

Smart Lock Platform Comparison Report 2026

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



TTLOCK

vs



KoreLock®

vs



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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 the 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 right choice comes down to how much of your product you're willing to let someone else control.



TTLOCK

VS



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VS



Platform Overview

TTLOCK is a China-based platform that gets you to market at the lowest cost because of its one-size-fits-all model and because you're renting your product's brain. Your lock runs on a shared app, a shared cloud, and a roadmap you don't control. www.ttlock.com.

Platform Overview

KORELOCK is a US-based Smart Lock platform that gives you a purpose-built OEM platform for lock manufacturers who want to own their brand, customer relationships, and white-label mobile and web apps. It offers US-based management and commercial-grade access control, with a team to build custom features. www.korelock.com.

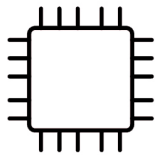
Platform Overview

TUYA is a China-based platform that gives you a massive smart-home IoT ecosystem. But locks are one product category among thousands, and your access control product inherits a consumer smart-home architecture rather than one built for security. www.tuya.com.

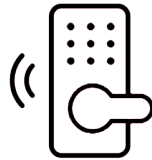
Platform Definition

These are the Ten Layers of a Smart Lock Platform.

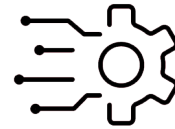
Before comparing, let's define what a platform includes. A complete smart lock platform spans ten layers:



1.
Embedded Lock
Hardware



2.
Reader
Hardware
NFC and Card Readers,
Keypads, QR Scanners,
Bluetooth



3.
Lock
Firmware



4.
Cloud
Infrastructure
With a Digital Twin
Per Device



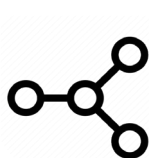
5.
Credential
Ecosystem
Including Mobile Keys
and Wallet Credentials



6.
Device and
Cloud Security



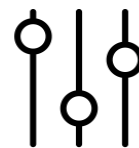
7.
OTA Update
Management



8.
Partner
Integration APIs



9.
White-Label Web
and Mobile Apps



10.
Factory Tooling &
QA Test Systems

And that's 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)	KORELOCK (U.S.)	TUYA (China)
Built for	Lock factories needing instant software	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/QA tooling	Modules, cloud, app frameworks, ecosystem
Brand & customer relationship	Shared TTLOCK app; end users are TTLOCK users	Fully white-label apps; end users are lock manufacturers users	OEM app options on shared platform
Data hosting	TTLOCK-operated cloud (China-based company)	KORELOCK-operated cloud on AWS (US-based company); dedicated AWS IoT instance available	TUYA-operated cloud (China-based company)
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	Offers SDK or OEM app paths, but built on TTLOCK's infrastructure and account architecture	Fully white-label, lock brand-owned apps are the default model: the lock brand's end users are their customers, not KORELOCK's	Offers SDK or OEM app paths, but built on TUYA's infrastructure and account architecture
Mobile & wallet credentials	Proprietary eKeys	Mobile keys, PIN, NFC/card, plus wallet credentials via specialist 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	Limited without bridges	API-driven; PMS and building-automation focus	Excellent (Alexa, Google, Matter)
Minimum viable volume	High-volume commodity economics	Built for the long tail; 5-50k unit products are the business model	Scale-oriented
Engineering & support	China-based	US-based, partnership model	China-based, scale-oriented
Time to market	Fastest	6 months to production-ready (typically)	Fast
Best for	Budget consumer locks, STR channel	Lock brands serving commercial & residential for lock manufacturers that want to own the product	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: PCBAs 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.
- Fast time to market.
- Mature rental-oriented features (timed PINs, one-time codes, eKeys, gateways).
- Very low cost.



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. (Its public app-store ratings are worth reading before you commit your brand to it.)
- Your lock behaves like every other TTLOCK lock, so differentiation is minimal.
- 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's a transparency problem: Sciener, the private Chinese company behind TTLOCK, publishes no customer, infrastructure, or security-response disclosures. Security researchers who reported vulnerabilities in Sciener firmware through a 2024 CERT coordination process noted the absence of a public vendor response.

