



Thai Driver License OCR: Recognition Engine Migration Audit

Service version v1.1.2-20260823 · Audit executed 22 August 2026 · iApp Technology Co., Ltd.,
Bangkok, Thailand

Executive summary. Before migrating the Thai Driver License OCR service to its new recognition engine, every response field was audited against the previous engine on byte-identical license images. Agreement across all 25 response fields was **99.65%**; no field was removed and no field changed type; and every difference, adjudicated against the physical cards, favored the new engine. In production the service processes a card in 0.3 s (median) and sustains 25,000 cards per hour.

1 Introduction

The Thai Driver License OCR API extracts 25 structured fields from Thai driver licenses — license number, names, dates, and license type in both Thai and English, plus detection of the face photo, flag, and signature. It is operated by iApp Technology Co., Ltd. as a public cloud API and as a fully self-contained on-premise deployment.

In August 2026 the service’s character-recognition engine was replaced. An engine change behind a stable API carries a specific risk: the response contract can drift silently — a field disappears, changes type, or changes format — and integrations break without any error being raised. This audit was designed to rule that out before the migration shipped, and to determine whether the new engine reads license text at least as well as the engine it replaces.

2 Method

- **Fairness.** Both engines process byte-identical license images. The audit candidate is the deployed production build with only the recognition-engine client swapped, so the engine is the only variable; card localisation, cropping, and field parsing are shared.
- **Scoring.** Every response field is compared individually and classified as identical, differing (with a character-level similarity ratio), missing, or type-changed. Timing fields are excluded as volatile.
- **Adjudication.** Every differing value was resolved by reading the physical card, so a difference is only counted in either engine’s favor when the card itself settles it.

3 Results

Only four fields ever differed, in three patterns — and in each case the physical card settles it in the new engine’s favor:

- **A misread issue year, corrected.** The previous engine returned 18May 2008 where the card reads *Issue Date 18 May 2006* (B.E. 2549); the new engine returns 18 May 2006.
- **Dropped spaces in dates, corrected.** The previous engine consistently dropped the space between day and month on this layout (11 April2025, 26March 2019); the new engine preserves it.

Measure	Result
Overall field similarity	99.65%
Fields missing from the new engine's response	none
Fields that changed type	none
Adjudicated differences favoring the new engine	all

Table 1: Field-level audit across all 25 response fields on the license test set. The response contract is unchanged; existing clients need no modification.

- **Thai word segmentation.** On Thai name and registrar fields the new engine segments Thai words more faithfully to the printed card.

4 Production Performance

Metric	Value
Median end-to-end processing time	0.3 s per card
Sustained throughput	6.9 cards/s ($\approx 25,000$ cards/hour)
Maximum input file size	10 MB
Supported inputs	JPEG, PNG (front side)

Table 2: Production service performance, measured on the deployed v1.1.2-20260823 service, August 2026.

5 Deployment and Data Security

The public cloud API is GDPR- and PDPA-compliant: uploaded images are processed in memory and are not retained after the response is returned. The new engine requires no external network egress, which makes a fully self-contained on-premise deployment available — no license data leaves the customer's infrastructure.

6 Reproducibility

The audit protocol — byte-identical inputs, per-field classification, card-adjudicated differences — is specified in full above. The license test set contains real Thai driver licenses and is withheld under Thai PDPA obligations; organizations wishing to validate the results on their own licenses, or to enquire further, may contact sale@iapp.co.th.

About iApp Technology. iApp Technology Co., Ltd. is a Thai artificial-intelligence company providing OCR, document understanding, speech, and large-language-model services for the Thai language.

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