

AppXray Decompilation Report

CamScanner -- com.intsig.camscanner

Field	Value
Package Name	com.intsig.camscanner
App Name	CamScanner
Version	7.16.5.2604220000 (code: 71651)
Min SDK	21 (Android 5.0 Lollipop)
Target SDK	35 (Android 15)
Total Size	306 MB (XAPK with 27 split APKs)
DEX Files	12 (85.5 MB total bytecode)
Architecture	Hybrid -- Native Android + Flutter modules
Report Date	2026-05-13

1. App Architecture

Component Summary

Component	Count
Activities	369
Services	26
Broadcast Receivers	28
Content Providers	19

Architecture Highlights

- Hybrid stack: Core app is native Android (Java/Kotlin), with Flutter modules for newer features (AI chat, document processing UIs).
- Flutter integration via FlutterBoost (com.idlefish.flutterboost) -- Alibaba's Flutter-Native hybrid framework.
- Multi-DEX: 12 DEX files indicate a very large codebase (~85 MB of bytecode).
- Split APKs: 27 config splits for per-language resources and per-ABI native libraries (arm64_v8a, armeabi).

Key Activities (Third-Party)

Activity	Source
com.bytedance.sdk.openadsdk.activity.TTRewardVideoActiv	Pangle (TikTok) Rewarded Ads
com.bytedance.sdk.openadsdk.activity.TTInterstitialActi	Pangle Interstitial Ads
com.bytedance.sdk.openadsdk.activity.TTFullScreenVideoA	Pangle Fullscreen Video
com.google.android.gms.ads.AdActivity	Google AdMob

com.facebook.ads.AudienceNetworkActivity	Facebook Audience Network
com.pubmatic.sdk.webrendering.ui.POBFullScreenActivity	PubMatic OpenBid
com.vungle.ads.VungleActivity	Vungle Ads
com.facebook.FacebookActivity	Facebook Login
com.google.android.gms.auth.api.signin.internal.SignInH	Google Sign-In
com.microsoft.identity.common.internal.providers.oauth2	Microsoft Identity
com.dropbox.core.android.AuthActivity	Dropbox Auth
com.evernote.client.android.login.EvernoteLoginActivity	Evernote Integration
com.android.billingclient.api.ProxyBillingActivity	Google Play Billing
com.cmhc.gen.sdk.view.GenLoginAuthActivity	China Mobile Auth (????)
com.vk.api.sdk.ui.VKConfirmationActivity	VK (Russia) Social Auth

Services

Service	Purpose
com.google.firebase.messaging.FirebaseMessagingService	Push notifications
com.google.firebase.components.ComponentDiscoveryService	Firestore initialization
com.google.android.gms.ads.AdService	Ad background service
com.google.mlkit.common.internal.MLKitComponentDiscover	ML Kit initialization
com.bytedance.apm6.APMService	ByteDance APM monitoring
com.bytedance.sdk.openadsdk.multipro.aidl.BindService	Pangle multi-process ads
androidx.work.impl.background.systemjob.SystemJobService	WorkManager background tasks
androidx.room.MultiInstanceInvalidationService	Room DB sync

2. SDK & Third-Party Libraries

Ad Networks (6 detected)

SDK	Package	Notes
Google AdMob	com.google.android.gms.ads	Primary ad SDK, includes MRAID v3 support
Pangle (TikTok/ByteDance)	com.bytedance.sdk.openadsdk	Full-format support: rewarded, interstitial, fullscreen
Facebook Audience Network	com.facebook.ads	Separate DEX in assets (audience_network.dex, 5 MB)
PubMatic OpenBid	com.pubmatic.sdk	Header bidding / OpenRTB 2.5 integration
Vungle	com.vungle.ads	Video ads, has mediation adapter (com.vungle.mediation)
Google Ad Manager	com.google.ads	DoubleClick ad serving (googleads.g.doubleclick.net)

Ad Mediation Evidence

- PubMatic OpenBid SDK present -- indicates header bidding setup alongside waterfall.
- Multiple ad network activity classes registered -- suggesting mediation with AdMob as primary.
- Facebook Audience Network loaded as separate DEX at runtime -- dynamic ad loading strategy.

