

A self-hosted, end-to-end-encrypted messenger, localized for everyone.

F1Whisper is a clean, minimal fork of Threema for Android, repointed to a fully independent backend — no Google services, no central directory, no contact graph.

Open Source

End-to-End Encrypted

Reproducible CI Builds

29 Languages

Reviewers Welcome

🔗 Demo server: thm.f1tech.info ● Live · latest release v6.4.3-18

You 🔒



relay server



🔒 Peer

— 01 - OVERVIEW

What F1Whisper is

The goal is a private, high-performance, end-to-end-encrypted messenger that depends on **no third-party infrastructure**. Beyond that, F1Whisper sets out to deliver **first-class right-to-left support, localization into many more languages**, and a **richer UI and user experience** — adding the genuinely-missed features users already know from other well-known messengers such as Telegram.

All cryptography runs client-side via the shared Rust protocol core (`libthreema`); our backend simply routes sealed envelopes.

Base	Threema for Android, upstream 6.4.3 (build 1148)
License	AGPL-3.0 (same as upstream)
Release line	v6.4.3-1 → v6.4.3-18 (latest)
Scope of change	455 files · +26,835 / -3,945 lines · 25 new source files

Design principle

Thin, auditable rebrand layer — protocol gaps fixed server-side, never worked around in the app

— 02 — OPENNESS & REPRODUCIBILITY

Verifiable, not just visible

- ✓ **Fully open source** on GitHub — every line of the client is public.
- ✓ **APKs are genuinely built from the published source** by GitHub Actions on every v* tag — not hand-built and uploaded. What you read is what you run.
- ✓ **Signed releases** with a hardened pipeline: SHA-pinned Actions, clean keystore handling, and APK Signature Scheme v3.
- ✓ **arm64-only build option** ships a ~44% smaller APK (~41 MB vs ~73 MB).
- ✓ **In-app self-updater** pulls signed releases directly from GitHub.
- ✓ **Reviewers are welcome.** Clone, build, diff against upstream, or audit the CI artifacts. Issues and security reports are encouraged.

NOTE TO SECURITY RESEARCHERS

The **server** has completed a professional pre-deployment security audit and hardening pass. The **client** fork is intentionally a thin, minimal layer over audited upstream Threema code, and is **open for independent community review** — this is part of that invitation.

— 03 — CLIENT ACHIEVEMENTS

What we added & improved

🌐 Localization — a first-class feature

Full, professional localization across **29 shipped locales** with correct right-to-left rendering. **Every new string is translated into all 29 locales before it ships** — English-only is not accepted as “done.”



RTL (●) covers Arabic, Farsi, Urdu & Uyghur — mirrored bubbles, avatars, reactions & input. Plus a pre-authentication language picker.

🛡️ Privacy & anonymity

Anonymous setup Onboarding wizard stripped of phone number, email, and contact sync.

No contact permissions READ_CONTACTS removed; full device-contacts removal supported.

Single activation key One field to redeem a single key, one per device — no personal data collected.

No contact discovery No identity/hash upload, no social graph — by design.

Share by ID Share your bare F1/Threema ID directly.

Connectivity & push (no Google)

Google-free push	Persistent F1 Push with FCM/GMS fully stripped from the on-prem APK.
Reconnect deep-fix	Recovers from stuck-disconnected states after sleep, network change, or VPN switch.
Editable server	Server endpoint is user-configurable.
Battery exemption	One-tap battery-optimization allowance to keep delivery reliable.

Messaging features

Reaction notifications	Notifications for reactions, with tap-to-jump to the message.
Rich text	Monospace code and tap-to-reveal spoilers (obscured in notifications too).
Media spoilers	Blur + tap-to-reveal for images/videos, re-hidden on chat exit.
Scheduled messages	Local scheduling with reboot re-arm, a day/hour/minute wheel picker, and a manage UI.
Listen-once voice	Burn-after-listening voice messages (1:1 and groups).
Group typing & details	Live typing indicators plus per-member “Read by / Delivered to / Sent to.”
Chat folders	Local folders with filter chips and a manage view.
Backgrounds & color	15 gradient chat backgrounds and Material You dynamic color, on by default.
Profile-picture broadcast	Avatar changes pushed to all permitted contacts.

— 04 — SERVER

Public capability summary

We built our own independent, self-hosted backend that speaks the full Threema client contract. It is **live** as a public demo and is a **high-quality, professionally security-audited and hardened product, ready for review and testing.**

1:1 text messaging

● Supported

Voice messages, images, files (encrypted media)

● Supported

Delivery & read receipts

● Supported

Message editing & reactions

● Supported

Group messaging

● Supported

Forward Secrecy (PFS)

● Supported

Encrypted backup & restore of ID (Threema/F1 Safe)

● Supported

1:1 voice & video calls (TURN)

● Supported

Group calls (SFU)

● Not yet implemented

Desktop / multi-device

● Not yet implemented

In short: the server supports every option except group calls and desktop/multi-device. It is independent of threema.ch, runs on a hardened native deployment, and never has access to message plaintext.

— 05 — GET INVOLVED

How to review

01

Read the code — github.com/Mon-pub/F1Whisper

02

Verify the build — inspect the GitHub Actions release workflow, or build the APK yourself and compare against the CI artifact.

03

Test against the live demo — point the app at thm.f1tech.info.

04

Get a key — free activation keys for testing at shop.thm.f1tech.info.

05

Report findings — open an issue or a security report on the repository. We welcome reviewers.

Built with a security-first, high-quality minimal-changes reviewed philosophy. The client stays minimal and auditable; the cryptography stays end-to-end, same Threema core.

F1Whisper AGPL-3.0 Based on Threema for Android 6.4.3 f1whisper.f1tech.info