# **Bookmap Connectivity**

Please read the following important notes.

Bookmap is a stand-alone trading platform. **Data and brokerage services are not included** with the subscription to or purchase of Bookmap; you will need to provide these services in order to connect Bookmap to the live markets. <u>Click here</u> for a list of the supported brokers

Bookmap connects to three different types of markets: US stocks, futures, and digital currencies (crypto). You can connect to US stocks, several futures data feeds, and several digital currency exchanges all at the same time in Bookmap.

Bookmap functions on Windows and Mac (it also works on <u>Linux</u> but is not officially supported). You can install Bookmap on as many machines as you like; however, you can only access one copy of Bookmap at a time. The Bookmap Global+ version allows you to access Replay Mode on a secondary machine.

There are a few different versions of Bookmap; click here for more information and pricing.

- Bookmap Digital: FREE version that supports crypto with one instrument only
- Bookmap Global: connects to stocks, futures and multiple crypto currencies
- Bookmap Global+: in addition to the features in Global, it contains add-ons and the ability to trade from the chart

## **US Stocks Connectivity**

# **dxFeed** for US Stocks

A subscription to dxFeed is required in order to connect Bookmap to US stocks. Currently this is the only method for connecting Bookmap to the US stock markets with full depth data. <u>dxFeed for stocks data can be purchased from bookmap.com</u>.

Notes:

- dxFeed covers all US equities.
- Supported market data feeds at this stage are Nasdaq TotalView (full depth), Cboe/EDGX (full depth) and NBBO. ARCA and other ECNs are not included in the dxFeed's market depth data so you might see order book discrepancies. To learn more about NBBO, <u>click here</u>.
- Up to 24 hours of backfill data can be merged with real-time data upon subscription to a new symbol. The resolution of backfill data is one second. It consolidates data from the following feeds:
  - Nasdaq TotalView full depth
  - Cboe/EDGX (BATS) full depth
- When subscribing to dxFeed data, you are only receiving data and not brokerage services. If you have an account with TradeStation or Interactive Brokers, you can get the data via dxFeed and trade via your brokerage account. More details are provided below.

For pricing of dxFeed stocks & futures market data, please go to dxfeed.bookmap.com

## Subscribing to dxFeed Data for US Stocks

A subscription to dxFeed is available via your account @ Bookmap. Once you <u>subscribe to</u> <u>Bookmap</u>, log into the <u>www.Bookmap.com/portal</u>. Then in the left margin toolbar, click on "**Addons**". Choose the desired dxFeed subscription and go through the purchasing process.

### Connection

Watch this video to learn how to connect dxfeed / US Stocks to Bookmap

## BROKERS

# dxFeed **TradeStation** for US Stocks only

If you have Bookmap Global+ version 7.1 or greater and a TradeStation account, it is possible to route live trades from Bookmap to your TradeStation account for stocks. Note that a dxFeed subscription is still required in order to get the US stocks data into Bookmap. You are not receiving TradeStation stock data, you are only routing your trading decisions from Bookmap to your Tradestation account.

### Pricing

Special pricing is available for TradeStation

### Connection

To learn how to connect dxFeed, Bookmap & TradeStation, watch this connection video



If you have Bookmap Global+ 7.0 and an Interactive Brokers account, it is possible to route live trades from Bookmap to your Interactive Brokers account. A dxFeed data subscription for stocks is still required in order to get the US stocks data into Bookmap. You are not receiving Interactive Brokers stock data, you are only routing your trading decisions from Bookmap to your Interactive Brokers account.

## **Futures Connectivity**

As a stand-alone platform, Bookmap connects to several data providers such as Rithmic (MBO & full depth), dxFeed (full depth), CQG Continuum, Gain Capital, IQFeed, and Transact. If your broker supports one of those platforms, you can get credentials from your broker and use Bookmap to visualize the market data and trade. If your broker doesn't support those platforms, you can subscribe directly to the data provider for data only. Note that in order to trade from the Bookmap chart to your funded account you have to have the Bookmap Global+ version.

Futures backfill data of up to 24 hours is available for all connections. To learn more about this <u>click here</u>.



Rithmic offers high quality futures data. We recommend Rithmic data for Bookmap.

You can subscribe directly to Rithmic for market data. Please <u>contact Rithmic</u> for more details as well as for <u>14 day free trial</u>.

Notes:

- Rithmic data consists of full depth market data for the majority of futures markets.
- For CME futures, Rithmic provides Market-by-Order data.
- Rithmic does not offer brokerage services. See list of brokers that offer Rithmic.
- You can use the same Rithmic market data credentials in Bookmap for other platforms. Additional costs may apply.

## Connection

While configuring connectivity in Bookmap, pay attention to the Rithmic System/Gateway combination. If you are not sure what Gateway should be set to, use the default settings.



