eMbox

Delivered at your door. Read in private.

eMbox — Complete Product Brief

June 2026 · Patent Pending · Pre-launch · Waitlist Open

https://embox-site.pages.dev

Executive Summary

eMbox is a secure digital delivery anchor for official mail — banks, government, healthcare, insurers, utilities, and courts — cryptographically bound to your physical street address. Unlike email, it proves delivery to your home. Unlike FedEx or DHL, it is not parcel logistics — it is certified mail for the digital age. Unlike a traditional mailbox, it never exposes document content outdoors. Only enrolled, verified senders can deliver — eliminating marketing solicitation and phishing from the official channel. Your personal email stays for people; institutions use eMbox. App-only plans mean nobody has to know you upgraded (no curb billboard required). The optional Home Vault shows glance-only status at the door. You retrieve on your phone and read privately indoors. Six US provisional patent applications protect the protocol stack. Target: replace certified paper mail ($10.48+/letter) with certified digital delivery ($2.50–$4.00/sender) while eliminating mailbox theft, porch ID-card theft, and missed legal deadlines. Gulf expansion: Qatar (Hukoomi, Tawtheeq, Tasdeeq) and Saudi Arabia (Vision 2030 — 11 PIF giga-projects, ROSHN, Diriyah, Qiddiya, Absher/Nafath) digitize identity and smart-city ICT but lack certified delivery to the household national address. eMbox closes that last mile — bilingual EN/AR, SPL/QID binding, sender pilots via MCIT, DGA, and smart-community handovers. See /global#qatar and /global#ksa.

Problem Statement

Official mail is still physical in a digital world — and nothing at your door was built to receive it safely.

The last mile of official communication is stuck between paper mail that exposes and loses sensitive documents, and digital channels that cannot prove delivery to a street address.

50% First-Class Mail volume drop since 2008 (USPS OIG)	**$10.48+** Cost per certified letter (USPS 2025)
$12.7B Mail-related identity theft losses (2024 FTC est.)	**0** Digital receivers at US homes for certified official mail

Mailbox = public exposure

- Window envelopes advertise senders to the street
- Checks and cards sit unattended for days
- Thin metal boxes defeated in seconds
- No theft alerts or delivery receipts

Privacy failure

- Medical, financial, legal content visible before opening
- No glance-only outdoor layer
- Paper enters home as interceptable object

Sender cost & legal gap

- Banks spend $3–10+ per certified statement
- Law requires address proof — email insufficient
- No chain-of-custody from sender to household

The eMbox Solution

Core idea: A secure delivery anchor at your physical address — not an outdoor reader. Retrieve on your phone. Read in private.

Key capabilities

- Address-bound vault — payloads tied to GPS, street, device serial
- Glance-only outdoor UI — count, sender, urgency; never document body
- Retrieve on phone — read indoors; optional print after retrieve
- Sender-verified allowlist — institutions only; anti-phishing
- Cryptographic receipts — sent → secured → retrieved → read
- Theft-resistant — encrypted vault worthless if stolen

Delivery flow

1. Sender (bank, IRS, doctor) signs document via Certified API
2. Cloud validates address token and routes to home vault
3. Device secures encrypted payload; outdoor display shows metadata only
4. You glance at door — see Bank · 1 new · Urgent
5. Tap phone at door — retrieve-or-acknowledge handshake
6. Read privately on phone or desktop; export affidavit if needed

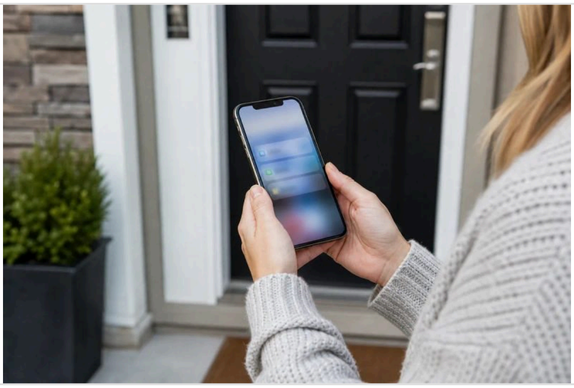
Product Video Tour (Poster Frame)

6-scene product tour: hero, kitchen, office, home, security, product — available at https://embox-site.pages.dev/demo

