Kaiko

MIGRATION GUIDE

# Open Interest

## Amberdata → Kaiko

2026

www.kaiko.com

## 1 At a glance

**What these endpoints give you.** The open interest (total outstanding contracts) of one derivatives instrument on one exchange, as a time series. Amberdata serves this from two endpoints, one for **futures and perpetuals** and one for **options**. On Kaiko both move to a single endpoint, the **Exchange-provided metrics** endpoint, where you choose the instrument class per request.

> What changes for you
>
> - Both Amberdata endpoints map to `/v2/data/derivatives.v2/risk`. You add `instrument_class` (`future`, `perpetual-future` or `option`) and pass the instrument as a query parameter, not in the path.
> - Exchange and instrument identifiers change (e.g. `binance` → `binc`, see §6). Look up Kaiko instrument codes with the derivatives reference endpoint.
> - Kaiko returns **one snapshot per interval** (1 minute minimum) instead of every exchange update. Values are returned as strings and timestamps mark the start of the interval.
> - Each Kaiko row also carries 24h volume, expiry information and, depending on the class, funding rates or option implied volatility and Greeks.

### Coverage & distribution

**Data type:** Exchange-reported open interest, per instrument
**Instrument classes:** Dated futures, perpetual futures, options
**Exchanges:** 15 derivatives venues (see §6)
**Scope per request:** One exchange + one instrument
**Granularity:** `1m`, `1h`, `4h`, `1d` (default `1m`)
**Units:** Exchange-native (contracts, base or quote units depending on the venue)
**Distribution:** REST API

## 2 Endpoint & authentication

| | Amberdata (today) | Kaiko (new) |
|---|---|---|
| **Method** | GET | GET |
| **Base URL** | `https://api.amberdata.com` | `https://us.market-api.kaiko.io`<br>`https://eu.market-api.kaiko.io` |
| **Path (futures & perpetuals)** | `/markets/futures/open-interest/{instrument}` | `/v2/data/derivatives.v2/risk` |
| **Path (options)** | `/markets/options/open-interest/{instrument}` | `/v2/data/derivatives.v2/risk` |
| **Auth** | API key header `x-api-key` | API key header `X-Api-Key` |
| **Compression** | `Accept-Encoding: gzip, deflate, br` (required) | gzip supported (e.g. `curl --compressed`) |

Choose the `us` or `eu` host closest to your infrastructure; the data is the same.

## 3 Request parameters

One parameter set covers both Amberdata endpoints. Where futures and options behave differently, the note says so.

| Amberdata param | Kaiko param | Change | Notes |
|---|---|---|---|
| `{instrument}` (path, required) | `instrument` (query, required) | RENAMED | Moves to the query string. Codes differ from exchange symbols (e.g. `btc-usd`, `btcusdt250117`); look them up with the derivatives reference endpoint. |
| `exchange` (required) | `exchange` (required) | RENAMED | Value codes change (§6). One exchange per request; the Amberdata options endpoint also accepted a comma-separated list. |
| — | `instrument_class` (required) | NEW | `future`, `perpetual-future` or `option`. An Amberdata futures `type` of `PERPETUAL` maps to `perpetual-future`. |
| `startDate` (optional) | `start_time` (optional) | RENAMED | **Inclusive** on both. Kaiko accepts ISO 8601 **with milliseconds** only, e.g. `2026-01-01T00:00:00.000Z`. Seconds or milliseconds since epoch are not accepted. |
| `endDate` (optional) | `end_time` (optional) | RENAMED | **Exclusive** on both. Same format rule as `start_time`. Amberdata capped one request at 731 days (futures) or 365 days (options); on Kaiko, page through long ranges. |
| `sortDirection` (optional) | `sort` (optional) | RENAMED | `asc` or `desc`. Default changes from `asc` to `desc`. Works on any date range on Kaiko (Amberdata: last 24 hours only). |
| `timeFormat` (optional) | — | REMOVED | Kaiko always returns epoch milliseconds. |
| — | `interval` (optional) | NEW | `1m`, `1h`, `4h`, `1d`; default `1m`. See §7 for how longer intervals are sampled. |
| — | `page_size` (optional) | NEW | Rows per page, 1 to 1,000 (default 100). |

**No dates given.** Amberdata returns the last 24 hours (futures) or the last year (options). Kaiko returns the most recent snapshots, newest first. Set explicit bounds for backfills.

## 4 Response envelope & metadata

The fields around the data, the wrapper your parser reads before reaching the numbers. This envelope is **identical on every Amberdata endpoint**.

| Amberdata field | Kaiko field | Change | Notes |
|---|---|---|---|
| `status` | — | REMOVED | Use the HTTP status code. |
| `title` | — | REMOVED | "OK" label, no direct Kaiko equivalent. |
| `description` | — | REMOVED | Free-text status description. |
| `payload.data` | `data` | RENAMED | **Array** of snapshots (§5). |

| Amberdata field | Kaiko field | Change | Notes |
|---|---|---|---|
| `payload.metadata` | — | REMOVED | Only `api-version`, e.g. `2023-09-30`. Kaiko versions in the path. |
| `payload.metadata.next` | `next_url` | RENAMED | Next page. Follow until absent or null. |
| — | `query` | NEW | Echo of your request parameters. |
| — | `time` / `timestamp` | NEW | Response time (ISO 8601 / ms). |

## 5 Response data fields

Both Amberdata endpoints return the same row shape. On Kaiko, the exchange and instrument move from each row to the `query` block, since a request covers one of each.

| Amberdata field | Kaiko field | Type | Change | Notes |
|---|---|---|---|---|
| `value` | `open_interest` | string | RENAMED | Native units. Cast string to number. |
| `exchangeTimestamp` | `timestamp` | integer (ms) | RENAMED | Now the **interval start** (§7). |
| `exchangeTimestampNanoseconds` | — | integer | REMOVED | Minute-aligned snapshots. |
| `instrument` | `query.instrument` | string | RENAMED | Once per response. |
| `exchange` | `query.exchange` | string | RENAMED | Once per response (§6). |
| `type` | `query.instrument_class` | string | RENAMED | `PERPETUAL` → `perpetual-future`. |
| — | `24h_volume` | string | NEW | Units vary by venue. |
| — | `time_to_expiry` | number | NEW | Minutes left (futures, options). |

Other fields Kaiko adds per instrument class are listed below the table.

