Kaiko

MIGRATION GUIDE

Futures – OB Depth – Depth

HTTP REST

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you. Order book depth per level on futures and perpetual contracts: the size and number of orders resting within given distances of the best price, on each side of the order book.

What changes for you

- **One snapshot per `interval` instead of every minute.** Each Kaiko row is the order book depth at the start of an `interval` (default `1d`).
- **One row per interval, both sides as columns.** Amberdata returns one row per side (`side`); Kaiko returns both sides in the same row with `ask_` / `bid_` prefixes.
- **Same 20 depth levels** (5, 10, 15, 20, 25, 50, 75, 100, then every 25 up to 500 bps), with suffixes such as `_5bps` instead of `005`.
- **Size in the venue unit on both sides** (e.g. USD on Deribit inverse perpetuals). Kaiko also adds `usd_million`, meaningful on linear contracts only (see §5).
- **Reference price:** Kaiko measures levels from the mid price by default; add `slippage_ref`=`best` to match Amberdata (best bid / best ask).
- **Best bid, best ask, mid price and spread are not on this endpoint**; they are on the Futures Bid Ask Spread endpoint.
- **Exchange and instrument move into the URL path**; the market (`{instrument_class}`) becomes explicit (see §2–3).

Coverage & distribution

Data type: Order book aggregation (depth per level)

Markets: CEX dated futures and perpetual futures

Granularity: Amberdata: a snapshot every minute, last 24 hours by default. Kaiko: one snapshot per `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`	`/v2/data/order_book_snapshots.v1/exchanges/{exchange}/{instrument_class}/{instrument}/ob_aggregations/volume_depth`
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	Moves to the URL path. Kaiko instrument code, e.g. `BTC-PERPETUAL` → `btc-usd` on Deribit (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.
—	`interval`	NEW	**Aggregation interval; default `1d` .** Any duration from 1 second to 1 day, suffixed `s` , `m` , `h` or `d` (e.g. `30s` , `15m` , `4h` , `1d`); maximum 1 day.
`timeFormat` (optional)	—	REMOVED	Kaiko returns Unix milliseconds.
—	`slippage_ref`	NEW	**Reference price of the depth levels.** Default `mid_price` ; set `best` to measure levels from the best bid / best ask, as Amberdata does.
—	`slippage`	NEW	Shared order book aggregation parameter, echoed in `query` (default `0`); not used for depth.
—	`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.
`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 interval. `{X}` = level in basis points, Kaiko suffix `_{X}bps` (e.g. `_5bps`), Amberdata suffix on three digits (e.g. `005`). Levels: 5, 10, 15, 20, 25, 50, 75, 100, then every 25 up to 500 bps.

Amberdata field	Kaiko field	Change	Notes
`exchange` , `instrument`	—	REMOVED	Not repeated per row; recoverable from the request path or `query` .
`side`	—	REMOVED	Kaiko returns both sides in each row, prefixed `ask_` / `bid_` .
`timestamp`	`poll_timestamp`	RENAMED	Unix milliseconds; timestamp of the interval snapshot on Kaiko.
`basisPoints{XXX}`	`ask_volume_{X}bps` , `bid_volume_{X}bps`	RENAMED	Depth size within the level, **in the venue order size unit on both sides** (e.g. USD on Deribit inverse perpetuals); decimal string on Kaiko.
`basisPoints{XXX}` `OrderCount`	`ask_order_count_{X}bps` , `bid_order_count_{X}bps`	RENAMED	Number of orders within the level; integer.
—	`ask_usd_million_{X}bps` , `bid_usd_million_{X}bps`	NEW	Depth in quote value, in millions. Not returned by Amberdata's derivatives depth endpoint. **On inverse contracts (e.g. Deribit), size is already in USD, so this field is not a USD amount: use the `volume` fields instead.** Computed as size × price / 1,000,000.

Amberdata field	Kaiko field	Change	Notes
`bestBidPrice`, `bestAskPrice`, `midPrice`	—	REMOVED	Not on this endpoint. Available from Kaiko's order book aggregation `full` endpoint (see the Futures – OB Depth – Bid Ask Spread guide).
`spreadPercent`	—	REMOVED	Same: available from the `full` aggregation (Futures – OB Depth – Bid Ask Spread guide).

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

Levels and units match, so depth values should be close once rows are aligned on time and sides are merged. Differences come from the granularity (a snapshot every minute on Amberdata, one per `interval` on Kaiko) and from the default reference price of the levels.

- **Granularity.** Amberdata returns one snapshot per minute (last 24 hours by default); Kaiko returns one snapshot per `interval` (default `1d`). Use a short interval to follow intraday changes.
- **Reference price.** Kaiko measures levels from the mid price by default, Amberdata from the best bid / best ask. Use `slippage_ref` = `best` to compare like with like; the narrow levels change most.
- **Prices and spread.** Use the Bid-Ask Spread endpoint for best bid, best ask, mid price and spread.
- **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 sizes and values as decimal strings, order counts as integers.

8 Before / after example

Request

Amberdata

```
GET https://api.amberdata.com/markets/derivatives
    /analytics/futures-perpetuals/depth
    ?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/volume_depth
    ?interval=1h
    &slippage_ref=best
X-Api-Key: <your key>
```

Response

Same instrument on both sides (Deribit BTC perpetual). Amberdata: example from its documentation (shortened). Kaiko: real sample with `slippage_ref=best`, sizes in USD. Different dates, so values are not comparable.

Amberdata

```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [
      {
        "basisPoints005": 6.830253600000002,
        "basisPoints005OrderCount": 60,
        "basisPoints010": 29.522870730000008,
        "basisPoints010OrderCount": 111,
        ... (015 to 500)
        "bestAskPrice": 82695.55,
        "bestBidPrice": 82691.18,
        "exchange": "deribit",
        "midPrice": 82693.36499999999,
        "instrument": "BTC-PERPETUAL",
        "side": "ask",
        "spreadPercent": 0.005284583593871039,
        "timestamp": 1742342400000
      },
      ...
    ]
  }
}
```

Kaiko

```
{
  "query": {
    "interval": "1d",
    "aggregation": "volume_depth",
    "exchange": "drbt",
    "instrument_class": "perpetual-future",
    "instrument": "btc-usd",
    "slippage": 0,
    "slippage_ref": "best",
    "sort": "desc",
    "page_size": 10,
    ...
  },
  "data": [
    {
      "ask_order_count_5bps": 44,
      "ask_usd_million_5bps": "77853.72378",
      "ask_volume_5bps": "998270",
      "bid_order_count_5bps": 45,
      "bid_usd_million_5bps": "87793.32341",
      "bid_volume_5bps": "1126190",
      ... (all 20 levels, ask and bid)
      "poll_timestamp": 1793491200000
    },
    ...
  ],
  "result": "success",
  ...
}
```