

Smart Lock Platform Comparison Report

A Side-By-Side Comparison of
TTLOCK vs. KORELOCK vs. TUYA



TTLOCK

vs



KoreLock®

vs



Date:

08 October 2026

Created by:

Robert Goff

VP Product and Co-Founder

KoreLock, Inc.

7100 E. Belleview Avenue, Suite 203

Greenwood Village, CO 80111 USA



Table of Contents

Introduction	03
The Short Answer	04
Platform Definition	05
Side-By-Side Comparison	06
Platform Deep Dive: TTLOCK	07
Platform Deep Dive: KORELOCK	08
Platform Deep Dive: TUYA	09
Renting vs Owning	10
Smart Home Ecosystem	11
How to Choose	12
Time to Market	12
The Bottom Line	12

Introduction

Which Smart Lock Platform Should Lock Manufacturers Choose?

Choosing a Smart Lock platform is about more than connecting a lock. It's about who controls your brand, customers, technology, and roadmap. This Smart Lock Platform Comparison Report compares TTLOCK, KORELOCK, and TUYA, across the key layers of smart lock technology – from hardware and firmware to cloud, security, apps, credentials, and access control.

The report explores a critical question for lock manufacturers:

Are you renting your technology – or building a connected lock business you control?

Read this side-by-side Smart Lock comparison report and find out which platform model fits your business.



Robert Goff
Vice President of Product, and
Co-Founder Korelock, inc.



The Short Answer

The choice comes down to two questions. How much of the product has to be shaped around someone else's hardware and roadmap, and who owns the customer once the lock is connected?



VS



VS



TTLOCK is a China-based platform that offers the fastest and lowest-cost path to a connected lock, as long as the lock gets designed around one of their off-the-shelf boards. It works with Alexa and Google Home. The catch: their locks are Bluetooth-only, so remote access, voice control, and automation all require TTLOCK gateway hardware, and the product lives inside a shared app and cloud the manufacturer does not control.

KORELOCK is a US-based platform that gives you a purpose-built OEM platform for lock manufacturers. Lock manufacturers who want to own their brand, customer relationships, and white-label mobile and web apps, and offer US-based management and commercial-grade access control, with a team to build custom features. The catch: KORELOCK is a platform partnership rather than a module purchase, and a typical project runs about six months to production-ready, most of it new board design for the manufacturer's own lock. KORELOCK offers the same "off-the-shelf" integration module model that TUYA offers, but in our experience, most projects need more custom design work.

TUYA is a China-based platform that has the strongest smart-home position of the three. TUYA holds Matter certification for a door lock, so the product appears natively in Matter ecosystems without a bridge, and its module model lets a manufacturer keep its existing board and MCU. That matters for a residential or short-term rental lock, and is largely irrelevant for an office door or a storage lock. The catch: locks are one category among thousands on a horizontal IoT platform, so credential depth, audit trails, and commercial account structures run shallower than a dedicated access platform, and with thousands of manufacturers on the platform, no single roadmap request carries weight.

Platform Definition

These are the Ten Layers of a Smart Lock Platform.

Before comparing, let's define what a platform includes. A complete smart lock platform spans ten layers:



And this is the conservative version. It doesn't count regulatory certification (FCC, CE, UL, Bluetooth qualification, and now cybersecurity requirements like the EU's RED), fleet lifecycle tooling for commissioning, support, and RMA, or the machinery behind recurring revenue: managing subscriptions, gating features by tier, and actually billing for it.

Keep this ten-layer Smart Lock platform feature list in mind, because TTLOCK, KORELOCK, and TUYA cover very different portions of it, and every layer a platform doesn't cover becomes your problem.

