Kaiko

MIGRATION GUIDE

Volatility Index Decorated

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you: Deribit's **DVOL** volatility index for BTC or ETH, one row per bar, next to the **30-day implied volatility smile at the same minute**: the index close, the at-the-money and 50-delta volatilities, the 25-delta call and put volatilities, their risk reversal, and the index and underlying prices.

What changes for you

- You will call a new endpoint, `/analytics/volatility/volatility-index-decorated`, using your Kaiko API key in the `X-Api-Key` header (§2).
- `currency=BTC` becomes `base_asset=btc`, in lowercase and without a quote asset. `exchange` is optional, and its only value is `drbt`, for Deribit (§3, §6).
- `start_time` is now required, whereas Amberdata served a default window when no date was given. `timeInterval=hour` becomes `interval=1h` (§3).
- Volatilities, including the index close, are now returned as decimals, for example `0.3738` where Amberdata returned `37.38` (percent).
- Field names now use snake_case, for example `delta25RrSkew` becomes `risk_reversal_25` and `exchangeTimestamp` becomes `value_time`, an ISO 8601 string. `daysAgo`, `exchange`, `instrument` and `currency` are no longer returned (§5).
- The window, the sampling and the limits stay the same as on Amberdata.

Coverage & distribution

Data type: Time series, one row per bar, newest first

Index: Deribit DVOL, for BTC and ETH

Smile: 30-day constant maturity of the delta surface, at the minute of the bar

Sampling: Every minute, hour or day (default), one bar each, not averaged

Range: Up to 1, 90 or 3,660 days per request (minute, hour, day)

History: From October 2024

Distribution: REST API

2 Endpoint & authentication

	Amberdata (today)	Kaiko (new)
Method	GET	GET
Base URL	`https://api.amberdata.com`	`https://api.kaiko.io`
Path	`/markets/derivatives/analytics/volatility/index-decorated`	`/analytics/volatility/volatility-index-decorated`
Auth	API key header `x-api-key`	API key header `X-Api-Key` (your Kaiko key)

Header names are not case-sensitive, so `x-api-key` and `X-Api-Key` refer to the same header: only the key itself changes. **Versioning:** Amberdata reported its version in `payload.metadata.api-version` (`2023-09-30`). Kaiko accepts an optional `api_version` query parameter (the default and current version is `2026-10-01`) and returns it in `meta.api_version`.

3 Request parameters

Amberdata param	Kaiko param	Change	Notes
`currency` (required)	`base_asset` (required)	RENAMED	`BTC` → `btc`, `ETH` → `eth`. Lowercase only. No quote asset.
`exchange` (optional)	`exchange` (optional)	RENAMED	`deribit` → `drbt`, the default and only value.
`startDate` (optional)	`start_time` (required)	RENAMED	**Now required.** Inclusive. ISO 8601 with a time zone.
`endDate` (optional)	`end_time` (optional)	RENAMED	Exclusive. Defaults to now. ISO 8601 with a time zone.
`timeInterval` (optional)	`interval` (optional)	RENAMED	`minute` → `1m`, `hour` → `1h`, `day` → `1d` (default). Amberdata's values return a 400 error.
`timeFormat` (optional)	None	REMOVED	Kaiko times are always ISO 8601 strings, the same as Amberdata's `timeFormat=iso`. You can simply remove it from your requests.
None	`sort` (optional)	NEW	`desc` (default, newest first, as Amberdata) or `asc`.
None	`api_version` (optional)	NEW	Lets you pin the response format. The default is `2026-10-01`.