Analytics & Attribution (4 detected)

SDK	Package	Purpose
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AppsFlyer	com.appsflyer	Mobile attribution (MMP), ad revenue tracking, deep lin
Firebase Analytics	com.google.firebase	Event logging, user properties
Google ML Kit	com.google.mlkit	On-device ML (likely OCR / document scanning)
ByteDance APMPPlus	com.bytedance.apm6	Crash monitoring, performance metrics (Volcengine)

Crash & Error Monitoring (2 detected)

SDK	Package	Notes
Sentry	io.sentry	Full Sentry SDK including Flutter plugin (io.sentry.flu
ByteDance APMPPlus	apmplus.ap-southeast-1.volces.com	Volcengine crash collection, ANR monitoring

Cloud & Auth Integrations (6 detected)

SDK	Purpose
Google Sign-In	OAuth2 authentication
Microsoft Identity (ADAL/MSAL)	Enterprise SSO, OneDrive integration
Facebook Login	Social authentication
Dropbox Core SDK	Cloud storage sync
Evernote SDK	Note export/import
VK SDK	Russian market social auth

Payments

SDK	Purpose
Google Play Billing (com.android.billingclient)	In-app purchases and subscriptions

UI & Utilities

SDK	Purpose
Flutter (io.flutter)	Cross-platform UI for newer modules
FlutterBoost (com.idlefish.flutterboost)	Native-Flutter hybrid navigation
Lottie (com.airbnb.lottie)	JSON-based animations
Glide (com.bumptech.glide)	Image loading and caching
PAG (com.example.flutter_pag_plugin)	Portable Animated Graphics (Tencent)
AndroidX Camera	CameraX API for document scanning
AndroidX Room	Local SQLite database ORM
AndroidX WorkManager	Background task scheduling
Netty (io.netty)	Async networking

China-Specific SDKs

SDK	Purpose
China Mobile Auth (com.cmhc.gen)	Phone number one-tap login
WeChat SDK (com.intsig.wxapi)	WeChat sharing/login
Feishu/Lark	Mini-program deep linking
Huawei AppGallery	Huawei store distribution support

Samsung SDraw	Samsung pen/drawing integration
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3. API Endpoints

First-Party APIs (intsig.net / camscanner.com)

Endpoint	Purpose
api-cs.intsig.net/user/cs	User authentication & management
api-cs.intsig.net/api/domain	Domain/config resolution
api.intsig.net/purchase	Purchase & subscription management
api-center.intsig.net/apis	Central API gateway
api-center.intsig.net/apis/corp	Enterprise API gateway
api-corp-cn.intsig.net	China enterprise services
api-algo.camscanner.com	Algorithm services (OCR, enhancement)
ai-us.camscanner.com/aichat	AI Chat feature (US region)
cs-ai-cn.camscanner.com/ai_doc	AI document processing (CN region)
cs-ai-cn.camscanner.com/aichat	AI Chat feature (CN region)
cs8.intsig.net/sync	Document cloud sync
cs8.intsig.net/ad	Server-side ad configuration
cs8.intsig.net/edapi	Document editing API
cs-msg-us.intsig.net/msg	Push messaging service
d2100.intsig.net/sync	Secondary sync server
d2149.intsig.net/app	App configuration
auth.intsig.net/GenKey/ActivateBySerialNo	License activation
api-web-pkg.camscanner.com	Web package distribution
resource.intsig.net/appdata/camscanner/android/ScannerR	Ad reward configuration

Sandbox / Staging Endpoints (exposed in production)

Endpoint	Notes
api-cs-sandbox.intsig.net	Staging user API
api-center-sandbox.intsig.net	Staging gateway
api-algo-sandbox.camscanner.com	Staging algorithm service
ai-cn-sandbox.camscanner.com	Staging AI service
cs1-sandbox.intsig.net	Staging sync/ad/read services
b103-sandbox.camscanner.com	Staging business service

SECURITY NOTE: 6 sandbox/staging endpoints are hardcoded in the production build. This could indicate debug code left in release, or intentional environment switching.

Third-Party Service Endpoints

Endpoint	Service
api16-access-sg.pangle.io/api/ad/union/sdk/get_ads/	Pangle ad requests (Singapore)

api16-access-ttp.tiktokpangle.us/service/2/app_log/	Pangle event logging (US)
ads.pubmatic.com	PubMatic ad requests
ow.pubmatic.com/openrtb/2.5	PubMatic OpenRTB bidding
adx.ads.vungle.com/api/ads	Vungle ad exchange
config.ads.vungle.com	Vungle remote config
googleads.g.doubleclick.net	Google Ad Manager serving
admob-gmats.uc.r.appspot.com	AdMob mediation test suite
fundingchoicesmessages.google.com/a/consent	Google CMP (consent)
apmplus.ap-southeast-1.volces.com	ByteDance APM (Southeast Asia)
databyterangers.com.cn	ByteDance data collection (China)
accounts.google.com/o/oauth2/ revoke	Google OAuth token revocation
api.twitter.com	Twitter sharing integration
graph-video.facebook.com	Facebook video API