Side-By-Side Comparison Chart

DIMENSION	TTLOCK (China-Based)	KORELOCK (U.S.-Based)	TUYA (China-Based)
Built For	Companies targeting the crowded budget residential market	Lock manufacturers building a connected lock business	Smart-home device makers
Platform Coverage (of 10 layers)	Modules, firmware, cloud, shared app	All 10 layers, including reader hardware and factory tooling	Modules, cloud, app frameworks, ecosystem
Hardware Model	Design your lock around off-the-shelf TTLOCK board	Ready-made KORELOCK modules, or a custom board designed around your lock	Add a TUYA module to your existing hardware
Brand & Customer Relationship	Shared TTLOCK app; end users are platform users	Fully white-label apps; end users are manufacturer's customers	OEM app options on shared platform
Data Hosting	TTLOCK-operated cloud (China-based)	KoreLock AWS, dedicated AWS IoT instance available (US-based)	Tuya-operated cloud with regional data centers. (China-based)
Device Security	Varies by factory; no public disclosures	Secure boot, signed OTA, EAL 6+ secure element, mTLS	Module-level; consumer smart-home oriented
White-Label Mobile App	SDK or OEM app on TTLock infrastructure	Fully white-label lock brand-owned apps as default model	SDK or OEM app on Tuya infrastructure
Mobile & Wallet Credentials	Proprietary eKeys	Mobile keys, PIN, NFC/card, plus wallet credentials via partners	Ecosystem app credentials
Custom Feature Development	Roadmap outside of lock manufacturer's control	Nimble US team; customer-driven features	Enterprise-scale, slow-moving
Access Control Depth	Strong for rentals and residential	Commercial-grade multifamily, hospitality, SMB, enterprise	Consumer smart-home oriented
Smart-Home Ecosystem (Residential, STR)	Alexa and Google Home; gateway hardware required	Not a focus; API-driven integrations instead	Native Matter, certified
Property & Building systems (Multifamily, Commercial, Hospitality)	Rental-oriented features; limited beyond that	PMS, building automation, and partner APIs	Consumer smart-home oriented
Minimum Viable Volume	High-volume commodity economics	Built for long tail; 5-50k unit products viable	Scale-oriented
Engineering & Support	China-based	US-based, partnership model	China-based, scale-oriented
Time to market	Fastest, using an existing board design	6 months to production-ready, typically, incl. new board design	Fast, adding a module to existing hardware
Best For	Budget residential locks, STR channel	Lock brands serving commercial & emerging markets	Locks inside a smart-home lineup



Deep Dive

The TTLOCK Platform

TTLOCK (Sciener) is a vertical SaaS system based in China, built specifically for smart locks: PCBA and modules, the shared TTLOCK mobile app, a cloud API, and an SDK. Hundreds of lock factories ship TTLOCK-compatible hardware, which is why it dominates budget and mid-tier OEM projects and short-term rental deployments. Learn more: www.ttlock.com.



Strengths

- Near-zero software development.
- Fastest time to market, provided the lock is designed around an available PCBA
- Mature rental-oriented features (timed PINs, one-time codes, eKeys, gateways).
- Lowest cost of the three.
- Works with Alexa and Google Home.



Limitations

- Your product runs inside TTLOCK's app and cloud unless you fund SDK-based custom development.
- End users are TTLOCK's, not yours, and your reputation rides on a shared app you don't control.
- Your lock behaves like every other TTLOCK lock, so differentiation is minimal.
- Remote access, voice control, and smart-home bridging all require TTLOCK gateway hardware, because the locks themselves are Bluetooth-only.
- Every connected feature adds a second device to the bill of materials, a second SKU for the channel to stock, and a second product for support to troubleshoot.
- Measured against the ten layers, TTLOCK covers modules, firmware, cloud, and a shared app.
- Brand ownership, custom features, and commercial-grade account structures are out of reach.
- Building a SaaS revenue layer or an enterprise offering on top hits a ceiling fast.
- There is a transparency problem. In March 2024, CERT/CC published VU#949046 covering eight CVEs across Sciener's lock firmware, the Gateway G2, and the TTLOCK app, including encryption downgrade, non-unique AES keys, and unauthenticated firmware updates. The advisory records that CERT/CC received no statement from the vendor. We could not find a public customer list, infrastructure details, or security response process, which becomes a problem the first time a commercial buyer sends a vendor questionnaire.

Deep Dive

The KORELOCK Platform

KORELOCK is a turnkey US-based OEM platform built exclusively for lock manufacturers and access control providers. It covers all ten platform layers mentioned above. The design goal: a manufacturer converts its existing offline electronic locks into connected smart locks under its own brand, with its own customer relationships. Learn more: www.korelock.com.



