

Dataset description

For historical data on trades, klines and aggtrades (both Futures and Spot) users can download directly from our public website. Please refer to our github page: <https://www.binance.com/en/landing/data>

Data update frequency: T+1; normally ready at utc+0 4:00

Data type

- T_DEPTH: tick-by-tick order book (level 2). Directly fetched from our api, will have gapes.
- S_DEPTH: order book snapshot (level 2); temp data solution only for BTCUSDT at the moment.
- T_DEPTH_BACKFILL: tick-by-tick order book (level 2). T_DEPTH backfilled with internal logs. Currently in beta. And will stop producing in mid-july 2021, resume date TBD.

tick-by-tick order book, level 2 (T_DEPTH, T_DEPTH_BACKFILL)

Schema

field	desc
symbol	symbol
time	transaction time, timestamp
first_update_id	-
last_update_id	-
pu	Last_update_id of previous row, to help exam completeness. Only applicable to coin-m futures depth update (not orderbook snapshot).
side	a = ask (SELL order) b = bid (BUY order)
update_type	snap = used for order book snapshot only set = set price level to current qty (not delta) delta = qty change of the price level (delta)
price	-
qty	-

sample data

symbol	timestamp	first_update_id	last_update_id	side	update_type	price	qty
BTCUSDT	1593647999921	39538108420	39538108420	a	set	9235.09	0
BTCUSDT	1593647999933	39538108444	39538108444	a	set	9236.04	0.852

BTCUSDT	1593647999954	39538108472	39538108472	b	set	9219.67	0
BTCUSDT	1593647999983	39538108497	39538108497	a	set	9236.04	0.912
BTCUSDT	1593647999983	39538108498	39538108498	a	set	9235.11	0

Symbol

COIN-M and USDT-M futures are all supported (queried through different symbol, for example: 'BTCUSDT', 'BTCUSD_200925')

Time

2020/07/01 to date; for newly launched symbols starting from the launch date.

Completeness

For coin-m futures, a small part of the datasets when missing, detailed as below

- 2020.09.27 lost 18 seconds
- 2020.10.24 lost 121 seconds

You can use the `pu` to check the datasets yourselves.

For usdt-m futures, the datasets are guaranteed to be complete, as they are reproduced from internal logs; you are welcome to compare this to any collected datasets, and if there is any difference, feel free to tell us.

Order book snapshot, level 2 (S_DEPTH)

Currently only support BTCUSDT at around 1s (1000 ms) interval with 20 price levels. A small part of the data is missing, and will be back filled in the future. `ts` refers to `transaction_time`.

Historical Data Download API

General Info

The data download API is part of the Binance API (<https://binance-docs.github.io/apidocs/spot/en/#general-api-information>).

For how to use it, you may find info there with more examples, especially SIGNED Endpoint security as in https://binance-docs.github.io/apidocs/spot/en/#signed-trade-user_data-and-margin-endpoint-security

For accessing Futures data, the API account also needs to open a Futures account. The futures id will be whitelisted (not the IP).

Get Download ID For Futures Hist Data (USER_DATA)

POST /sapi/v1/futuresHistDataId (HMAC SHA256)

For bulk data download, it may take hours to generate the download link; it's recommended requesting within 1-3 months length each time, especially for tick-level order book data.

For data type info (available symbol and time range), please refer to `dataset description`.

Weight: 1000

Parameters:

Name	Type	Mandatory	Description
symbol	STRING	YES	
startTime	LONG	YES	Timestamp in ms; INCLUSIVE
endTime	LONG	YES	Timestamp in ms; INCLUSIVE
dataType	ENUM	YES	"T_DEPTH", "S_DEPTH" "T_DEPTH_BACKFILL"
recvWindow	LONG	NO	
timestamp	LONG	YES	

Response:

```
{  
  "id": "11141ad13d1"  // download id  
}
```

Get Download Link by ID (USER_DATA)

GET /sapi/v1/downloadLink (HMAC SHA256)

Download link expiration: 24h

Weight: 1000

Parameters:

Name	Type	Mandatory	Description
downloadId	STRING	YES	
recvWindow	LONG	NO	
timestamp	LONG	YES	

Response:

```
{  
  "link": "www.binance.com",      // download link  
  "expirationTime": 1566813600,  // the link would expire after this timestamp  
}
```

Changelog

2021/07/01

Update description for T_DEPTH_BACKFILL; may pause for some time.

2021/04/28

Add description of T_DEPTH_BACKFILL

Remove docs for index price (as can be accessed from data.binance.vision)

2021/03/23

Remove T_TRADE data from doc. Will be publically available in [binance.vision](https://data.binance.vision).

Ref. <https://github.com/binance/binance-public-data/>

2020/11/13

Support T_DEPTH for USDT-m futures (all symbol starting from 2020/07/01);

Download limit rules improvements

Add docs for mark price, index price

2020/11/06

Support T_DEPTH for Coin-m futures (all symbol starting from 2020/07/01)

2020/10/30

support T_DEPTH for USDT-M futures (BTCUSDT, ETHUSDT, starting from 2020/07/01)

2020/08/12

support T_TRADE for COIN-M futures

2020/06/18

add second-level S_DEPTH data (BTCUSDT only)

group data file into day interval

add description for data types, support symbol; omit interval in doc for possible errors