

Fintechee

# FIX Trade Specification

Fintechee

for

**Fintechee FIX API Trading Platform**

by

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## Versions

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<b>FIX API Version Number</b>	<b>Date</b>	<b>Changes</b>
1.0	2024-05-28	Initial Version

## Introduction

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### Purpose

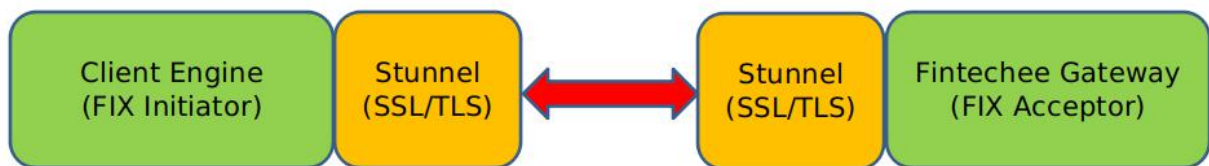
This document aims to delineate the guidelines for engaging with the Fintechee Financial Information eXchange (FIX) Gateway for trading purposes.

### Functionality

The Fintechee FIX 4.4 API is tailored for foreign exchange (FX), contracts for difference (CFDs), and cryptocurrencies trading. It facilitates integration with Fintechee's trade routing engine for the following functionalities:

- Connectivity
- Order Execution

### System Overview



### References

More information on Fintechee and the Fintechee FIX Gateway can be found at our website: [www.fintechee.com](http://www.fintechee.com)

## Connectivity

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### Introduction

Connecting to the Fintechee FIX 4.4 API:

- 1) Client opens socket connection to Fintechee FIX Gateway on pre-defined port.
- 2) Client sends FIX Logon Message (35=A)
- 3) Fintechee FIX Gateway sends FIX Logon Response (35=A)
- 4) Fintechee / Client exchange Heartbeat (35=0)

### Credentials

Customers connecting to the Fintechee FIX API will obtain the following information from the Fintechee FIX Gateway (Acceptor). This information should remain configurable within their Client FIX Engine (Initiator):

Trade Session	
IP Address	
Port	
SenderCompID	
TargetCompID	
Password	e.g. LogonTag=554=Password

### Whitelist(Live Only)

Before establishing a connection to Fintechee, it is necessary to arrange adjustments to the Fintechee firewall to allow the IP address from which the client intends to connect.

### Verification

Before testing FIX API conformance, all clients connecting to Fintechee via FIX should conduct a network connectivity test using a TELNET protocol client application. In Linux, open the terminal prompt and enter:

```
telnet <IP Address> <Port>
```

Success is indicated by a blank screen. For any errors encountered, please contact Fintechee Support.

### **Connection Keepalive Requirements**

Clients connected to Fintechee must send a Heartbeat (35=0) message to Fintechee on each connected FIX session at least once every 30 seconds. Sessions failing to meet this requirement may be disconnected due to lack of communication.

## FIX Messaging

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### Standard Header

The standard header included on all FIX Messages sent/received by Fintechee.

Standard Header					
Tag	Field Name	Required	Value	Type	Comments
8	BeginString	Y	FIX.4.4	String	Always first field in message.
9	BodyLength	Y	-	Int	Always second field in message.
35	MessageType	Y	-	String	Always third field in message.
34	MsgSeqNum	Y	-	Int	The sequence number of the message, can be embedded outside of header.
49	SenderCompID	Y	-	String	The SenderCompID supplied to the client by Fintechee.
52	Timestamp	Y	-	String	UTC time message was sent. (Including Milliseconds)
56	TargetCompID	Y	-	String	The TargetCompID supplied to the client by Fintechee.

### Logon

The client sends a Logon message to initiate a FIX session. The Fintechee FIX implementation includes the Password for authentication purposes in the original Logon message.

Logon (MsgType, 35=A)					
Tag	Field Name	Required	Value	Type	Comments
<Standard Header>					
108	HeartBtInt	Y	-	Int	Indicates how often the client would like to receive a periodic heartbeat from Fintechee, in seconds.  This value should be 60 or less.
141	ResetSeqNumFlag	N	-	Boolean	Must be Y.  Quickfix Settings: e.g. ResetOnLogon=Y
554	Password	Y	-	String	The password supplied to the client by Fintechee.  Quickfix Settings: e.g. LogonTag=554=Password

## Heartbeat

A Heartbeat message serves as a keep-alive and a means of verifying FIX connectivity, sent either by Fintechee to the client or vice versa. It is sent in response to a Test Request.

Client connections are required to send a Test Request to Fintechee at least once every 30 seconds.

Heartbeat (MsgType, 35=0)					
Tag	Field Name	Required	Value	Type	Comments
<Standard Header>					
112	TestReqID	N	-	String	The Test Request ID, if responding to a Test Request.

## Test Request

A Test Request message is used by either Fintechee or the client to verify two-way FIX connectivity. A Heartbeat message is then sent in response to the Test Request.

