

APEX STANDARDS

Total Search for Communication Standards

Fact Sheet

API

Database	SDO	Start Year	Description	API Spec (fields · filters · return)
ASX3GPP	3GPP	1998	Mobile telecom standards (GSM, UMTS, LTE, 5G).	Fields: tdoc (contribution ID), groupx (WG), spec, rel, meeting_id/meeting, date_meeting_start/end, location, type_, decision, tdoc_status, wi/related_wi, cr_num/cr_rev/cr_category/cr_status, source/source_company, author/contact, agenda_item, revision chain (is_revision_of/revised_to), url_zip/url_folder, data_files, original_url, full_text , images . Filters: meeting ID/location, WG, spec/release, date range, revision/status, WI/CR, source/company, author/contact, full-text. Return: short_snippets + detail_snippets; images: inline thumb + inline original.
ASXETSI	ETSI	1988	European telecom standards (radio, networks, satellite, smart grids).	Fields: spec/spec_full/spec_title, ver (edition), rel, wg/tsg, section/page, release_date, citation_counts, url, data_files, original_url, full_text , images . Filters: spec/version/release, WG/TSG, clause/section, date range, citations, full-text. Return: short_snippets + detail_snippets; images: inline thumb + inline original.
ASXOMA	OMA	2002	Open mobile industry standards for interoperable mobile services.	Standards/technical-spec clause search (not contributions). Fields: spec/profile ID, version, date, url, data_files, original_url, full_text , images . Filters: profile/spec, version, clause, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXOPRAN	O-RAN Alliance	2018	Open, interoperable RAN specifications for modular networks.	Standards/technical-spec clause search (not contributions). Fields: doc ID, WG (WG3/4/5/6/7/10), title, version, date, url, data_files, original_url, full_text , images . Filters: WG, version, clause/section, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXITU	ITU-T	1980	Global telecommunication standards and recommendations for ICT networks.	Standards/technical-spec clause search (not contributions). Fields: rec ID (G./H./X./Y.), Series, Study Group, edition/version, pub/approval dates, url, data_files, original_url, full_text , images . Filters: SG/Series/ID, version, clause, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXOneM2M	oneM2M	2012	IoT/M2M service layer specifications for interoperable systems.	Standards/technical-spec clause search (not contributions). Fields: spec ID, release, version, WG, date, url, data_files, original_url, full_text , images . Filters: release/version, WG, clause, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXIEEE802	IEEE 802	1980	LAN and wireless networking standards (Ethernet, Wi-Fi, WPAN).	Fields: wg, dcn (doc #), rev, title, author, year, dt, file/filepath, url, data_files, original_url, full_text , images ; meeting/session/location when present. Filters: WG, year, DCN, rev, author, date range, revision/status, full-text. Return: short_snippets + detail_snippets; images: inline thumb + inline original.
ASXWIFI	Wi-Fi Alliance	1999	Wi-Fi certification profiles and interoperability guidelines for IEEE 802.11 variants.	Standards/technical-spec clause search (not contributions). Fields: program/profile, version, certification doc ID, date, url, data_files, original_url, full_text , images . Filters: program, version, clause, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXBTSIG	Bluetooth SIG	1998	Bluetooth wireless standards (core, profiles, mesh).	Standards/technical-spec clause search (not contributions). Fields: spec/profile/mesh IDs, core version, date, url, data_files, original_url, full_text , images . Filters: profile/spec, version, clause, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXIETF	IETF	1986	Internet protocol standards (TCP/IP suite) via open, consensus-driven process.	Fields: idd/idd_txt (draft IDs), rfc, wg, title, author(+count), intended_status, version, dt, url, citation fields, filesize, data_files, original_url, full_text , images where present. Filters: WG, RFC, intended status, version, author, date range, revision/status (drafts), full-text. Return: short_snippets + detail_snippets; images: inline thumb + inline original when available.
ASXW3C	W3C	1994	Web and Internet standards (HTML, CSS, XML, HTTP).	Standards/technical-spec clause search (not contributions). Fields: TR shortname, status (WD/CR/PR/REC), WG, version/dated snapshot, date, url, data_files, original_url, full_text , images . Filters: status, WG, clause, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXCVE	CVE / NVD	1999	Cybersecurity vulnerability identifiers and metadata.	Standards/tech-meta clause/field search. Fields: CVE ID, CWE, CVSS, publish/modify dates, vendor/product, url, data_files, original_url, full_text . Filters: CVE/CWE, CVSS range, vendor/product, date range, full-text. Return: short + detailed snippets; (images rarely applicable).
ASXCODEC	MPEG (ISO/IEC JTC 1/SC 29) · JVET/JCT-VC · ITU-T (codec) · AOMedia	1998	Umbrella for codec bodies (e.g., AVC/H.264, HEVC/H.265, VVC/H.266, AV1).	Fields: spec/recommendation IDs, WG (SC29/JVET/JCT-VC/SG16), meeting/session/tdoc (where applicable), version/edition, date, company/author (where present), url, data_files, original_url, full_text , images . Filters: WG, spec/rec, contribution vs spec, version, date range, revision/status, full-text. Return: short + detailed snippets; inline thumb + inline original.
ASXDVB	DVB · ARIB · ATSC	DVB 1993 / ARIB 1995 / ATSC 1982	Digital TV broadcasting standards (DVB, ARIB, ATSC).	Standards/technical-spec clause search (not contributions). Fields: standard/doc ID, org, version/edition, date, url, data_files, original_url, full_text , images . Filters: org, version, clause, date range, full-text. Return: short + detailed snippets; inline thumb + inline original.