Product & Placement

Address-bound official mail at home

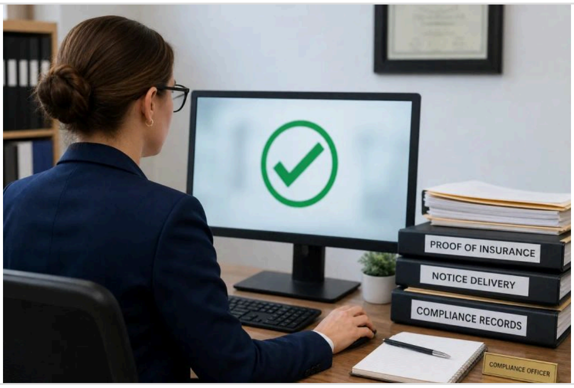
Optional Home Vault — glance-only outdoors



Retrieve at door on phone

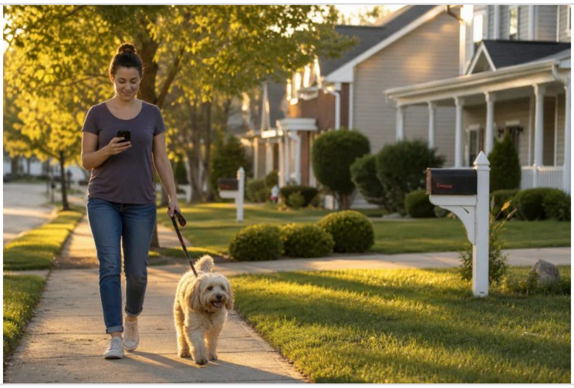
App-only — no hardware on curb

Problem: unlocked mailbox vs secure vault



Delivery receipt & affidavit export

Blocks marketing & solicitation



Discreet — app-only adoption

Use Cases

Banks & financial

Documents: Statements, cards, fraud alerts, 1099s, loan disclosures

Why it matters: Mail theft drives check fraud; certified paper costs billions

Government & IRS

Documents: Tax notices, benefits, jury summons, DMV

Why it matters: Missed notices → penalties; certified mail is slow and expensive

Healthcare

Documents: Lab results, EOBs, prescription notices

Why it matters: HIPAA-sensitive paper in unlocked boxes

Insurance (5 lines)

Documents: Quotes, HO renewals, COIs, health EOBs, BOP/WC — multi-line, health, commercial, homeowners, small business

Why it matters: ID cards stolen from porch; quotes in spam; agencies need cancellation proof

Utilities & telecom

Documents: Bills, shutoff warnings, outage alerts

Why it matters: Time-sensitive warnings buried in junk mail

Legal & courts

Documents: Summons, contracts, certified correspondence

Why it matters: Process servers cost $75–200; need address proof

Property & HOAs

Documents: Lease notices, assessments, violation letters

Why it matters: Community-wide digital delivery without paper slips

Aviation (full stack)

Documents: Passenger passes & IROP; flight bills; SITA-class ops copies; cargo AWB; MRO/AD; crew; charter; GA; customs

Why it matters: One certified address vault for passenger and operator mail — complements gate and SITA networks, does not replace them

Qatar — government & Gulf senders

Documents: MOFA attestation, Hukoomi notices, bank/regulatory letters, QIC policies, HMC/Lbaih, aviation crew mail

Why it matters: 74%+ services online; Qatar Post still delivers MOFA docs — no address-bound digital receiver at villa compounds

Saudi Arabia — smart cities & government

Documents: Absher notices, Qiwa labour letters, Ejar leases, ROSHN handover packs, ZATCA, Sehhaty, giga-project workforce mail

Why it matters: 11 PIF smart-city programs wire ICT and SPL addresses — no certified official-mail layer at the unit door

Patent Portfolio (US Provisional — Pending)

Six patent families filed 2026 · 18+ protected claim areas · US primary · PCT expansion planned.

Address-Bound Secure Delivery Vault (P0)

Home vault accepting payloads only when cryptographically bound to street address, GPS, and device identity — legally attributable delivery without outdoor content exposure.

- Digital address token binding payload hash to geolocation and serial
- Dual-anchor receipt with secure-element attestation + geofenced retrieve
- Signed chain-of-custody ledger from sender KMS to user device
- Automatic rejection of payloads failing address-chain verification

Retrieve-or-Acknowledge Legal Delivery Protocol (P1)

Legal equivalence to physical mail via biometric or phone retrieve at the secured address, with jurisdiction-aware notice rules and court-exportable proof.

- Retrieve-or-acknowledge trigger at delivery anchor
- Statutory notice classifier for jurisdiction-specific rules
- One-tap affidavit export with secured/retrieved metadata
- Deferred reading without invalidating delivery timestamp

Hardware-Rooted Sender Trust & Anti-Phishing (P0)

Only institution-signed payloads enter the vault; outdoor display shows sender identity without content; first-time senders enrolled via postcard ritual.