Test Request (MsgType, 35=1)					
Tag	Field Name	Required	Value	Type	Comments
<Standard Header>					
112	TestReqID	N	-	String	The Test Request ID, if responding to a Test Request.

## Resend Request

The Resend Request message is sent by the receiving application to request the retransmission of messages. It is used when a sequence number gap is detected, a message is lost by the receiving application, or as part of the initialization process.

Resend Request (MsgType, 35=2)					
Tag	Field Name	Required	Value	Type	Comments
<Standard Header>					
7	BeginSeqNo	Y	-	Int	The first sequence number from this session to resend.
16	EndSeqNo	Y	-	Int	The last sequence number from this session to resend is specified. It should be set to 0 to resend all messages following the BeginSeqNo.



## Reject

A Reject message is sent in response to an unsupported or badly formed FIX message from the client to Fintechee. When feasible, a reason and explanation for the rejection are provided.

**Note:** A FIX level reject differs from a trade level reject, which would be sent via an ExecutionReport or BusinessMessageReject. The Reject message is specifically intended for administrative or system level message rejections.

<b>Reject (MsgType, 35=3)</b>					
<b>Tag</b>	<b>Field Name</b>	<b>Required</b>	<b>Value</b>	<b>Type</b>	<b>Comments</b>
<b>&lt;Standard Header&gt;</b>					
371	RefTagID	N	-	Int	The FIX tag of the field that caused the FIX rejection.
372	RefMsgType	N	-	Int	The MsgType of the message that caused the FIX rejection.
373	SessionRejectReason	N	-	Int	An enumerated reason for the Reject message.
45	RefSeqNum	Y	-	Int	The MsgSeqNum of the message causing the Reject message.
58	Text	N	-	String	Text explaining the FIX Reject message.

## Logout

A Logout message is sent by either Fintechee to the client or the client to Fintechee to terminate a FIX session. Typically, most FIX engines automatically generate the Logout message and response. If applicable, the Fintechee FIX engine will provide a reason for the Logout in the Text (58) field.

<b>Logout (MsgType, 35=5)</b>					
<b>Tag</b>	<b>Field Name</b>	<b>Required</b>	<b>Value</b>	<b>Type</b>	<b>Comments</b>
<b>&lt;Standard Header&gt;</b>					
35	MsgType	Y	5	String	Tag 35=5 Indicates Logout.
58	Text	N	-	Text	Reason for the logout, if available.

### Summary

Upon establishing a connection to the Fintechee FIX API Trade Session, the client can initiate a trade by sending a NewOrderSingle message. The Fintechee FIX API will promptly respond with an ExecutionReport indicating ExecType (150) as "PendingNew" (A). If an order fails to become active due to credit or other issues, it will receive an ExecType of "BusinessMessageRejected" (j). It's worth noting that in Fintechee FIX, "partially filled" orders are not supported. Once an order is completely filled, an ExecutionReport with ExecType "Fill" (2) will be dispatched. In the event of a timeout or user-initiated cancellation, an ExecutionReport with ExecType "Canceled" (4) will be issued. In the Canceled report, the CumQty (14) field will be zero (0).

If a client intends to cancel the processing of a trade, they can send a FIX OrderCancel Message. If the order cannot be canceled, an OrderCancelReject message will be sent in response. Alternatively, the Fintechee FIX API will return an ExecutionReport with the type "Canceled".

### Messaging Sequence

1. Client Sends NewOrderSingle Message
2. Fintechee responds with ExecutionReport ExecType = "Pending New" (A)
3. Fintechee responds
  - with an ExecutionReport OrderStatus = "Fill" (1), ExecType = "Trade" (F)
  - or
  - with an ExecutionReport ExecType = "Canceled" (4)
  - or
  - with an ExecutionReport ExecType = "Rejected" (8)

### Order Type / Time In Force Chart

	GTC	FOK
Market	The system will attempt to fill the order until the Bridge market timeout value is reached. It will utilize the best price available for the requested volume.	The system only makes one pass to fill the order and must match a quote whose volume meets or exceeds the requested volume; it will not sweep the book.

<b>Limit</b>	The system will endeavor to fill the order until the OrderCancelRequest is reached. It must match a quote whose price is as good as or better than the requested price.	The system only makes one pass to fill the order and must match a volume that meets or exceeds the requested volume; it will not sweep the book. Additionally, it must match a quote whose price is as good as or better than the requested price.
<b>Stop</b>	The system will continue attempting to fill the order until the OrderCancelRequest is received. It must match a quote whose price is as bad as or worse than the requested price.	The system only makes one pass to fill the order and must match a volume that meets or exceeds the requested volume; it will not sweep the book. Additionally, it must match a quote whose price is as bad as or worse than the requested price.