Apex Standards API Service enables cost-effective, real-time standards discovery tailored to internal R&D needs. The service is not intended for bulk/archival snapshots. Pricing, schemas, and rate tiers are client-configurable. Details on security, limits, sorting, pagination, media handling, and onboarding appear in Footnotes 1–20 (Page 2).

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Footnotes (Items 1-20, consolidated)

Schema variables (representative model) — The variables listed represent the deployed data model. Authoritative definitions (names, types/lengths, nullability, enumerations, foreign-key relationships/-joins, enrichment columns) are finalized during client-specific configuration. Commercial terms are determined by the scope of customization and data transformation.

Snippets — Two modes derived from full text: short_snippets (~150-character, token-boundary windows) and detail_snippets (±2 sentences with multi-hit consolidation). Snippets are sanitized, preserve source order, and use minimal emphasis tags.

Media delivery — When images are available, responses include inline thumbnail and inline original descriptors. Thumbnails suit result tiles; originals preserve source dimensions/quality for inspection and export.

Full text & source files — Each dataset exposes a full_text search field, structured data_files descriptors (filename, byte size, MIME, checksum), and an original_url linking to the authoritative source website for user-side downloads.

Search scope by dataset — For non-3GPP/IEEE/IETF/ETSI/codec sources, search targets published standards or technical-specification clauses (not contribution tracking). Contribution metadata (e.g., meeting IDs, submitters, decisions) is modeled where such workflows exist (e.g., 3GPP, some IEEE/IETF drafts).

Result caps, limits, and errors — page_size ≤ 100 (hard cap). Cursor pagination supplied. Rate-limit exceedance yields HTTP 429 with RFC 9333 headers and, when applicable, body code: "OVER_QUERY_LIMIT". Clients SHOULD implement exponential backoff with jitter and honor Retry-After.

Service scope — Real-time query API; not intended for bulk archival downloads. For sanctioned bulk exports, contact support@apexstandards.com

Rate-limit tiers — Policies may differ for text-only versus text + embedded images (higher QPM for text; lower QPM with images). Thresholds are contract-defined per client and surfaced via RFC 9333 headers: RateLimit-Limit, RateLimit-Remaining, RateLimit-Reset.

Transport & authentication — All endpoints use TLS 1.3 with HSTS and OCSP stapling. Default authentication: HTTP Bearer tokens. Enterprise options: OAuth 2.0/OIDC and mTLS. Data at rest: AES-256. Media access MAY use signed URLs.

Client network controls — Optional IP/CIDR allow-listing, deny-listing, and geo-fencing per API key. Non-per-

mitted calls return HTTP 403 with a Problem Details payload.

Standards compliance — Payloads: JSON (RFC 8259). Errors: Problem Details (RFC 9457). Rate-limit semantics: RFC 9333. API description: OpenAPI 3.1.

Error-handling guidance — Clients SHOULD implement exponential backoff with jitter for 429/5xx, respect Retry-After, and bound concurrency. Retries for non-idempotent operations are NOT recommended unless explicitly documented.

Observability metadata — Responses MAY include request_id, elapsed_ms, and server_region. Clients SHOULD log these with status code and rate-limit headers for tracing and SLO monitoring.

Latency & throughput (indicative SLOs) — End-to-end response targets (complex cross-corpus queries): 1-10 s, average ≈ 3.0 s, stddev ≈ 1.9 s. Text-only narrow filters typically < 1.5 s. Throughput scales horizontally; per-tenant burst controls apply.

Pagination model — Cursor-based. Request: page_size (tiers 10 / 25 / 100; tier selection is priced), cursor (opaque). Response: next_cursor or null. total_estimated is advisory and may be omitted for performance. Sorting — sort accepts: date_desc (default), date_asc, recency (freshness-weighted), score_desc (relevance), source_asc, author_asc, revision_desc, version_desc, status_order (document-status precedence). Ties break by score_desc, then date_desc, then id.

Quota accounting (media) — With include=media_in-line, total response bytes (JSON + base64 images) count toward bandwidth/quota. Base64 expansion overhead is approximately 4/3 of the binary size. Headers MAY include X-Bytes-Counted.