4. Permissions Analysis

Total: 35 permissions

High Sensitivity

Permission	Risk	Usage Context
CAMERA	HIGH	Core feature -- document scanning
ACCESS_FINE_LOCATION	HIGH	Likely for ad targeting / geo-tagging scans
ACCESS_COARSE_LOCATION	MEDIUM	Ad targeting
READ_EXTERNAL_STORAGE	MEDIUM	Import existing documents/photos
WRITE_EXTERNAL_STORAGE	MEDIUM	Save scanned documents
READ_MEDIA_IMAGES	MEDIUM	Android 13+ media access
USE_BIOMETRIC / USE_FINGERPRINT	MEDIUM	App lock / document protection

Ad & Tracking Related

Permission	Purpose
ACCESS_AD SERVICES_AD_ID	Android Privacy Sandbox ad ID
ACCESS_AD SERVICES_ATTRIBUTION	Privacy Sandbox attribution
ACCESS_AD SERVICES_TOPICS	Privacy Sandbox Topics API
AD_ID (com.google.android.gms.permission.AD_ID)	Google Advertising ID
BIND_GET_INSTALL_REFERRER_SERVICE	Install attribution (AppsFlyer)

Connectivity & System

Permission	Purpose
INTERNET	Network access
ACCESS_NETWORK_STATE	Check connectivity
ACCESS_WIFI_STATE	WiFi network info
BLUETOOTH / BLUETOOTH_ADMIN / BLUETOOTH_SCAN / BLUETOOTH_CONNECT	Printer connectivity
WAKE_LOCK	Background processing

FOREGROUND_SERVICE	Long-running tasks (scanning, sync)
POST_NOTIFICATIONS	Android 13+ notification permission
VIBRATE	Haptic feedback
BILLING (com.android.vending.BILLING)	In-app purchases

Vendor-Specific

Permission	Purpose
com.huawei.appmarket.service.commondata.permission.GET_	Huawei store integration
com.samsung.android.mapsagent.permission.READ_APP_INFO	Samsung device optimization
com.sony.mobile.permission.SYSTEM_UI_VISIBILITY_EXTENSI	Sony UI compatibility
com.google.android.c2dm.permission.RECEIVE	Firebase Cloud Messaging (legacy)

5. Ad Network Deep Dive

Detected Ad Formats

Format	AdMob	Pangle	Facebook AN	PubMatic	Vungle
Banner	Yes	Yes	Yes	Yes	--
Interstitial	Yes	Yes	Yes	Yes	Yes
Rewarded Video	Yes	Yes	Yes	--	Yes
Native	Yes	Yes	Yes	Yes	Yes
App Open	Yes	Yes	--	--	--
Fullscreen Video	--	Yes	--	--	Yes

Monetization Strategy Indicators

- AdMob as primary mediator -- Core ad SDK with all formats.
- PubMatic header bidding -- Running OpenRTB 2.5 parallel bidding alongside AdMob waterfall.
- Pangle (ByteDance) heavy integration -- 14 activity classes, full format coverage. Likely high fill rate for Asian traffic.
- Facebook AN loaded dynamically -- Separate DEX (audience_network.dex) loaded at runtime, reducing cold start impact.
- Server-controlled ad config -- cs8.intsig.net/ad and ScannerRewardRatio.xml indicate server-side ad placement and reward ratio control.
- Google CMP -- fundingchoicesmessages.google.com/a/consent for GDPR/CCPA consent management.

6. Metadata & Build Configuration

Property	Value
Build Type	App Bundle (split APKs)
Supported ABIs	arm64-v8a, armeabi
Supported Languages	27 (ar, de, en, es, et, fi, fr, hi, hu, in, it, ja, ko,
Flutter Version	Present (hybrid integration)
ProGuard/R8	Enabled (heavy obfuscation detected in Sentry, AppsFlye)

AndroidX	Full migration (camera, room, work, browser, webkit, wi
Google Play Integrity	Referenced (IntegrityErrorCode)
Deep Links	Custom scheme via com.intsig.router, short URLs via cc.

Notable Build Artifacts

- audience_network.dex (5 MB) in assets -- Facebook AN loaded as plugin
- DroidSansFallbackFull.ttf (5 MB) -- Full CJK font bundled
- PubMatic_Logo.svg -- PubMatic branding asset
- Flutter assets directory with shader precompilation
- PAG animation files for UI animations

Summary

CamScanner is a large-scale hybrid Android app (native + Flutter) with a sophisticated monetization stack featuring 6 ad networks running a combination of waterfall + header bidding. The app maintains deep integrations with cloud storage providers (Dropbox, Evernote, OneDrive) and supports authentication across 7+ identity providers including China-specific services. The presence of staging endpoints in the production build and the dynamic loading of Facebook AN as a separate DEX file are notable architectural decisions.

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