Kaiko

MIGRATION GUIDE

Delta Surfaces Floating, TradFi

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you: Amberdata's **Delta Surfaces Floating** for US-listed options becomes Kaiko's **TradFi Delta Surface Floating**. For one US-listed equity or ETF (IBIT, MSTR, COIN, ...), one row per 5-minute bucket and listed expiry: the implied volatility at the at-the-money point and at the 0.05 to 0.45 deltas, in steps of 0.05, on the call and the put side, with the spot price and the underlying rate of the expiry. The surface is computed from SpiderRock's level-1 option quotes with the same method on both sides.

What changes for you

- New endpoint and key: call `/analytics/volatility/tradfi-delta-surface-floating` with your Kaiko API key in the `X-Api-Key` header (§2).
- The ticker is lowercase: `currency=IBIT` becomes `base_asset=ibit` ; `quote_asset` is optional and always `usd` (§3, §6).
- `timeInterval=minute` becomes `interval=5m` (`5m` default, `1h` , `1d`); `daysToExpirationStart/End` become `start_days_to_expiry/end_days_to_expiry` , with the same meaning (§3).
- Volatilities are now returned as decimals, for example `0.2818` where Amberdata returned `28.18` (percent), rounded to 5 decimals (§5, §7).
- Field names move to snake_case, for example `deltaPut10` becomes `delta_put_10` , `expirationTimestamp` becomes `expiry` , and `timestamp` becomes `value_time` (§5).
- The same 23 underlyings are served (§6).

Coverage & distribution

Data type: Time series, one row per 5-minute bucket and listed expiry, newest bucket first

Sampling: Every 5 minutes during the US session (13:30 to 20:00 UTC on US daylight time), the bucket on the hour, or one bucket per trading day

Metrics: ATM and 0.05 to 0.45 delta call and put volatilities, per listed expiry · spot price and underlying rate of the expiry

Underlyings: 23 US-listed crypto ETFs and crypto-exposed equities (§6)

Range: Up to 7, 90 or 3,660 days per request (5m, 1h, 1d)

History: From 21 October 2026; a backfill to extend the available history is in progress

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/delta-surfaces /floating/tradfi`	`/analytics/volatility /tradfi-delta-surface-floating`
Auth	API key header `x-api-key`	API key header `X-Api-Key` (your Kaiko key)

Header names are not case-sensitive: `x-api-key` and `X-Api-Key` are the same header, only the key changes. **Versioning:** Amberdata reports its version in `payload.metadata.api-version` (`2023-09-30`). Kaiko takes an optional `api_version` query parameter (default and current `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	The ticker, written in lowercase: `IBIT` becomes `ibit` (§6).
None	`quote_asset` (optional)	NEW	Always `usd` , the default; you can omit it.
`startDate` (optional)	`start_time` (optional)	RENAMED	Inclusive on both sides. ISO 8601 with a time zone.
`endDate` (optional)	`end_time` (optional)	RENAMED	Exclusive on both sides. ISO 8601 with a time zone.
`timeInterval` (optional)	`interval` (optional)	RENAMED	`minute` → `5m` (default), `hour` → `1h` , `day` → `1d` .
`daysToExpirationStart` (optional)	`start_days_to_expiry` (optional)	RENAMED	Inclusive lower bound, in whole days, on both sides.
`daysToExpirationEnd` (optional)	`end_days_to_expiry` (optional)	RENAMED	Exclusive upper bound, on both sides: 7 to 31 keeps the expiries from 7 days out to just under 31.
`timeFormat` (optional)	None	REMOVED	No longer needed: Kaiko always returns times as ISO 8601 strings.
None	`sort` (optional)	NEW	`desc` (default, newest first, as with Amberdata) or `asc` .
None	`api_version` (optional)	NEW	Pins the response format to a version. Default `2026-10-01` .