You can connect Bookmap to dxFeed for futures. A subscription to dxFeed for futures is offered via your account on Bookmap. Once you <u>subscribe to Bookmap</u>, log into the <u>www.Bookmap.com/portal</u>, click on "Addons" in the left margin and choose the desired dxFeed subscription. For pricing of dxFeed stocks & futures market data, please go to <u>dxfeed.bookmap.com</u>.

Notes:

- dxFeed offers full depth market data for CME and ICE.
- dxFeed does not offer brokerage services directly. Routing trading activity to other brokers is not supported at this time.

### Connection

Watch this video to learn how to connect dxfeed futures to Bookmap



Bookmap connects to Gain Capital OEC futures data. You can subscribe directly to <u>Gain Capital</u> for Futures data visualization here.

Notes:

- Gain Capital does not currently offer full depth market data for futures.
- See <u>list of brokers that offer Gain</u>. Reach out to the various brokers to understand data costs and any trading fees associated with Gain Capital OEC data.
- The Stage 5 platform is based on Gain Capital OEC data.

### Connection

Watch this video to learn how to connect OEC futures to Bookmap



Bookmap connects to CQG Continuum data only; it does not connect to CQG IC nor any other CQG products. Note that CQG Continuum currently offers full depth market data only for COMEX and NYMEX exchanges and does not offer full depth for indexes or other CME futures.

You can subscribe directly to CQG Continuum for market data. Please <u>contact CQG Continuum</u> for more details.

Notes:

- CQG does not offer brokerage services. See <u>list of brokers that offer CQG Continuum</u>. Please reach out to the various brokers to understand data costs and any trading fees associated with CQG Continuum data.
- To connect Bookmap as a standalone consumer of CQG Continuum, request information from your broker for both Bookmap Private Label and CQG Continuum in CAST.
- You can use the same CQG Continuum market data credentials in Bookmap for other platforms. Additional costs may apply.

### Connection

To learn how to connect CQG Continuum for futures to Bookmap, watch this video



Bookmap connects to IQFeed futures for data,

You can subscribe directly to IQ Feed for Futures data visualization only.

Notes:

- No brokerage services are available directly from IQ Feed. <u>Click here to see list of</u> <u>brokers that offer IQFeed</u>. Please reach out to the brokers to understand data costs and any trading fees associated with IQFeed data.
- IQFeed does not currently offer full depth market data.

### Connection

Watch this video to learn how to connect IQFeed futures to Bookmap



Bookmap currently connects to Transact futures. You can subscribe directly to <u>Transact futures</u> <u>data here</u>.

Notes:

- Transact does not currently offer full depth market data for futures. It also has some stability-related issues; therefore, we do not recommend using Transact market data.
- <u>See list of brokers that offer Transact data</u>. Please reach out to the various brokers to understand data costs.

### Connection

Watch this video to learn how to connect Transact futures to Bookmap



Bookmap will offer connectivity to Brazilian futures markets via Cedro soon.



Bookmap connects to NinjaTrader 7 & 8. Data first arrives from a third party vendor into the NinjaTrader platform and then is output to Bookmap.

Notes:

- Although this method of connectivity is available, it is recommended to connect Bookmap as a standalone platform directly to the data provider. This will improve stability and the quality of the data received.
- Most NinjaTrader market data feeds do not contain full depth data. Rithmic contains full depth when connecting to NinjaTrader, however MBO data is not supported.

### Connection

Watch this video to learn how to connect NinjaTrader futures to Bookmap

## InteractiveBrokers TWS API Futures

Bookmap connects to Interactive Brokers (IB) Traders WorkStation's API (TWS) for futures for data only. You can subscribe directly to <u>Interactive Brokers</u>.

Notes:

- IB does not currently offer full depth market data for futures.
- Market data updates are not frequent; therefore, we do not recommend using IB data.
- If you're using dxFeed for futures market data, it is not possible to trade from the Bookmap chart into a live Interactive Brokers account. This is only possible with dxFeed stock data.

### Connection

Watch this video to learn how to connect Interactive Brokers TWS to Bookmap

## **TT .NET Futures Connectivity**

Bookmap connects to the TT .NET API. You can subscribe directly to <u>Trading Technologies</u>.

Note:

• TT.NET connectivity is relatively new and does not currently offer full depth market data for futures.

## **Digital Currency Exchanges**

Bookmap connects directly to several digital currency exchanges:

- → GDAX
- → BitMEX
- → Bitfinex
- → OKCoin
- → HitBTC
- → bitFlyer
- → Poloniex
- → Kraken
- → Okex

Notes:

- In Bookmap Digital (the free version), you can use Bookmap with one crypto instrument only, for both for market data visualization and trading. If you want more than one symbol at a time, you'll need to subscribe to Bookmap Global or Global+.
- A crypto exchange account is not required in order to connect to a crypto exchange.
- Some crypto adapters include both market data and trading access, and some include market data connectivity only.

### Connection

Most crypto adapters are already available as a part of Bookmap Version 7.1 in the External Plugins Manager (*Settings >> Manage* plugins).

