

ENABLING SECURE AND AUDITABLE LOGISTIC SOLUTIONS

Richard Moser and Carl Fenger of LEGIC Identsystems explain how mobile credentialing enables freight forwarders to reduce costs while increasing supply chain transparency

Continuous technological advancements are reshaping the logistics market. Complex logistics and security challenges can now be solved based on mobile credentialing technology.

Not only does this result in reduced operational costs and theft, but it increases transparency and clearer liability throughout the supply chain.

Cargo security: Securing cargo handover to prevent freight theft

Global supply chains have experienced significant disruption due to the COVID-19 pandemic, war in Ukraine as well as ever-increasing vulnerability due to the growing adoption of digital technologies.

In 2021, the top three causes of freight theft were hijacking (26%), theft from storage facilities (25%) and containers/trailers (11%) (Transported Asset Protection Association). Cargo at rest in unsecured parking lots, container yards or port facilities is especially vulnerable to theft – a situation that is aggravated by growing port congestion.

Criminal organisations increasingly infiltrate supply chains or manage to bribe warehouse workers or truck drivers to steal cargo. Insider theft typically occurs when warehouse or facility employees disclose confidential information pertaining to shipping and delivery times or when employees intentionally leave doors and gates unlocked overnight, granting criminals easier access to goods.

To mitigate these risks, logistic authorities such as BIS, TT Club & TAPA EMEA recommend security measures such as sealed rail containers with ISO-17712-compliant locks, documented checks on locking devices at all stops, GPS tracking of containers and alarms when container doors are opened by unauthorised personnel.

Securing freight based on real time monitoring of mobile credentials

Based on dynamically managed encryption technology, real time mobile credentialing over-the-air and biometric authentication capabilities of smartphones, secure and auditable permission-based access to storage facilities,

containers, vehicles as well as shipping information and packing lists can be quickly implemented. The benefits of mobile credentialing for cargo security are as follows:

- Wireless configuration – user smartphones and electronic locks can be remotely managed and configured over-the-air via a secure, encrypted Bluetooth or RFID channel





- Eliminates physical keys which are easily lost or copied and require cumbersome manual storage and handling
- Authentication of both users as well as locks and vehicles prevents fraud and hardware spoofing
- Enabling of an audit trail provides historical reporting of who has interacted with each container, lock and vehicle; when and where.
- Permission-based access grants and revokes access remotely and in real time
- Offline operation – mobile credentialing platforms can operate autonomously without a network connection, resulting in 24/7 availability ▶

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Cold chain logistics: Securely manage delivery of perishable goods

Perishable goods such as food, pharmaceuticals and high value electronics require a controlled temperature to ensure the quality of the product during shipment.

With a market value of US \$782b by 2030 (source Allied Market Research), the “Cold Chain Logistics” market is becoming increasingly important in global supply chains. Risks in dealing with temperature sensitive goods include food spoilage, degradation of pharmaceuticals and damage to high value electronics and other environmentally sensitive products.

Main factors contributing to damaged goods are related to improper handling during shipment and last-mile delivery and failure to comply with regulatory procedures or temperature monitoring guidelines. Reliance on multiple third party service providers also contributes to a lack of logistics overview.

The ability to precisely monitor and record container environment and as well as manage and log who accesses a container where and when is becoming increasingly important, especially for auditing and liability purposes.



Real time monitoring and cargo access control is becoming a key competitive advantage for providers of cold chain logistics services. Here are some of the benefits of mobile credentialing for cold chain logistics:

- Remote, real time management of critical access points such as containers, storage facilities and transport vehicles
- Automated logging of door and container openings based on mobile credentials enables reliable auditing and quality control of shipments from end-to-end
- Automatic locking of transport equipment prevents human error, hijacking and product tampering
- High security as locks and data storage/communications implement the highest commercially available encryption (AES-128) combined with Secure Element technology. All RF communications are encrypted; key data stored in the lock is physically and electronically inaccessible and smartcards cannot be copied
- Offline operation – mobile credentialing platforms such as LEGIC Connect function even without a network connection enabling reliable 24/7 operation even when offline

LEGIC Identsystems

For over 30 years, Swiss-based LEGIC Identsystems has enabled companies from around the world to deploy solutions with demanding security requirements.

Based on key management, trusted services and secure, contactless semiconductors, the LEGIC Security Platform provides end-to-end security for smartphone and smartcard-based access, mobility, shared resource and industrial IoT applications.