Window, sampling and limits

- **Boundary, the same as Amberdata:** the window is `[start_time, end_time)`, meaning that the bucket at `start_time` is included and the one at `end_time` is not.
- **Sampling:** with `5m` you receive every bucket of the US session. With `1h` you receive the bucket on each hour (`hh:00` UTC), as with Amberdata's `hour`. With `1d` you receive one row per expiry and New York trading day, taken from the 15:00 America/New York bucket (19:00 UTC on US daylight time, 20:00 UTC otherwise), as with Amberdata's `day`. Two cases differ from Amberdata, which served no row at all for such a day: when that bucket is missing, Kaiko serves the latest bucket available before it on that day, so that the day still has a row; and for the day in progress, Kaiko serves the latest bucket so far, a provisional value that is replaced once the 15:00 bucket exists.
- **Defaults:** without dates, both sides return the latest bucket. With `start_time` alone, Kaiko returns everything from that time until now. With `end_time` alone, Kaiko cannot infer a window and returns 200 with an empty `data` array; we recommend always sending both bounds.
- **Limits:** up to 7 days per request at `5m` (Amberdata allowed 1 day), and, as with Amberdata, 90 days at `1h` and 3,660 days at `1d`. A wider window returns a 400 error whose message names the maximum. The whole window comes back in a single response; there is no pagination to handle.
- **Expiry filter:** `start_days_to_expiry` is inclusive and `end_days_to_expiry` exclusive, as Amberdata's, each usable alone, whole days from 1 to 3,660; a start at or after the end returns a 400 error, and a filter that keeps no expiry returns 200 with an empty `data` array. Please note that Kaiko does not recognise Amberdata's values: `interval=minute` or an uppercase ticker also return a 400 error.
- **Time format:** ISO 8601 with a time zone, e.g. `2026-10-23T18:25:00.000Z`. Amberdata also accepted a time without a time zone; Kaiko requires one and returns a 400 error otherwise.

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`	None	REMOVED	Use the HTTP status code (200).
`title`	None	REMOVED	No equivalent on success.
`description`	None	REMOVED	No equivalent on success.
`payload.data`	`data`	RENAMED	Top level. **Array**, one row per bucket and expiry.
`payload.metadata`	`meta`	RENAMED	Top level.
`api-version`	`api_version`	RENAMED	`2026-10-01` (Amberdata: `2023-09-30`).
None	`count`	NEW	Rows in `data`.
None	`next_url`	NEW	Always `null` (one page).
None	`url`	NEW	Your request URL, with `api_version`.

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

Errors and empty results

- **Ticker not served:** where Amberdata returned 200 with an empty `data` array, Kaiko returns **404** with the code `unknown_instrument` (for example "spy-usd is not a served US-listed option underlying"), so that a wrong ticker is caught immediately.
- **Uppercase ticker:** Amberdata accepted any case; Kaiko expects lowercase and returns **400** for `IBIT`, for example.
- **Start equal to or after end:** Kaiko returns **400**.
- **No data in the window:** outside the session, on a weekend or with an expiry filter that keeps nothing, both sides return 200 with an empty `data` array.
- **Missing key:** a request without an API key returns **401** with the code `missing_api_key`.
- **Missing or invalid parameter:** both sides return 400. Kaiko error bodies follow the `application/problem+json` standard (RFC 9457): they carry a `status`, a `title`, a `detail` message that names the parameter at fault, and the code `invalid_parameter`.

5 Response data fields

Amberdata field	Kaiko field	Type	Change
`timestamp`	`value_time`	string	RENAMED
`exchange`	None	string	REMOVED
`currency`	None	string	REMOVED
`expirationTimestamp`	`expiry`	string	RENAMED
`daysToExpiration`	`days_to_expiry`	number	RENAMED
`indexPrice`	`index_price`	number	RENAMED
`underlyingRate`	`underlying_rate`	number	RENAMED
`multiplier`	`multiplier`	number	IDENTICAL
`atm`	`atm`	number	IDENTICAL
`deltaPut05` … `deltaPut45` (9 fields)	`delta_put_05` … `delta_put_45`	number	RENAMED
`deltaCall05` … `deltaCall45` (9 fields)	`delta_call_05` … `delta_call_45`	number	RENAMED