Window and limits

- **Window:** `[start_time, end_time)`, the same as Amberdata: 2026-10-20 00:00 to 05:00 at `1h` returns 00:00 to 04:00 on both sides.
- **start_time is required:** without dates, Amberdata served its widest window, whereas Kaiko returns a 400 error. `end_time` defaults to now.
- **Sampling and limits, the same as Amberdata:** `1m` returns every minute, `1h` the bar at `hh:00`, and `1d` the one at 00:00 UTC. You can request at most 1, 90 or 3,660 days; a wider window, including a `start_time` alone further back than that, returns a 400 error. The whole window comes in one response, without pagination.
- **Gaps:** a bar is returned only when both the index and the surface exist at that minute, as on Amberdata, so a few bars can be missing.
- **Time format:** please use ISO 8601 with a time zone, for example `2026-10-20T00:00:00.000Z`. Amberdata also accepted a date alone or a time without zone, but Kaiko returns a 400 error for both.
- **History:** from October 2024.

4 Response envelope & metadata

These are the fields around the data, in other words the wrapper your parser reads before reaching the numbers. This envelope is **identical on every Amberdata endpoint**.

Amberdata field	Kaiko field	Change	Notes
`status`	None	REMOVED	Please use the HTTP status code (200) instead.
`title`	None	REMOVED	There is no equivalent on success.
`description`	None	REMOVED	There is no equivalent on success.
`payload.data`	`data`	RENAMED	Now at the top level. An **array** with one row per bar.
`payload.metadata`	`meta`	RENAMED	Now at the top level.
`api-version`	`api_version`	RENAMED	`2026-10-01` (Amberdata: `2023-09-30`).
None	`count`	NEW	The number of rows in `data` (bars).
None	`next_url`	NEW	Always `null`, since there is a single page.
None	`url`	NEW	Your request URL, including `api_version`.

On Amberdata, `api-version` sits inside `payload.metadata`. On Kaiko, `api_version`, `count`, `next_url` and `url` all sit inside `meta`.

Errors and empty results

- **Asset without a DVOL index:** Amberdata returned a 200 response with an empty `data` array (for example `DOGE`). Kaiko returns a **404** error with the code `unknown_instrument` (for example "drbt publishes no volatility index for doge").
- **Missing start_time:** Kaiko returns a **400** error, whereas Amberdata used a default window.
- **Uppercase or Amberdata codes:** Amberdata accepted any case. Kaiko returns a **400** error (for example `BTC`, `deribit`).
- **Start equal to or after end:** Amberdata returned a 200 response with an empty `data` array. Kaiko returns a **400** error.
- **No data in the window:** both APIs return a 200 response with an empty `data` array.
- **Missing or invalid parameter:** both APIs return a 400 error. Kaiko errors are `application/problem+json` (RFC 9457) bodies that include `status`, `title`, a `detail` message naming the parameter, and the code `invalid_parameter`.

5 Response data fields

Amberdata field	Kaiko field	Type	Change
`exchangeTimestamp`	`value_time`	string	RENAMED
`exchange`	None	string	REMOVED
`instrument`	None	string	REMOVED
`currency`	None	string	REMOVED
`daysAgo`	None	integer	REMOVED

Amberdata field	Kaiko field	Type	Change
`close`	`close`	number	RENAMED
`atm`	`atm`	number	RENAMED
`delta50`	`delta_50`	number	RENAMED
`deltaCall25`	`delta_call_25`	number	RENAMED
`deltaPut25`	`delta_put_25`	number	RENAMED
`delta25RrSkew`	`risk_reversal_25`	number	RENAMED
`indexPrice`	`index_price`	number	RENAMED
`underlyingPrice`	`underlying_price`	number	RENAMED

- **value_time** is the bar time, as an ISO 8601 string (`"2026-10-20T04:00:00.000Z"`), whereas Amberdata returned a number of milliseconds by default.
- **exchange, instrument and currency** are no longer repeated in the rows: they are in your request and in `meta.url` .
- **daysAgo** is not returned. It counted the whole days between the bar and the time of the request, so you can compute it from `value_time` if you need it.
- **close** is the DVOL close as a decimal. Deribit quotes DVOL in percentage points, so `37.38` becomes `0.3738` .
- **atm, delta_50, delta_call_25, delta_put_25** are the 30-day constant-maturity volatilities. They are `null` when the surface has no usable point at that minute. **risk_reversal_25** is `delta_call_25 - delta_put_25` , the equivalent of Amberdata's `delta25RrSkew` .
- **index_price** is the index (spot) price and **underlying_price** the forward price at the 30-day maturity, both in USD.