- Wireless configuration – reefers or active cooling containers can be managed and configured over-the-air via a secure, encrypted Bluetooth or RFID channel to prevent damage to the cargo caused by misconfigurations or interventions by unqualified personnel



REAL TIME MONITORING AND CARGO ACCESS CONTROL IS BECOMING A KEY COMPETITIVE ADVANTAGE FOR PROVIDERS OF COLD CHAIN LOGISTICS SERVICES.

For more information about mobile credentialing and LEGIC Connect for cargo security, visit www.legic.com/logistics or send an email enquiry to info@legic.com

Mobile Credentialing that just works.

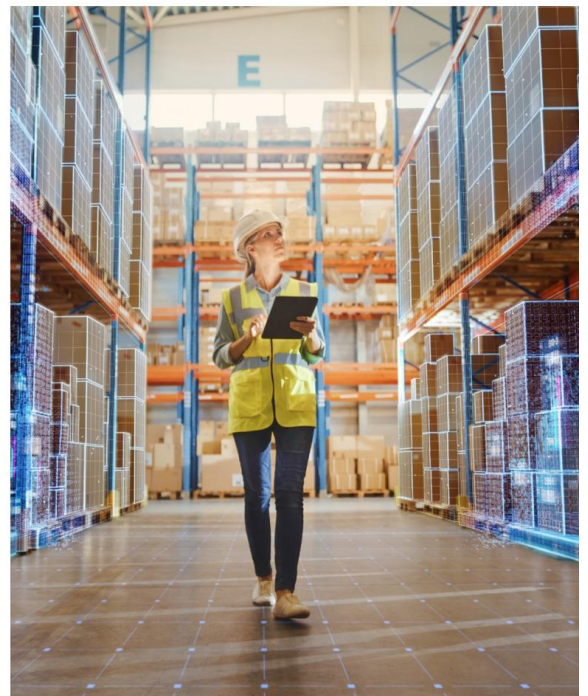
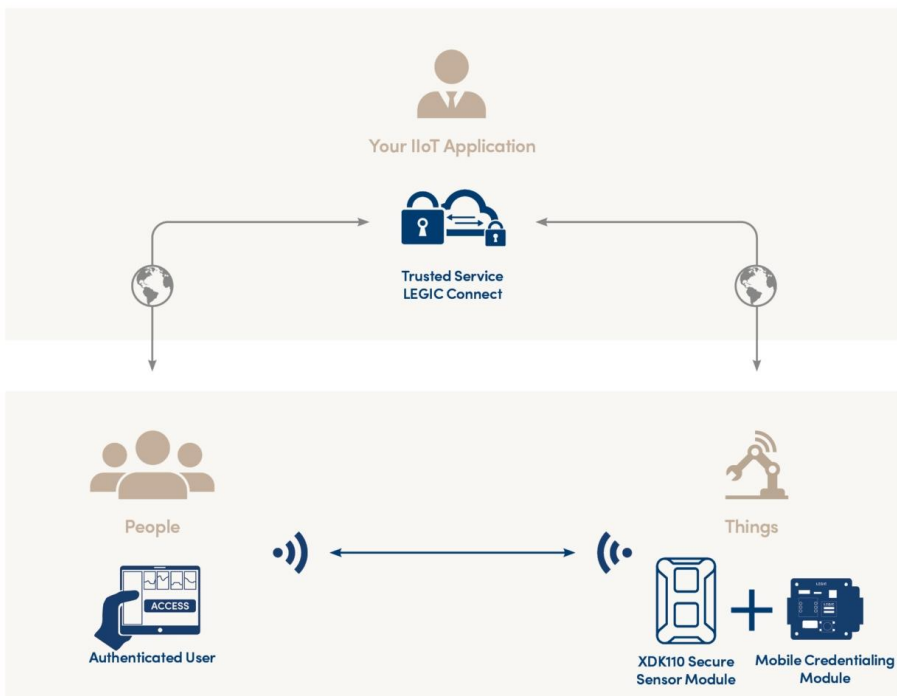


Based on Mobile Credentialing and Managed Encryption, LEGIC's Security Platform ensures your applications link verified users with trusted machines, sensors and assets.

The result: mobile interactions are secure, transparent, touchless and accountable.

For details, visit www.legic.com/iot.

Secure Human Interactions in a digital world



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