- **Futures and options also add:** `nearby` and `quarterly_nearby`, booleans flagging the soonest-expiring contract and the soonest-expiring quarterly contract for the same base and quote.
- **Perpetuals also add:** `funding_rate`, `predicted_funding_rate` (can be null), `funding_rate_ts`, `next_funding_time`, `funding_interval` (`1h`, `4h`, `8h` or `continuous`) and `is_actual_funding_rate`, which is the string `"true"` / `"false"`, not a JSON boolean.
- **Options also add:** `ask_iv`, `bid_iv`, `mark_iv` (implied volatility at ask, bid and mark) and the Greeks `delta`, `gamma`, `rho`, `theta`, `vega`.
- **Responses may also include** a `ratio_details` object (`long_ratio`, `short_ratio`, `ls_ratio`, `ratio_exch_ts`). Its values are `null` where the exchange does not provide them; ignore it if you only need open interest.

## 6 Exchange & venue names

For these endpoints the venue is a **derivatives exchange**. Kaiko provides open interest for the 15 venues below; use the Kaiko code in the `exchange` parameter.

| Kaiko code | Exchange |
|---|---|
| `binc` | Binance |
| `bopt` | Binance Options |
| `bgdm` | Bitget |
| `bull` | Bullish |
| `bbit` | Bybit |
| `delt` | Delta Exchange |
| `drbt` | Deribit |
| `drve` | Derive |
| `edxm` | EDX Markets |
| `gtdm` | Gate Derivatives |
| `hbdm` | Huobi |
| `hldv` | Hyperliquid |
| `okex` | OKX |
| `thlx` | Thalex |
| `whbt` | Whitebit |

Instrument codes also change: Amberdata uses the exchange's own symbol (e.g. `BTCUSD_PERP`, `BTC-27DEC24-100000-C`); Kaiko uses its own codes (e.g. `btc-usd`), listed by the derivatives reference endpoint per exchange and instrument class.

## 7 Will your values change?

### Short answer

No, for the same instrument and moment. Both providers pass through the **open interest reported by the exchange**, in the exchange's own units. What changes is **when** the value is sampled: Amberdata gives you every exchange update, Kaiko one snapshot per interval.

- **Snapshots, not ticks.** Kaiko's finest granularity is one value per minute, labelled with the minute's start. To compare history, take the last Amberdata update in each minute.
- **Longer intervals use the last minute.** With `1h`, `4h` or `1d`, each row holds the value from the **last minute of the period**, labelled with the period's start: the 09:00 hourly row carries the 09:59 value.

- **Units vary by exchange.** Open interest stays in the venue's native unit (contracts, base or quote), as on Amberdata. To get coin or USD amounts, convert using the contract size from the derivatives reference endpoint and a price. When totalling per exchange, include every live contract listed there.

## 8 Before / after example

Binance BTC/USD perpetual, the minute of 31 Oct 2026 23:59 UTC. For options, use the Amberdata options path and `instrument_class=option` on Kaiko; everything else is the same.

### Request

**Amberdata**

```
GET /markets/futures
    /open-interest/BTCUSD_PERP
    ?exchange=binance
    &startDate=2026-10-31T23:59:00
    &endDate=2026-11-01T00:00:00
x-api-key: <your-key>
Accept-Encoding: gzip, deflate, br
```

**Kaiko**

```
GET /v2/data/derivatives.v2/risk
    ?exchange=binc
    &instrument_class=perpetual-future
    &instrument=btc-usd
    &start_time=2026-10-31T23:59:00.000Z
    &end_time=2026-11-01T00:00:00.000Z
    &interval=1m
X-Api-Key: <your-key>
```

### Response (real responses, trimmed to the matching row)

**Amberdata**


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "metadata": {
      "next": null,
      "api-version": "2023-09-30"
    },
    "data": [
      ...
      {
        "instrument": "BTCUSD_PERP",
        "exchange": "binance",
        "exchangeTimestamp": 1793491186315,
        "exchangeTimestampNanoseconds": 0,
        "value": 14520762,
        "type": "PERPETUAL"
      }
    ]
  }
}
```


**Kaiko**


```
{
  "query": {
    "page_size": "100",
    "exchange": "binc",
    "instrument_class": "perpetual-future",
    "instrument": "btc-usd",
    "interval": "1m",
    "sort": "desc",
    "data_version": "v2",
    "commodity": "derivatives",
    "request_time": "2026-11-16T01:10:02.927Z"
  },
  "time": "2026-11-16T01:10:03.008Z",
  "timestamp": 1794791403008,
  "data": [ {
    "timestamp": 1793491140000,
    "24h_volume": "2031185",
    "open_interest": "14520762",
    "funding_rate": "0.00010000",
    "predicted_funding_rate": null,
    "funding_rate_ts": "2026-10-31T16:00:00Z",
    "next_funding_time": "2026-11-01T00:00:00Z",
    "is_actual_funding_rate": "true",
    "funding_interval": "8h",
    "ratio_details": {
      "long_ratio": null,
      "short_ratio": null,
      "ls_ratio": null,
      "ratio_exch_ts": null
    }
  } ]
}
```