



Ensuring Safety, Reliability and Compliance

Cyber threats have moved from cyber attacks to cyber warfare. Railway control systems, wayside communications platforms, signaling systems, traction systems, auxiliary converters, bogies and engine controllers, may be vulnerable due to a lack of strong embedded cryptographic controls, including: multi-factor authentication, secure boot, secure update, and secure, encrypted communications.

Transportation and railway system manufacturers must ensure compliance with cybersecurity standards such as NIST 800-53, IEC 62443-3-3, and FIPS 140-2. Keeping up with these standards as well as emerging standards from the Industrial Internet Consortium (IIC) and Industrie 4.0 is challenging. New regulations such as GDPR in Europe raise the stakes for non-compliance to more than €20 million per incident. Older protocols such as Modbus, DNP3 and BacNet can be difficult to secure.

In transportation, risk can be measured in terms of safety and reliability of the systems. While data privacy is important, ensuring physical human

safety is absolutely critical. Securing the surveillance and lighting systems within the stations is also important.

Mocana's Proven Cybersecurity Solution

Used by more than 200 OEMs to protect more than 100 million devices, Mocana's IoT Security Platform is a FIPS 140-2 validated embedded cybersecurity software solution that ensures device trustworthiness and secure communications by giving industrial automation manufacturers, OEMs and critical infrastructure operators an easy way to:

- Harden communications and signaling systems, traction systems, and engine controllers with multi-factor authentication using X.509 certificates and trust chaining
- Secure the boot process to validate the firmware, OS and applications
- Enable secure, cryptographically-signed over-the-air (OTA) and over-the-web (OTW) firmware updates
- Integrate hardware or software-based roots of trust such as TPM, SGX, TrustZone, HSMs, SIMs, and MIMs
- Replace open source crypto software such as OpenSSL.

For more information on Mocana's comprehensive IoT Security Platform and how it can help you secure your critical infrastructure, visit our website at mocana.com or send us an email via sales@mocana.com.