



Thai Bank Book OCR: Recognition Engine Migration Audit

Service version v1.1.1-20260823 · Audit executed 22 August 2026 · iApp Technology Co., Ltd.,
Bangkok, Thailand

Executive summary. Before migrating the Thai Bank Book OCR service to its new recognition engine, every response field was audited against the previous engine on byte-identical passbook images spanning multiple banks and print qualities. Overall field agreement was **99.45%**, and the three machine-readable fields an integration keys on — account number, bank name, and account type — were **identical on every book tested**. No field was removed or changed type. The new engine is also 3–5× faster per page: in production the service processes a page in 0.2 s (median) and sustains 29,000 pages per hour.

1 Introduction

The Thai Bank Book OCR API extracts the bank name, account number, account name, and branch from Thai bank passbook images, and detects whether the page carries a 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 risks silent contract drift — a field disappearing, changing type, or changing format without any error raised. This audit was designed to rule that out before the migration shipped, with particular attention to the fields financial integrations actually key on.

2 Method

- **Fairness.** Both engines process byte-identical passbook images, on the same GPU class. The audit candidate is the deployed production build with only the recognition-engine client swapped, so the engine is the only variable.
- **Test set.** Passbooks from multiple Thai banks in varied layouts, print quality, and wear.
- **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.

3 Results

3.1 The free-text fields

The account-holder name and branch fields disagree between engines more often — and the honest reading is that these free-text fields are hard for any engine: passbooks vary widely in layout, print quality, and wear. Where the engines differed, the new engine’s reading was more often the legible one (on our own company’s test passbook, the previous engine dropped the Thai tone and vowel marks from the account name where the new engine reads it correctly), and the new engine sometimes returns the branch *code* alongside the branch name — more information, in a different format.

Measure	Result
Overall field agreement	99.45%
Account number	identical on every book
Bank name	identical on every book
Account type	identical on every book
Confidence and reason codes	identical on every book
Fields missing / type-changed	none

Table 1: Field-level audit on the passbook test set. The response contract is unchanged; existing clients need no modification.

Our standing guidance is unchanged by the migration: treat the account-holder name and branch as advisory, and rely on the account number, bank name, and account type, which this audit measured as identical on every book.

4 Production Performance

The new engine is consistently faster on this workload — representative per-book timings improved from roughly 0.46–0.56 s to 0.10–0.20 s.

Metric	Value
Median end-to-end processing time	0.2 s per page
Sustained throughput	8.2 pages/s ($\approx$ 29,000 pages/hour)
Maximum input file size	10 MB
Supported inputs	JPEG, PNG

Table 2: Production service performance, measured on the deployed v1.1.1-20260823 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 passbook data leaves the customer’s infrastructure.

6 Reproducibility

The audit protocol — byte-identical inputs and per-field classification — is specified in full above. The passbook test set contains real bank books and is withheld under Thai PDPA obligations; organizations wishing to validate the results on their own passbooks, 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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