- **value_time** is the bucket time, ISO 8601 (`"2026-10-23T18:25:00.000Z"`); Amberdata returned it as epoch milliseconds by default (`1792779900000`).
- **exchange, currency** are no longer repeated in the rows: the ticker is in your request and in `meta.url`.
- **expiry** is the listed expiry, ISO 8601 at 00:00 UTC (`"2026-10-26T00:00:00.000Z"`); Amberdata returned it as epoch milliseconds (`1792972800000`). Rows are listed by ascending expiry within a bucket, as Amberdata.
- **days_to_expiry** is the time to that expiry in days, with two decimals, on both sides (`2.23`).

- **index_price** is the spot price of the underlying in dollars, and **underlying_rate** the underlying rate of the expiry, as a decimal (`0.04602` = 4.602%), on both sides. Both fields are per expiry, so they can differ slightly between the rows of a bucket.
- **delta_put_05 to delta_put_45, delta_call_05 to delta_call_45** are the nine put and nine call levels, the same levels as Amberdata's `deltaPut05` to `deltaPut45` and `deltaCall05` to `deltaCall45`: `deltaPut10` becomes `delta_put_10`. When a delta level lies beyond the options actually quoted on that side, the value is `null`, at Amberdata as at Kaiko.

Units: volatilities are annualised. Amberdata: percent with 2 decimals (`28.18` = 28.18%). Kaiko: decimal with 5 decimals (`0.2818` = 28.18%, served with 5 decimals, e.g. `0.28183`), one more digit than Amberdata. `index_price`, `underlying_rate` and `multiplier` keep their units.

6 Exchange & venue names

For this endpoint there is no exchange parameter: the options are US-listed, and the venue is fixed on both sides (Amberdata returned `exchange: "tradfi"` in every row, Kaiko does not repeat it).

Same coverage, lowercase ticker: Kaiko serves the same 23 underlyings as Amberdata, with `quote_asset=usd` for all of them. The only change is the case of the ticker you send: Amberdata's uppercase `currency` becomes Kaiko's lowercase `base_asset`, `IBIT` → `ibit`, `MSTR` → `mstr`. Please note that an uppercase ticker returns a 400 error.

Served underlyings: ARKB, BITB, BITO, BITQ, BITX, BMNR, COIN, CRCL, EETH, ETHA, ETHE, ETHU, FBTC, FETH, GBTC, GME, IBIT, MARA, MSTR, MSTU, MSTY, SATO, SBET. History on Kaiko starts on 21 October 2026 for every underlying; the Kaiko teams are working on a backfill to extend the available history.

7 Will your values change?

Short answer

The method is the same: Kaiko runs Amberdata's calculation on the same vendor quotes, expiry by expiry. Your volatilities keep their level once divided by 100; they can differ by a few hundredths of a volatility point on some buckets, because Amberdata and Kaiko read the quotes at a different instant within the 5-minute bucket. `underlying_rate`, `days_to_expiry` and `multiplier` are unchanged. The same dates return the same buckets.

- **Same source and method:** SpiderRock's level-1 mark implied volatilities of every listed option on the underlying. For each listed expiry, each wing is interpolated linearly in variance along the quoted options of its own side (calls for the call deltas, puts for the put deltas), and the at-the-money point in strike at the spot. Neither side extrapolates: a delta level beyond the quoted options is `null`, at Amberdata as at Kaiko.
- **Units and precision:** decimal instead of percent, so `28.18` becomes `0.2818`. Kaiko rounds to 5 decimals (`0.28183`), one more digit than Amberdata's 2 decimals in percent.
- **Snapshot within the bucket:** the vendor refreshes its quotes several times per 5-minute bucket. Kaiko computes on the first quote of each option in the bucket; Amberdata computed on the last. On an active day the two surfaces can differ by a few hundredths of a volatility point on some buckets, and `index_price` by a fraction of a cent, with no systematic sign.
- **At-the-money point:** Kaiko interpolates the at-the-money volatility at the expiry's spot, the average over its quotes; Amberdata interpolated it at the midpoint of the two strikes around the spot. The effect is below a hundredth of a volatility point.
- **Daily rows:** the same 15:00 America/New York bucket as Amberdata. Kaiko additionally serves a row when that bucket is missing (the latest one available before it) and for the day in progress (a provisional value, see §3).