JSON success example — 3GPP record (rich fields, inline images & snippets)

```
{
  "id": 495229,
  "dataset": "ASX3GPP",
  "sdo": "3GPP",
  "fields": {
    "id_tdoc_list": 3216630,
    "tdoc": "R1-2508201",
    "groupx": "RAN1",
    "filex": "TDoc_List_Meeting_RAN1#122-bis.xlsx",
    "tdocx": "R1-2508201.zip",
    "rel": "Rel-19",
    "spec": "38.291",
    "title": "Corrections to the Ambient IoT physical layer",
    "cr_title": null,
    "abstract": "MCC: This is for post-meeting discussion.",
    "cr_pack_tdoc": null,
    "wg_tdoc": null,
    "type": "draftCR",
    "decision": "endorsed",
    "tdoc_status": "approved",
    "agenda_item": "8",
    "agenda_item_desc": "Maintenance on Rel-19 NR and E-UTRA",
    "contact": "Carolyn Taylor",
    "contact_id": "90657",
    "for_": "Endorsement",
    "to_": null,
    "is_revision_of": null,
    "revised_to": null,
    "reply_in": null,
    "reply_to": null,
    "wi": null,
    "related_wi": "Ambient_IoT_Solutions-Core",
    "wi_full": "Ambient_IoT_Solutions-Core",
    "secretary_remarks": null,
    "date_uploaded_zip": "2025-10-24T12:45:04Z",
    "date_reservation_zip": null,
    "source": "Huawei",
    "cr_category": "F",
    "cr_categoryx": "correction",
    "groupx_title": "Radio Layer 1 spec (RAN1)",
    "tdocx": "R1-2508201",
    "tdocx_type": "tdoc",
    "date_xls": "2025-10-24T07:15:16Z",
    "url_xls": "http://www.3gpp.org/ftp/.../TDoc_List_Meeting_RAN1%23122-bis.xlsx",
    "fx_urlz": "http://www.3gpp.org/ftp/.../Docs/",
    "tdoc_file": "R1-2508201.zip",
    "date_zip": "2025-10-24T05:45:02Z",
    "url_zip": "http://www.3gpp.org/ftp/.../R1-2508201.zip",
    "url_folder": "http://www.3gpp.org/ftp/.../Docs/",
    "meeting": "R1-122-bis",
    "date_meeting_start": "2025-10-13",
    "date_meeting_end": "2025-10-17",
    "location": "Prague",
    "spec_title": null,
    "spec_full": null,
    "related_wi_title": null,
    "wi_full_title": null,
    "wi_full_tokens": null,
    "cr_spec": null,
    "cr_to_wg": null,
    "cr_to_tsg": null,
    "cr_reason": "RAN2 have now finalized certain message and procedure names in TS 38.391.",
    "cr_summary": "Random ID message renamed to Access Random ID; terminology alignment across PHY/MAC.",
    "cr_consequence": "Avoids misalignment between PHY and MAC specifications.",
    "cr_num": null,
    "cr_rev": "0",
    "cr_current_version": null,
    "cr_clauses_affected": "7.1.2, 7.1.3",
    "cn_note": null,
    "proposal": null,
    "proposal_all": null,
    "source_category": "Equipment[User End]",
    "source_category_count": 2,
    "source_country": "CN",
    "source_country_count": 1,
    "source_company": "Huawei",
    "source_company_count": 1,
    "source_categoryx": "Equipment[User End]",
    "source_categoryx_count": 2,
    "source_countryx": "CN",
    "source_countryx_count": 1,
    "source_companyx": "Huawei",
    "source_companyx_count": 1,
    "source_first": "Huawei"
  },
  "snippets": {
    "short_snippets": [
      "...Ambient IoT physical layer — Random ID message renamed Access Random ID..."
    ],
    "detail_snippets": [
      "From R1-2508154: (1) Random ID → Access Random ID; (2) 'Contention-free random access' → 'contention-free access'..."
    ]
  },
  "media": [
    {
      "id": "img_r1_2508201_fig1",
      "thumb_inline_b64": "iVBORw0KGgoAAA... (truncated)",
      "original_inline_b64": "iVBORw0KGgoAAA... (truncated)",
      "sha256_hex": "9f4a7a0d7e1c2b6f0a2d...",
      "byte_length_thumb": 18234,
      "byte_length_original": 593201
    }
  ],
  "provenance": {
    "original_url": "https://www.3gpp.org/ftp/.../R1-2508201.zip",
    "data_files": [
      {
        "filename": "R1-2508201.zip",
        "size_bytes": 593201,
        "mime": "application/zip",
        "checksum_sha256": "9f4a..."
      }
    ],
    "meta": {
      "request_id": "req_1b2c3d",
      "elapsed_ms": 1320,
      "server_region": "us-west-2"
    }
  }
}
```

Inline image encoding — Inline media are base64 (RFC 4648) encoded within JSON (e.g., thumb_inline_b64, original_inline_b64). Each image includes sha256_hex and byte-length metadata for integrity and accounting. When include=media_in-line is omitted, only descriptors/URLs are returned.

Client onboarding & commercial terms — Standard flow: (i) requirements intake & dataset selection; (ii) evaluation environment with limited QPM; (iii) test plan & acceptance; (iv) quotation with options for 1-year and 3-year terms; (v) production cut-over with keys, allow-lists, and SLO baselines. Pricing varies by dataset mix, schema customization, page_size tier (10/25/100), rate-limit tier, and media inline options.

support@apexstandards.com

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