## NewOrderSingle

NewOrderSingle (35=D)					
Tag	Field Name	Required	Value	Type	Comments
<b>&lt;Standard Header&gt;</b>					
1	Account	N	-	String	User defined account name. For retail systems, should be a unique identifier for the underlying trader. For individual traders, can be omitted.
11	ClOrdID	Y	-	String	A distinct identifier for the order. Must be universally unique across all prior trading sessions.
55	Symbol	Y	-	String	Instrument name (for FX, using CCY1/CCY2 format).
54	Side	Y	-	Int	The side (buy or sell) of the request. 1 = Buy 2 = Sell
38	OrderQty	Y	-	Qty	Order amount (for FX orders, this indicates the CCY1 amount).
40	OrdType	Y	-	Char	Enumeration for the Type of Order. 1 = Market 2 = Limit 3 = Stop
44	Price	Y/N	-	Price	Conditionally required based on OrdType. OrdType=1 (Market): Zero(0) or omitted OrdType=2 (Limit): Required and set to the limit price OrdType=3 (Stop): Required and set to the stop price
58	Text	N	-	String	User comment field.
59	TimeInForce	Y	-	Int	Enumeration of order duration. 1 = Good Till Cancel (GTC) 4 = Fill Or Kill (FOK)
60	TransactTime	Y	-	Time	Time of order creation in UTC format.

## ExecutionReport

Execution Report (35=8)					
Tag	Field Name	Required	Value	Type	Comments
<b>&lt;Standard Header&gt;</b>					
11	ClOrdID	Y	-	String	A distinct identifier sent by the client in Tag 11 of the corresponding NewOrderSingle message.
37	OrderID	Y	-	String	A distinct identifier assigned to the original order by Fintechee.
17	ExecID	Y	-	String	A distinct identifier assigned to the individual ExecutionReport by Fintechee. These ExecIDs are ensured to be singular within Fintechee for the particular FIX API account.
39	OrdStatus	Y	-	Int	Describes the current state of the order corresponding to this ExecutionReport. A=Pending New (Received) 2=Fill (Completely Filled) 4=Canceled (Cancelled, no fills) 8=Rejected (Rejected, no fills)
150	ExecType	Y	-	Int	The enumerated type of this ExecutionReport: A=Pending New (Received) 4=Canceled (Cancelled, no fills.) 8=Rejected (Rejected, no fills) F=Trade (this report indicates a full volume)
55	Symbol	Y	-	String	The instrument name from the original order request.
54	Side	Y	-	Int	The side (by or sell) of the original request. 1 = Buy 2 = Sell
38	OrderQty	Y	-	Qty	Original order quantity. Does not indicate a filled amount, only for reference.

40	OrdType	Y	-	Int	Enumerated Order Type from the original request. For reference. 1 = Market 2 = Limit 3 = Stop
44	Price	N	-	Price	The original requested price for the order.
59	TimeInForce	Y	-	Int	Enumeration of order duration for the original request. 1 = Good Till Cancel (GTC) 4 = Fill Or Kill (FOK)
151	LeavesQty	Y	-	Qty	The remaining quantity to fill from the original requested amount.
14	CumQty	Y	-	Qty	The total quantity filled for original request, including this fill.
6	AvgPx	Y	-	Price	The average price of all fills for this request, including the current fill. This will be 0 if the ExecType is Pending New. Fintechee does not support Partially Filled; therefore, the AvgPx indicates the price of the only fill for the order request.
103	OrdRejReason	N	-	Int	The reason why the order was rejected, if ExecType is Rejected.
58	Text	N	-	String	If the ExecType is Rejected or Canceled, it will be set to a textual explanation of the reason.
60	TransactTime	N	-	Date	Time of the original order creation in UTC Format.

## Order Cancel Request

OrderCancelRequest (35=F)					
Tag	Field Name	Required	Value	Type	Comments
<Standard Header>					
41	OrigClOrdID	Y	-	String	The ClOrdID of the original order the client intends to cancel.
11	ClOrdID	Y	-	String	A distinct identifier to specifically identify this cancel request.
54	Side	Y	-	Int	The side (buy or sell) of the request. 1 = Buy 2 = Sell
60	TransactTime	Y	-	Date	The timestamp indicating when this order request was initiated or released by the trader or trading system.

## Order Cancel Reject

OrderCancelReject (35=9)					
Tag	Field Name	Required	Value	Type	Comments
<Standard Header>					
37	OrderID	Y	-	String	A unique Order ID assigned to the original accepted order by Fintechee. It will be 'NONE' if CxlRejReason=1.
41	OrigClOrdID	Y	-	String	The ClOrdID from the original order the client intends to cancel.
11	ClOrdID	Y	-	String	The distinct identifier to identify the originating cancel request.
39	OrdStatus	Y	-	Int	Enumeration indicating the status of the order that was attempted canceled.
102	CxlRejReason	Y	-	Int	An enumeration indicating the reason for the cancel rejection: 0=TooLateToCancel - The order has already been canceled or filled. 1=UnknownOrder - The order ID was not found in the FIX engine.
434	CxlRejResponseTo	Y	-	Int	Enumeration indicating the type of request to which this rejection is responding.
60	TransactTime	Y	-	Date	The timestamp of the last transactional action performed on the order.