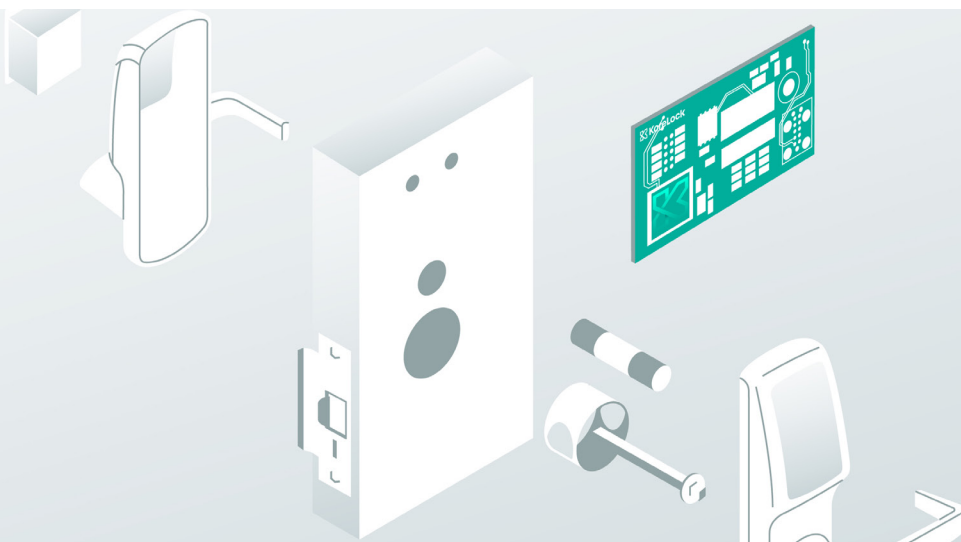
Strengths

- Built for the lock manufacturer business model.
- You own the brand, the app identity, and the customer relationship, along with the recurring revenue.
- Full credential stack: mobile keys, permanent, temp, and algorithmic PINs, NFC and cards, and web credentials.
- Wallet-grade mobile credentials come through specialist credential partners.
- Commercial-grade account hierarchies for multifamily, retail, SMB, and enterprise.
- Security that survives a buyer's review: secure boot with signed firmware, signed and verified OTA updates with rollback protection, hardware-backed key storage in a Common Criteria EAL 6+ certified secure element, TLS with mutual authentication and per-device certificates, and SOC 2-compliant AWS cloud infrastructure. Maps directly onto the EU RED cybersecurity requirements now mandatory for connected devices in Europe.
- Hosting runs on KORELOCK-operated AWS. Most customers use the shared multi-tenant environment; a dedicated AWS IoT instance is available if you need isolation, compliance, or data residency guarantees.
- Apple Wallet and Google Wallet support with wallet-grade mobile credentials through specialist credential partners, whose stacks are integrated into the platform. This gives partner products access to wallet credential capability without each product line needing its own multi-year ecosystem admission.
- US-based company offering the jurisdiction and support that North American commercial buyers require.
- Unlike the platform giants, KORELOCK builds custom features for its customers, including account-level security controls built to your requirements. New product roadmap requests actually ship.



Limitations

- Higher engagement than buying a TTLOCK board off the shelf. KORELOCK is a platform partnership, not a commodity module.
- If you only need a low-cost consumer lock with no brand strategy, TTLOCK is cheaper and faster.
- If your lock is primarily a smart-home accessory that needs deep Alexa and Matter integration out of the box, TUYA's ecosystem is hard to beat.





Deep Dive

The TUYA Platform

TUYA is a horizontal IoT platform-as-a-service based in China. Smart locks are one vertical inside an ecosystem spanning lighting, cameras, and appliances. It provides connectivity modules, cloud services, app frameworks (including OEM app paths), and integrations with Alexa, Google Home, and Matter. Learn more: www.tuya.com.



Strengths

- Native Matter support rather than a bridge. TUYA holds Matter certification for a door lock in the Connectivity Standards Alliance database, certified January 2025 and running Matter over Thread. For a lock that needs to appear in Matter ecosystems without additional hardware, this is a genuine advantage and the clearest reason to choose TUYA.
- Large ecosystem and smart-home interoperability, including Alexa and Google Home.
- A module model that lets a manufacturer keep its existing board and MCU rather than replacing them.
- A reasonable fit when your lock is one node in a broader smart-home portfolio.