8 Before / after example

Request

Amberdata

```
GET https://api.amberdata.com
    /markets/derivatives/analytics
    /volatility/delta-surfaces
    /floating/tradfi
    ?currency=IBIT
    &startDate=2026-10-23T18:25:00
    &endDate=2026-10-23T18:30:00
x-api-key: <your-amberdata-key>
```

Kaiko

```
GET https://api.kaiko.io
    /analytics/volatility
    /tradfi-delta-surface-floating
    ?base_asset=ibit
    &start_time=2026-10-23T18:25:00.000Z
    &end_time=2026-10-23T18:30:00.000Z
X-Api-Key: <your-kaiko-key>
```

Response (real responses, one 5-minute bucket, the first of its 27 listed expiries; fields reordered)

Amberdata


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [ {
      "timestamp": 1792779900000,
      "exchange": "tradfi",
      "currency": "IBIT",
      "expirationTimestamp": 1792972800000,
      "daysToExpiration": 2.23,
      "indexPrice": 46.0854469413188,
      "underlyingRate": 0.04602000117301941,
      "multiplier": 100,
      "atm": 28.18,
      "deltaPut05": 39.83,
      "deltaPut10": 33.8,
      "deltaPut15": 32.18,
      "deltaPut20": 31.02,
      "deltaPut25": 30.18,
      "deltaPut30": 29.46,
      "deltaPut35": 29.12,
      "deltaPut40": 28.78,
      "deltaPut45": 28.43,
      "deltaCall05": 35.51,
      "deltaCall10": 29.68,
      "deltaCall15": 28.51,
      "deltaCall20": 27.71,
      "deltaCall25": 27.59,
      "deltaCall30": 27.47,
      "deltaCall35": 27.35,
      "deltaCall40": 27.6,
      "deltaCall45": 27.87
    }
    … 26 more expiries, 3 to 818 days
    ],
    "metadata": {
      "api-version": "2023-09-30"
    }
  }
}
```


Kaiko


```
{
  "data": [ {
    "value_time": "2026-10-23T18:25:00.000Z",
    "expiry": "2026-10-26T00:00:00.000Z",
    "days_to_expiry": 2.23,
    "index_price": 46.08627450980395,
    "underlying_rate": 0.046020000000000026,
    "multiplier": 100,
    "atm": 0.28065,
    "delta_put_05": 0.39834,
    "delta_put_10": 0.33799,
    "delta_put_15": 0.32177,
    "delta_put_20": 0.31021,
    "delta_put_25": 0.30178,
    "delta_put_30": 0.29448,
    "delta_put_35": 0.29064,
    "delta_put_40": 0.28675,
    "delta_put_45": 0.28281,
    "delta_call_05": 0.35511,
    "delta_call_10": 0.29678,
    "delta_call_15": 0.28508,
    "delta_call_20": 0.27711,
    "delta_call_25": 0.27602,
    "delta_call_30": 0.27492,
    "delta_call_35": 0.27382,
    "delta_call_40": 0.27632,
    "delta_call_45": 0.27883
  }
  … 26 more expiries, 3 to 818 days
  ],
  "meta": {
    "api_version": "2026-10-01",
    "count": 27,
    "next_url": null,
    "url": "https://api.kaiko.io/analytics/
volatility/tradfi-delta-surface-floating?
base_asset=ibit&start_time=2026-10-23T18:25:00.000
Z&end_time=2026-10-23T18:30:00.000Z&api_version=20
26-10-01"
  }
}
```