnostics across the fleet
- Over-the-air software updates to extend functionality continuously
- Standards-based connectivity to Violet cloud applications and APIs

Event and video intelligence (recording layer):

- FRA-compliant IEEE-1482.1 connected event recorder
- Optional 49 CFR 229 / IEEE-compliant CHMM
- LVVR- and FAST-Act-compliant connected DVR
- On-demand access to live data, recorded video, and AI-generated thumbnails
- Web-based data and video sharing with no physical retrieval required

Integrated extensions:

- In-cab audible alerts
- Mobile Device Detection and compliance support
- AI-ready architecture for future analytics, sensing, and automation