Limitations

- Matter standardizes how a lock talks to a smart home, and stops there. It does not supply the commercial layers an access control business runs on: account hierarchies across properties and portfolios, audit trails a buyer's security team will accept, or property management system integration. Those stay the manufacturer's problem.
- Not lock-first. Credential hierarchies, audit requirements, and commercial account structures run shallower than dedicated access platforms, and reader hardware, factory tooling, and lock-specific QA are not what a horizontal platform does.
- With thousands of brand customers and enormous scale, customer-specific feature development is not the model. You adapt to TUYA, not the reverse.
- TUYA hosts North American and European data in regional AWS and Google Cloud data centers. But the platform is still owned and operated by a company headquartered in China, and in our experience, that ownership is a common objection from North American and European commercial buyers, especially on projects with security or procurement reviews.

The Strategic Question: Renting vs. Owning

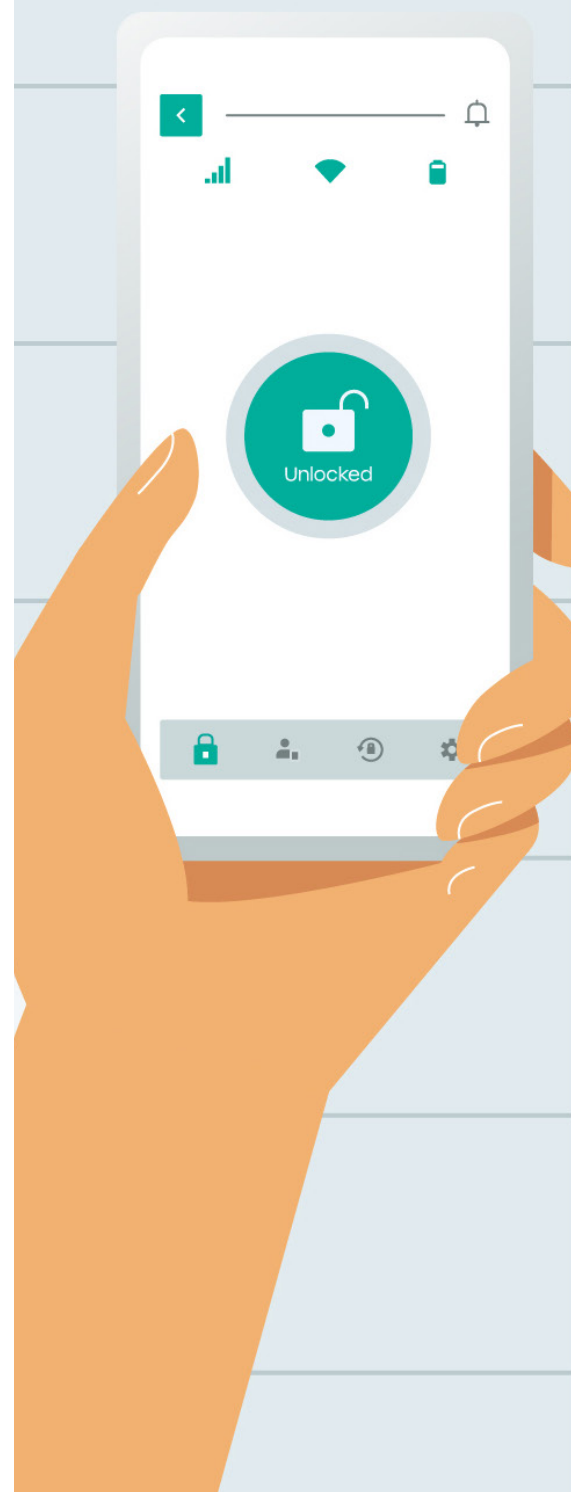
Manufacturers looking for a TTLOCK alternative usually name the same frustrations: the shared app, a roadmap they can't influence, B2B features they can't build. But the TTLOCK-vs-TUYA debate misses the real question. Both platforms answer: "how do I make my lock connected?" Neither answers the question that determines a lock manufacturer's next decade: who owns the customer relationship once the lock is connected, and who controls the roadmap?