- Hardware-rooted allowlist rejecting unsigned senders
- Sender glance glyph from certificate hash
- Postcard enrollment bridging paper trust to digital root
- Priority routing never elevates unverified senders

Glance-Only Outdoor Privacy Interface (P0)

Outdoor display shows status, urgency, and sender category — never document bodies, titles, amounts, or account numbers.

- Content-free status: count, category, urgency only
- Urgency encoding via border patterns without text
- Phone-first retrieve via NFC, BLE, or biometric
- Firmware rule preventing full document render outdoors

Multi-Tenant Household Vault Architecture (P1)

Partitioned namespaces per resident, expiring capability tokens for delegates, duress PIN for coercion scenarios.

- Per-resident vault partitions by sender metadata
- Expiring capability tokens for delegated retrieve
- Duress PIN showing benign status while alerting contact
- Household policy engine for cross-partition access

Physical Tamper Response & Resilience System (P2)

Accelerometer key zeroization, tamper broadcast to senders, multi-unit mesh for apartments, hybrid drawer for physical items.

- Tamper zeroization on enclosure break or motion anomaly
- Sender tamper broadcast on physical compromise
- Multi-unit store-and-forward with per-unit keys
- Hybrid secure drawer for physical items

IP strategy

- Defense in depth — six overlapping families from sender KMS to phone retrieve
- Privacy by architecture — hardware-enforced glance-only outdoor boundary
- Legal delivery moat — retrieve-or-acknowledge + statutory notice positioning
- Platform licensing — Certified API for banks, government, utilities

Why Not Email, FedEx, or Marketing Mail?

Couriers track parcels — they do not deliver certified bank, IRS, or insurer notices with address proof.

Capability	Email	eMbox
Tied to home address	No	Yes
Verified senders only	No	Yes
Blocks marketing solicitation	No	Yes
FedEx/DHL official digital mail	No	No — parcels only

Clean inbox

- Allowlist-only vault — no lead gens or fake cancellation emails
- Official mail leaves Gmail; email for people again
- App-only: discreet from neighbors; optional hardware later

Technology Walkthrough (7 Steps — Cinematic)

1. **Sender hits send** — First National Bank → 123 Main St
   Your address — not your inbox — is on the envelope.
   Bank signs statement with institution key via Certified API. Payload includes digital address token binding device and street address.

2. **Cloud validates & routes** — Address chain verified
   Fake senders and marketers stop here.
   Platform checks sender cert, address token, device registry. Mismatch = rejected. Payload encrypted AES-256-GCM.

3. **Secured in home vault** — Encrypted at your address
   The porch never sees your account number.
   Vault accepts encrypted payload. Outdoor display gets metadata only — never document body.

4. **Glance at the door** — Bank · 1 new · Urgent
   You know the bank came — not your balance yet.
   Content-free outdoor UI: sender category, count, urgency. No amounts, names, or document titles visible from street.

5. **Retrieve on your phone** — NFC / BLE / biometric at door
   This tap is proof at your address.
   Phone handshake at anchor point. Retrieve-or-acknowledge records legal delivery timestamp.

6. **Read in private** — Indoors on phone or desktop
   Privacy where you live.
   Full document on trusted device only. Optional indoor print after retrieve. Deferred reading allowed.

7. **Proof on demand** — Court-exportable affidavit
   The bank gets yes — with timestamps.
   One-tap export: sent → secured → retrieved → read chain with institution signatures.

Interactive demo with photography: https://embox-site.pages.dev/demo

vs Traditional Mailbox

Traditional mailbox vs eMbox

Feature	Traditional	eMbox
Secured to physical address	Yes (paper)	Yes (cryptographic)
Document readable from street	Yes — window envelopes	No — glance metadata only
Tamper-resistant vault	Partial — thin metal	Yes — encrypted + tamper-aware
Encrypted until retrieve	No	Yes
Sender identity verified	Partial — anyone can drop mail	Yes — institution allowlist
Delivery proof included	Partial — $10+ certified	Yes — default
Read privately indoors	No — paper carried inside	Yes — phone-first
Theft = data breach	Yes — checks, cards exposed	No — encrypted vault worthless

Real-world scenarios

The stolen check (Retiree, suburban home)

Traditional: Tax refund check visible through window envelope. Stolen from box overnight. $4,200 forged before bank notice.

eMbox: Glance shows Bank · 1 new. Retrieve on phone indoors. Check details never visible outdoors. Encrypted if device tampered.

The missed court notice (Small business owner)

Traditional: Summons buried in junk mail. Default judgment because notice never opened in time.

eMbox: Urgent flag on outdoor display. Push to phone. Statutory notice classifier ensures deadline visibility.