Deep Dive The KORELOCK Platform

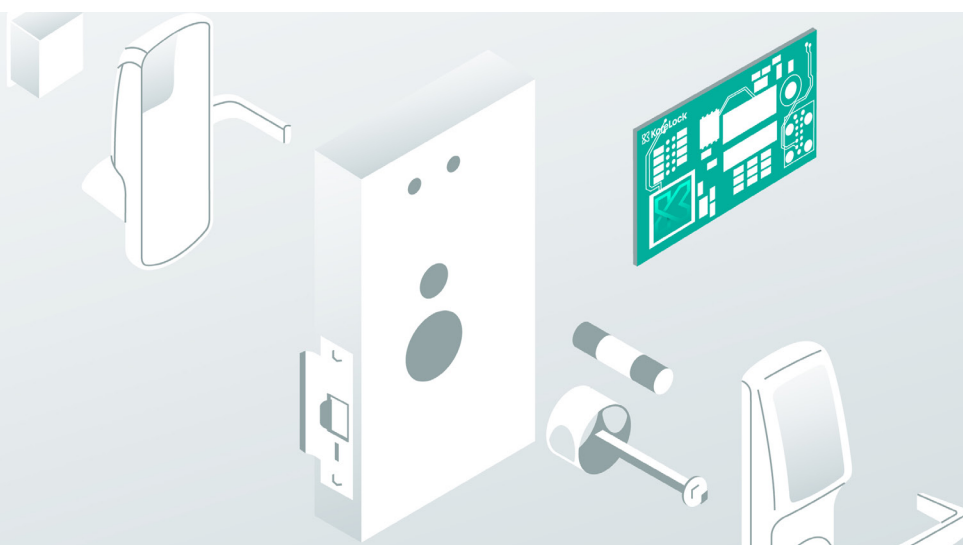
KORELOCK is a turnkey US-based OEM platform built exclusively for lock manufacturers and access control providers. It covers all ten platform layers mentioned above. The design goal: a manufacturer converts its existing offline electronic locks into connected smart locks under its own brand, with its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

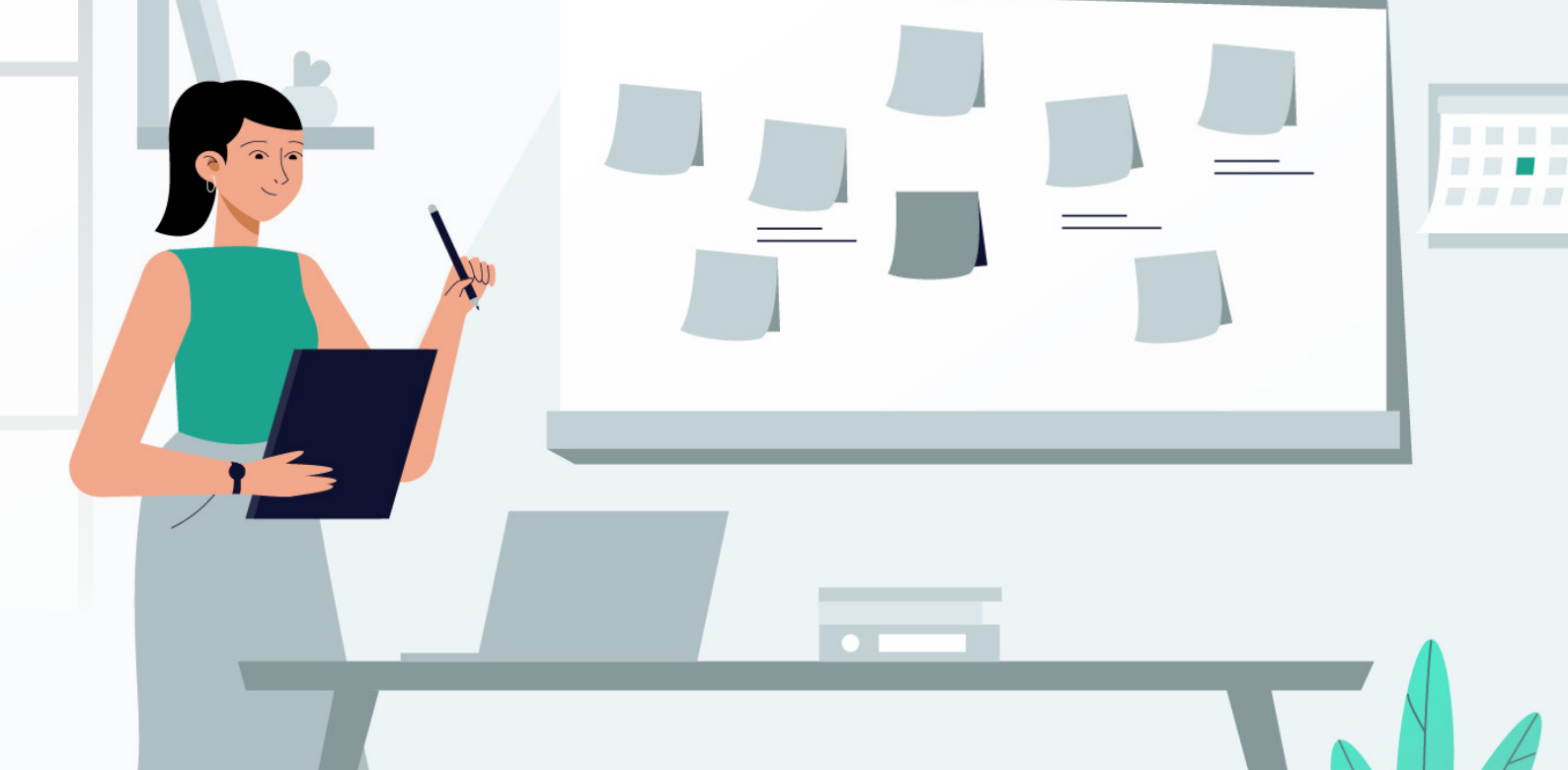
Strengths

- 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.
- 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

- Large ecosystem and smart-home interoperability
- A reasonable fit when your lock is one node in a broader smart-home portfolio



Limitations

- 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 aren't what a horizontal platform does.
- At 100,000+ manufacturers and enormous scale, customer-specific feature development isn't the model. You adapt to TUYA, not the other way around.
- Platform jurisdiction is a common objection from North American and European commercial buyers.