Units: all volatilities, `close` included, are annualised. Amberdata expressed them in percent (`37.38` = 37.38%), while Kaiko uses decimals (`0.3738` = 37.38%). Prices are in USD on both sides.

6 Exchange & venue names

For this endpoint, the venue is the exchange **publishing the volatility index**. Please map the exchange and the currency you send:

Amberdata exchange	Amberdata currency	Kaiko exchange	base_asset	History from
deribit	BTC	drbt	btc	Oct 2024
deribit	ETH	drbt	eth	Oct 2024

The index is Deribit's DVOL, published for BTC and ETH. It is quoted against no asset, so there is no `quote_asset` . Amberdata's codes (for example `deribit`) return a 400 error.

7 Will your values change?

Short answer

The calculation is the same: once volatilities are divided by 100, the values are directly comparable with Amberdata's. Only the precision of the risk reversal differs.

- **Same methodology:** the DVOL close is relayed as Deribit publishes it, not computed, and joined at the same minute to the 30-day constant maturity of the delta surface. The risk reversal is the 25-delta call minus the 25-delta put.
- **Precision:** Amberdata returned `delta25RrSkew` in single precision (for example `-3.4365132`), whereas Kaiko returns `risk_reversal_25` in double precision. The other fields have the same precision on both sides.

8 Before / after example

Request

Amberdata

```
GET https://api.amberdata.com
    /markets/derivatives/analytics
    /volatility/index-decorated
    ?currency=BTC
    &exchange=deribit
    &startDate=2026-10-20T00:00:00
    &endDate=2026-10-20T05:00:00
    &timeInterval=hour
x-api-key: <your-amberdata-key>
```

Kaiko

```
GET https://api.kaiko.io
    /analytics/volatility
    /volatility-index-decorated
    ?base_asset=btc
    &start_time=2026-10-20T00:00:00.000Z
    &end_time=2026-10-20T05:00:00.000Z
    &interval=1h
X-Api-Key: <your-kaiko-key>
```

Response (real responses, most recent bar; values rounded, fields reordered)

Amberdata


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [ {
      "exchangeTimestamp": 1792468800000,
      "exchange": "deribit",
      "instrument": "DERIBIT_BTC_DVOL_INDEX",
      "currency": "BTC",
      "daysAgo": 3,
      "close": 37.38,
      "atm": 36.26,
      "delta50": 36.13,
      "deltaCall25": 35.25,
      "deltaPut25": 38.69,
      "delta25RrSkew": -3.44,
      "indexPrice": 82028.56,
      "underlyingPrice": 82437.05
    },
    … 4 more hours, to 00:00
    ],
    "metadata": {
      "api-version": "2023-09-30"
    }
  }
}
```


Kaiko


```
{
  "data": [ {
    "value_time": "2026-10-20T04:00:00.000Z",
    "close": 0.3738,
    "atm": 0.3626,
    "delta_50": 0.3613,
    "delta_call_25": 0.3525,
    "delta_put_25": 0.3869,
    "risk_reversal_25": -0.0344,
    "index_price": 82028.43,
    "underlying_price": 82437.30
  },
  … 4 more hours, to 00:00
  ],
  "meta": {
    "api_version": "2026-10-01",
    "count": 5,
    "next_url": null,
    "url": "https://api.kaiko.io/analytics/
volatility/volatility-index-decorated?
base_asset=btc&start_time=2026-10-20T00:00:00.000Z
&end_time=2026-10-20T05:00:00.000Z&interval=1h&api
_version=2026-10-01"
  }
}
```