The medical result in the rain (Family of four)

Traditional: Lab results soaked in unlocked box. HIPAA-sensitive content destroyed — and exposed to neighbors.

eMbox: Healthcare sender verified. Metadata only outdoors. Full results retrieved privately on phone.

Innovation Stack

- Digital address token — GPS + street + device serial binding
- Dual-anchor receipt — secure element + geofenced retrieve
- Chain-of-custody ledger — append-only sender-to-user audit trail
- Hardware-rooted allowlist — anti-phishing by architecture
- Sender glance glyph — identity without content on outdoor display
- Postcard enrollment ritual — paper trust → digital root of trust
- Statutory notice classifier — jurisdiction-aware delivery rules
- One-tap affidavit export — court-ready proof bundles
- Multi-tenant household vaults — per-resident partitions
- Duress PIN mode — coercion-safe empty status
- Tamper zeroization — key wipe on physical compromise
- ESG metering API — CO_2 avoided vs paper baseline

Pricing (Founding Member — Indicative)

Consumer

Plan	Founding price	Notes
eMbox App (mobile only)	$6/mo founding · $59/yr	No hardware — cloud vault + phone
Digital Pro (mobile + desktop)	$9/mo founding · $99/yr	Windows, Mac, web + household profiles
Home Vault	$249 device + $9/mo founding	Full address anchor + glance display
Vault + Indoor Hub	$399 device + $12/mo founding	Indoor companion + optional print

Senders (B2B)

Tier	Price	
Certified Send	$3.49/delivery	
Volume (10k+/mo)	$1.89/delivery	
Enterprise	Custom platform + KMS integration	

Digital-only plans available for users who don't want hardware. Home Vault adds physical address anchor + glance display.

Engineering & Build Plan

Technology stack

Layer	Choice
Cloud	Cloudflare Workers + D1 + R2
Phone	Expo React Native (iOS, Android, Web)
Device sim	Node.js vault (pre-hardware MVP)
Crypto	Ed25519 / X25519 + AES-256-GCM
Sender SDK	OpenAPI + TypeScript

Phased roadmap

- Week 1: Protocol + crypto packages
- Weeks 2–3: Cloud API
- Weeks 3–4: Device simulator
- Weeks 4–6: Phone app
- Weeks 6–8: Sender Certified API
- Future: ESP32 hardware, e-ink, NFC, secure element

Buildability: Core P0 protocol is implementable with known crypto patterns. Software MVP in ~8–10 weeks; hardware follows.

Business & Platform

- eMbox Certified API — bulk send with webhooks
- Sender verification network — enroll once, anti-phishing
- HOA & property managers — community notices
- ESG metering API — CO_2 avoided vs paper baseline

Product Roadmap

- Indoor print module
- Indoor companion display
- Household profiles & away mode
- Insurance agency + carrier pilots (all five LOB niches)
- Software-only scale before hardware SKU
- USPS last-mile handoff
- Phone-side AI summarization (after retrieve only)
- Qatar sender pilot — MCIT / Hukoomi + Tasdeeq delivery layer
- KSA ROSHN or Diriyah smart-community handover pilot
- GCC statutory classifiers — Arabic/English bilingual metadata

Gulf Expansion — Qatar & Saudi Arabia

Gulf expansion — Qatar & Saudi Arabia

Qatar

Tasdeeq verifies authenticity; eMbox proves delivery to registered address

Stats: 74%+ online services · 2,300+ Hukoomi services · ~88% expat households

Senders: MCIT, MOFA, QNB, QIC, MATAR, Hamad Medical

embox-site.pages.dev/global#qatar

Saudi Arabia

Smart-city ICT automates buildings; eMbox proves certified mail reached SPL address

Stats: 96% e-gov maturity · 28M+ Absher identities · 11 PIF giga-projects · 300K+ ROSHN units

Senders: DGA, Absher, SNB, Al Rajhi, ROSHN, Diriyah, Qiddiya, NEOM

Smart cities: ROSHN, Diriyah Gate, Qiddiya, NEOM, Red Sea Global, New Murabba, KAFD

embox-site.pages.dev/global#ksa

GCC corridor: PK ↔ QA ↔ SA ↔ AE — one protocol, bilingual statutory classifiers

Download: https://embox-site.pages.dev/documents/eMbox-Gulf-Markets-Qatar-KSA.pdf

Next Steps

- Join waitlist at https://embox-site.pages.dev for founding member pricing
- Interactive demo: https://embox-site.pages.dev/demo
- Full problem analysis: https://embox-site.pages.dev/problem
- Patent details: https://embox-site.pages.dev/patents
- Sender partnerships: contact via waitlist