On a shared-platform model, your end users are the platform's users, living in the platform's app. Your app-store presence is absent or a thin reskin. Subscription revenue flows to the platform, not to you. And when your channel demands a feature (an account-level security control, a PMS integration, a new credential type), you file a ticket into a roadmap serving thousands of other manufacturers.

Let's be fair about what the giants do well: volume. TTLOCK and TUYA power a large share of the world's OEM smart locks, and for commodity products at commodity prices, that scale is appealing. It's also beside the point. Scale is precisely why no single manufacturer's roadmap matters to them, and commodity volume is not what a brand building a commercial product line is buying.

KORELOCK hosts and operates the cloud, like any platform. The difference is what sits on top: white-label apps that make the end user your customer. The US-based KORELOCK engineering team builds customer-requested features on real timelines, with the option of dedicated infrastructure when a deal requires it. You're not renting a generic platform. You're building your product on a platform that adapts to you.

That distinction matters most in multifamily and commercial channels, where buyers ask about jurisdiction, security certifications, long-term support commitments, and PMS integration. It's why "TTLOCK ceiling" stories are common: businesses launch quickly on a shared platform, then discover they can't build the B2B offering their channel is asking for.



The Tactical Question: Does Your Lock Need to Live in a Smart Home Ecosystem?

Start with one question: is this lock going on a residential front door? If yes, this section decides your platform. If not, don't worry about Matter.

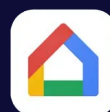
Matter, Alexa, Google Home, and Apple Home matter when the person using the lock is a consumer in their own home. That is the residential front door, and short-term rentals by extension. At every other door, a business manages access for other people, and the lock has to work with the software that business already runs: an access control system for an office or warehouse, a property management system for a hotel or an apartment building. Nobody is adding a warehouse or a hotel room door to Apple Home.

The question is not whether a platform supports Matter. It is which system your lock has to talk to: a homeowner's phone, or the software a business runs its building on.

A platform built for the first is not automatically good at the second. The second needs credential hierarchies, audit trails, and account structures that span a portfolio. This may not hold forever. The Connectivity Standards Alliance said in August 2026 that it is broadening Matter beyond the smart home into commercial buildings, though the categories it named were lighting, occupancy, energy, and environmental controls rather than locks. Access control is being standardized separately, under Aliro. For now, Matter's lock story is a residential one. The expectation of connectivity did follow the lock off the front door, into offices, warehouses, cabinets, gates, and storage. The expectation of ecosystem membership did not. The residential front door is also the most crowded category in the industry, with every major lock brand, a long list of consumer entrants, and page after page of white-labeled commodity locks competing on the same ecosystem features. Every other door is less contested. A manufacturer building its product around Matter support is competing in the saturated half of the market. The volume economics section in the side-by-side comparison chart picks up on this thread.



Amazon Alexa



Google Home



Apple HomeKit



Samsung
SmartThings



Which Platform Should You Choose?

Rent vs. Own

Are you renting your technology, or building a connected lock business you control? See the side-by-side comparison chart of TTLOCK vs. TUYA vs. KORELOCK and find out which platform model fits your business.

Time to Market

How long does it take to launch on each Smart Lock platform? TTLOCK claims it only takes a couple of months, using off-the-shelf boards and the shared app. TUYA advertises that projects take only a couple of weeks. However, in both cases, it likely takes the manufacturer more time to accommodate and change their product to fit their off-the-shelf PCB options. KORELOCK also has an off-the-shelf module that any manufacturer can implement into their lock. Most often, however, KoreLock customers opt to have KoreLock design a custom board that fits their existing product. In this case, KoreLock takes a project from start to production-ready in about six (6) months. 75% of this effort goes to new board design and prototyping, with 25% to custom firmware modifications to meet specific product needs.

The Bottom Line



For a factory shipping budget residential locks at volume, choose **TTLOCK** for the lowest cost and fastest time to market.

For a brand where the lock is one node in a smart-home lineup, choose **TUYA** for ecosystem reach and certified Matter support.

For a lock manufacturer building a connected product line it intends to own, choose **KORELOCK** for brand, customer relationships, revenue, and roadmap control, especially for commercial doors and niche segments the giants will not touch.

KoreLock, Inc.

7100 E. Belleview Avenue, Suite 203
Greenwood Village, CO 80111 USA
303.681.5785
support@korelock.com