Kaiko

MIGRATION GUIDE

Futures – OB Depth – Bid Ask Spread

HTTP REST

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you. The bid-ask spread of an instrument: best bid, best ask, mid price, absolute spread and spread in percent of the mid price.

What changes for you

- **Aggregated rows instead of 1-minute observations.** Kaiko serves the spread from its order book aggregation endpoint: each row covers one `interval` (default `1d`) and prices are averages over that interval. Set `interval` to match the granularity you need (see §3 and §7).
- **One instrument per call.** Amberdata can return all instruments of a currency (`instrument` = `btc`); on Kaiko, call once per instrument.
- **Exchange and instrument move into the URL path**, and the market (`{instrument_class}`) becomes explicit (see §2–3).
- **Units are unchanged:** spread in quote terms, spread percent in percent.
- **More data per row:** Kaiko adds order book depth at 16 levels per side (see §5).

Coverage & distribution

Data type: Order book aggregation (spread, depth)

Markets: CEX dated futures and perpetual futures

Granularity: Amberdata: 1-minute observations. Kaiko: aggregation over `interval`, default `1d`

Distribution: REST API

2 Endpoint & authentication

	Amberdata (today)	Kaiko (new)
Method	GET	GET
Base URL	`https://api.amberdata.com/markets/derivatives`	`https://us.market-api.kaiko.io` (or `eu.market-api.kaiko.io`)
Path	`/analytics/futures-perpetuals/depth/bid-ask-spread`	`/v2/data/order_book_snapshots.v1/exchanges/{exchange}/{instrument_class}/{instrument}/ob_aggregations/full`
Auth	API key header `x-api-key`	API key header `X-Api-Key` (same mechanism, new key)

Kaiko API family: Classic (versioned)

This endpoint belongs to Kaiko's existing versioned API. Its URL structure and response envelope differ from Kaiko's New API grammar endpoints (`market-data`), such as OHLCV Batch and Tickers.

3 Request parameters

Amberdata param	Kaiko param	Change	Notes
`exchange` (query, required)	`{exchange}` (path)	RENAMED	Moves to the URL path. Kaiko exchange code, e.g. `deribit` → `drbt` (see §6).
—	`{instrument_class}` (path)	NEW	Market: `future` or `perpetual-future`.
`instrument` (query, required)	`{instrument}` (path)	RENAMED	**One instrument per call on Kaiko.** Amberdata accepts a currency (`btc`) or an instrument (`btc-perpetual`); Kaiko needs the instrument code, e.g. `btc-usd` for the Deribit BTC perpetual (see §6).
`startDate` (optional)	`start_time`	RENAMED	Inclusive lower bound on both sides. Amberdata: seconds, milliseconds or ISO 8601. Kaiko: ISO 8601. Optional; automatically included in continuation tokens.
`endDate` (optional)	`end_time`	RENAMED	Exclusive upper bound on both sides. ISO 8601 on Kaiko.
`timeFormat` (optional)	—	REMOVED	Kaiko returns Unix milliseconds.
—	`interval`	NEW	**Aggregation interval; default `1d` .** Each Kaiko row aggregates the snapshots of one interval. Set a short interval (e.g. `1m`) to get observations close to Amberdata's 1-minute rows. Any duration from 1 second to 1 day, suffixed `s` , `m` , `h` or `d` (e.g. `30s` , `15m` , `4h` , `1d`); maximum 1 day.
—	`slippage` , `slippage_ref`	NEW	Optional slippage computation for a given order size, from `mid_price` by default. With `slippage` = `0` (default), `ask_slippage` and `bid_slippage` are `null` .
—	`page_size`	NEW	Optional. Rows per page; default 10.
—	`sort`	NEW	Optional. `asc` or `desc` (default).
—	`continuation_token`	NEW	Pagination; use `next_url` as returned.

4 Response envelope & metadata

The fields around the data. The Amberdata envelope is **identical on every Amberdata endpoint**; the Kaiko envelope is the one shared by Kaiko's order book snapshot endpoints.

Amberdata field	Kaiko field	Change	Notes
`status` / `title` / `description`	`result`	RENAMED	Single string (`"success"`) instead of the HTTP-style status object. Error handling must be rewritten.

Amberdata field	Kaiko field	Change	Notes
`payload.data`	`data`	RENAMED	Array holding the snapshot rows (see §5), now at the top level.
`payload.metadata.api-version`	`query.data_version`	RENAMED	Data version (`v1`), inside the echoed `query` object.
—	`query`	NEW	Echo of the request, including the defaults applied (`sort` , `page_size` , `slippage_ref` ...).
—	`time` , `timestamp`	NEW	Server response time (ISO 8601 and Unix milliseconds).
—	`continuation_token` , `next_url`	NEW	Pagination: call `next_url` for the next page.
—	`access`	NEW	Time range your API key can access (`access_range`) and data range (`data_range`).