The Strategic Question: Renting vs. Owning

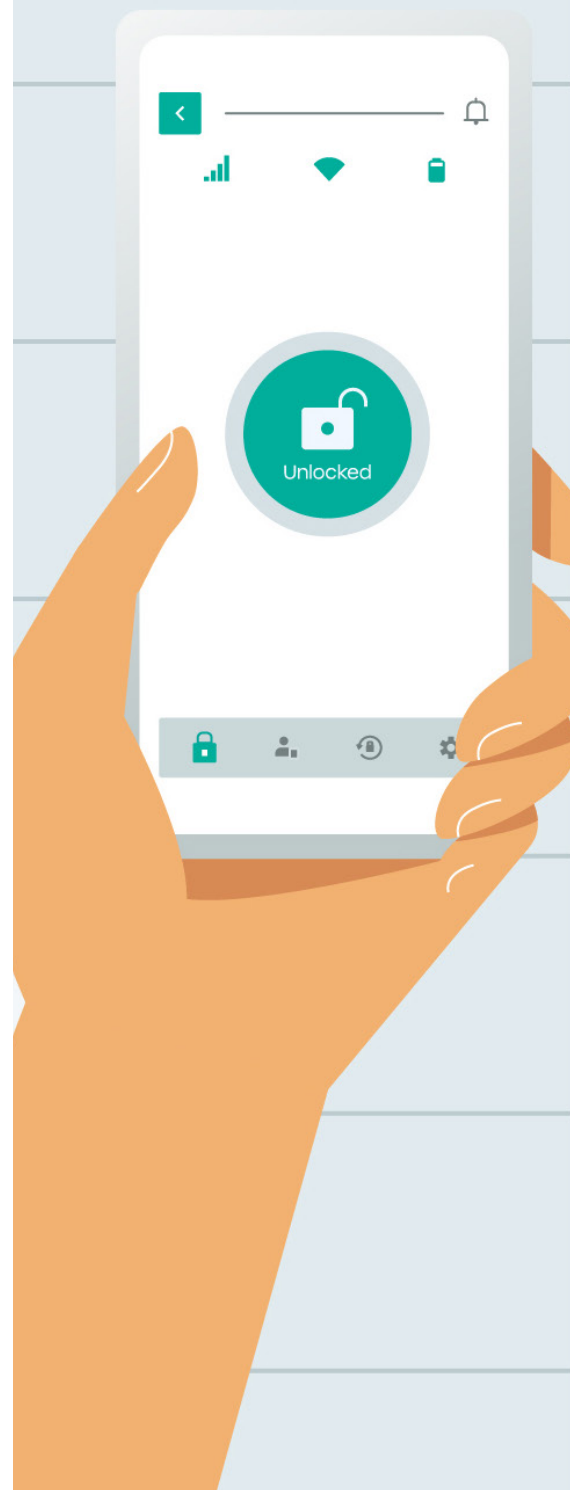
Manufacturers looking for a TTLOCK alternative usually name the same frustrations: the shared app, a roadmap they can't influence, B2B features they can't build. But the TTLOCK-vs-TUYA debate misses the real question. Both platforms answer: "how do I make my lock connected?" Neither answers the question 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 a hundred thousand 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.



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.

The Volume Question

There's one more axis worth naming. TTLOCK's economics assume commodity volume; TUYA's assume ecosystem scale. Neither model is built for the niche product: the connected cabinet lock, gate latch, or storage lock forecasting 5-50k units a year. Consumers expect connectivity in those form factors now (the expectation followed the lock off the front door), but the big platforms and the big lock brands alike can't justify serving them.

That long tail is specifically what KORELOCK was built for. Because the full ten-layer platform already exists and is amortized across many products, a 50k-unit niche product isn't a rounding error. It's the business model. If your product lives in a niche the giants ignore, that's not a reason to settle for a commodity platform. That's why a purpose-built one exists.

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 projects typically run a few months. 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

Which Smart Lock technology platform should a lock manufacturer choose? For a factory shipping budget consumer locks at volume, choose TTLOCK. For a brand where the lock is one node in a smart-home lineup, choose TUYA. For a lock manufacturer building a connected product line it intends to own (brand, customer relationships, revenue, and roadmap), especially in the niche segments the giants won't touch, choose KORELOCK.

KORELOCK, Inc. is a B2B IoT Smart Lock technology platform for lock manufacturers and access control providers, offering embedded firmware, PCBAs, white-label mobile and web apps, and cloud SaaS.

Learn more at korelock.com.