# BookmapConnect API (Layer 0 API)

If a specific data connection is not offered here, you can develop your own Bookmap adapter via BookmapConnect (L0 API). This allows you to connect to exchanges, data vendors, and trading systems while maintaining full Bookmap functionality.

Notes:

- Typically, the development of a new adapter has two stages: data connectivity and trading connectivity.
- The implementation of trading functionality is not mandatory and can be even implemented partially, for instance, visualization of the evolution of trader's orders but without the ability to send or modify orders from the Bookmap chart.
- There are two distinct solutions that are based on the L0 API: Quant (paid) and Connect (free).

For more information click here.

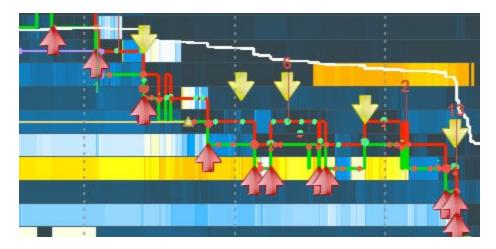
# **Connecting to your Own Data Source**

(Bookmap Quant Solution)

Bookmap Quant is required in order to connect your own data. It is used by proprietary HFT firms, banks, trading rooms, etc. These traders have their own data and trading systems. Bookmap uses nanoseconds timestamps.

#### FEATURES

The Bookmap Quant solution includes all built-in features and all of Bookmap's paid add-ons. In addition, it allows you to add and visualize custom indicators and custom order queue calculations (the order queue is displayed as markers on the order book column) as well as connect Bookmap to clients' proprietary sources of data. The display of custom indicators is fully configurable including usage of custom icons provided through the API as shown in this image:



#### PRICE

The base cost of the Bookmap Quant license is \$499 per seat per month, paid annually. For evaluating the Quant solution, Bookmap offers a one-month trial period of up to 5 seats for \$500. For more information, custom development, or special offers, please contact the Bookmap team at info@bookmap.com.

#### SECURITY

To support a fully secure solution, Bookmap Quant clients can use <u>Bookmap Offline Activation</u>. Bookmap is capable of operating without internet access. Users can configure a firewall to allow external access to their custom adapter only.

#### BOOKMAP RECORDER

One of the most frequent use cases of Bookmap Quant is debriefing of simulations and backtesting results. Unlike debriefing a trading session, there may be thousands of simulations per day. Since simulations typically run much faster than Bookmap's throughput (30–50k data events per second), and in order to avoid Bookmap being a bottleneck in the process, users can use a utility called Bookmap Recorder, **BookmapRecorder.jar**.

Bookmap Recorder is used to convert custom data into Bookmap-readable format files, which can be opened by Bookmap in Replay mode. The throughput of Bookmap Recorder is roughly 150–200k data events per second, producing files of size ~12 bytes per data event. Users can integrate the recorder into their simulation software and then use Bookmap to replay only the relevant files. For the purpose of replaying data, Bookmap Recorder does not have any disadvantages compared to using the usage of L0 API directly.

## **Connecting to Backfill Data**

Bookmap version 7 and above provides up to 24 hours of backfill Data upon the subscription to an instrument,

Here's how it works: First, Bookmap attempts to load the historical data recorded during a previous trading session and stored on your computer in the *C*:\*Bookmap*\*Feeds* folder. Backfill data goes to the folder *C*:\*Bookmap*\*Data library*. If there is no previously recorded data or if it has gaps, Bookmap downloads the missing data from one of the following servers (depending on the instrument type).

Data Source	Supported Instruments	Free	Paid
Powered by Bookmap	Digital currency from supported exchanges	Up to 48 hours	
Powered by Devexperts	US stocks and futures(*)	Up to 1 hour	Up to 24 hours for \$14/mo. per exchange

(\*) Supported futures exchanges are CME, ICE, and Eurex.

Notes:

- Backfill Data must not be confused with Historical Data. Backfill Data is what precedes the moment of a real time subscription while historical data is what is played by Bookmap Replay.
- The backfill data is not recorded into the Bookmap data files ".bmf". These files contain only the real time data collected from the moment of subscribing to a given instrument. However, users can save the complete data via *File >> Export*.
- Not all crypto exchanges support backfill data at this time.

## **Supported Brokers**

Here is a partial list of the featured brokers. Not all brokers are listed.

Stocks	Futures
TDAmeritrade (soon)	TDAmeritrade (soon)
TradeStation Data subscription via dxFeed with trading activity routed to TradeStation Interactive Brokers Data subscription via dxFeed with trading activity routed to Interactive Brokers	TradeStation (soon) Stage Five Rithmic, CQG, Gain OEC, IQFeed, TT.Net Optimus Futures Rithmic, CQG, Gain OEC, IQFeed, TT.Net Cannon Trading Rithmic, CQG, IQFeed, TT.Net, Transact Discount Trading Rithmic, CQG, Gain OEC, IQFeed, TT.Net AMP Futures Rithmic, CQG, Gain OEC, IQFeed, TT.Net Infinity Futures CQG, Transact



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