5 Response - data fields

One row per aggregation interval. `{L}` = depth level in percent of the mid price (`0_1` = 0.1%). All Kaiko values are decimal strings.

Amberdata field	Kaiko field	Change	Notes
`exchange` , `instrument`	—	REMOVED	Not repeated per row; recoverable from the request path or `query` .
`timestamp`	`poll_timestamp`	RENAMED	Unix milliseconds on both sides. On Kaiko, the timestamp of the aggregation interval (midnight UTC for `1d` in the sample).
`bestBidPrice`	`bid_price`	RENAMED	**Average best bid over the interval** on Kaiko, instantaneous on Amberdata. Number → decimal string.
`bestAskPrice`	`ask_price`	RENAMED	**Average best ask over the interval** on Kaiko. Number → decimal string.
`midPrice`	`mid_price`	RENAMED	Average mid price over the interval on Kaiko.
`spread`	`spread`	RENAMED	Same name. Absolute spread in quote terms; average over the interval on Kaiko. Number → decimal string.
`spreadPercent`	`spread_percent`	RENAMED	Spread divided by mid price, **in percent on both sides**.
—	`bid_volume{L}` , `ask_volume{L}`	NEW	Order book depth on each side within `{L}` % of the mid price, for 16 levels from `0_1` to `10` .

Amberdata field	Kaiko field	Change	Notes
—	`ask_slippage`, `bid_slippage`	NEW	Slippage for the order size set in `slippage`; `null` by default.

6 Exchange & instrument names

Kaiko identifies venues and instruments with its own normalized codes, which differ from Amberdata's names. Codes can also differ by market for the same venue (e.g. Binance spot and options).

Reference

The mapping rules and the full code lists apply to every endpoint and are described in the **Exchange, Asset & Instrument Mapping** migration guide (`exchange-instrument-asset-codes.pdf`).

7 Will your values change?

Short answer

Spread definitions match (absolute spread in quote terms, percent of mid), but Kaiko values are **averages over the aggregation interval** while Amberdata values are instantaneous 1-minute observations. Compare averages with averages, or query Kaiko with a short interval.

- **Aggregation.** With the default `1d` interval, one Kaiko row summarises a whole day; its best bid and best ask are averages, not prices that were quoted at a given time.
- **Book depth captured.** Depth is aggregated within 0–10% of the best bid or ask. Kaiko cannot collect the full 10% from every exchange it covers: on some exchanges, depth figures do not fully portray the order book volume.
- **Number representation.** Kaiko returns decimal strings; compare as decimals.

8 Before / after example

Request

Amberdata

```
GET https://api.amberdata.com/markets/derivatives
    /analytics/futures-perpetuals
    /depth/bid-ask-spread
    ?exchange=deribit
    &instrument=btc-perpetual
x-api-key: <your key>
```

Kaiko

```
GET https://us.market-api.kaiko.io
    /v2/data/order_book_snapshots.v1
    /exchanges/drbt/perpetual-future/btc-usd
    /ob_aggregations/full
    ?interval=1m
X-Api-Key: <your key>
```

Response

Same instrument on both sides (Deribit BTC perpetual). Amberdata: example from its documentation. Kaiko: real sample with the default `1d` interval; depth in USD on this inverse contract. Different dates, so values are not comparable.

Amberdata


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [
      {
        "bestAskPrice": 96589.6,
        "bestBidPrice": 96222.19,
        "exchange": "deribit",
        "midPrice": 96405.895,
        "pair": "BTC-PERPETUAL",
        "spread": 367.4100000000035,
        "spreadPercent": 0.3811074001232015,
        "timestamp": 1746144000000
      }
    ]
  }
}
```


Kaiko


```
{
  "query": {
    "interval": "1d",
    "aggregation": "full",
    "exchange": "drbt",
    "instrument_class": "perpetual-future",
    "instrument": "btc-usd",
    "slippage": 0,
    "slippage_ref": "mid_price",
    "sort": "desc",
    "page_size": 10,
    ...
  },
  "time": "2026-11-01T14:13:08.483Z",
  "timestamp": 1793542388483,
  "data": [
    {
      "ask_slippage": null,
      "bid_slippage": null,
      "bid_volume0_1": "4020222.409144197",
      ... (bid_volume0_2 to bid_volume10)
      "ask_volume0_1": "5055480.322391559",
      ... (ask_volume0_2 to ask_volume10)
      "poll_timestamp": 1793491200000,
      "mid_price": "77792.56359906214",
      "spread": "0.5",
      "bid_price": "77792.31359906214",
      "ask_price": "77792.81359906214",
      "spread_percent": "0.000642734956745953"
    },
    ...
  ],
  "result": "success",
  ...
}
```