



FEED market data

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0.1 Revision History

Date	Version	Notes
June 25, 2025	0.1	Initial version
August 05, 2025	0.2	Message identifiers
August 23, 2025	0.3	Enumeration documentation

1 Overview

This document details the complete specification for the TXSE (Texas Exchange) Market Data Feed. This feed is designed to provide comprehensive, real-time, and low-latency market data pertaining to all trading activities on the Texas Stock Exchange.

FEED does not include a framing or session protocol. These are handled by a higher-level protocol such as RAKE TCP or RAKE UDP for multicast distribution.

The specification covers a variety of market data messages essential for reconstructing the TXSE order book and processing trade information. These messages include, but are not limited to, symbol definitions (DefineSymbol), order additions (AddOrder), order deletions (DeleteOrder), various order execution types (ExecuteOrder, ExecuteOrderWithPrice), order modifications (ModifySizeDown, ReplaceOrder), and trade events (Trade, Break Trade)

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2 Types

- This document uses the terms Byte, Short, Int, Long to refer to numeric values that are 8,16,32,64 bit long respectively. All are two's complement signed little-endian encoded.

Type	Byte Length
Byte	1
Short	2
Int	4
Long	8

- Strings are all ASCII, fixed-length. Strings shorter than the fixed-length should be left justified, by right padded with spaces (ASCII 0x20) to the full string length
- Enums are encoded as a single Byte unless they appear in a bitfield, then they use the number of bits specified.
- TimeStamps are nanoseconds since the Unix epoch in UTC time zone, encapsulated by a Long

3 Market Data Messages

3.1 DefineSymbol

Symbol definition (currently incomplete – expected to grow)

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	's'/0x73/115
symbolId	1	2	Short	All other messages will refer to this identifier instead of the string of the symbol name
transactTime	3	8	TimeStamp	
matchingEngineId	11	1	Byte	The matching engine to which this symbol is assigned for the trading session
symbol	12	8	Str(8)	

3.2 AddOrder

Details for a newly added order for display to the TXSE book

Field Name	Offset	Size	Type	Notes		
messageType	0	1	Byte	'a'/0x61/97		
symbolId	1	2	Short			
transactTime	3	8	TimeStamp			
orderId	11	8	Long			
orderFlags	19	1	Bit Field Name	Offset	Size	Notes
			isBuy	0	1	true(1) if resting displayed order is a bid/buy, false(0) if resting displayed order is an offer/sell
			reserved	1	7	Reserved for future purposes
price	20	8	Long			
qty	28	4	Int			

3.3 DeleteOrder

Details for an order deleted in its entirety from the TXSE book

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	'd'/0x64/100
symbolId	1	2	Short	
transactTime	3	8	TimeStamp	
orderId	11	8	Long	

3.4 ExecuteOrder

Indicates that an order displayed on the TXSE book has executed in part or in full at its previously displayed price

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	'e'/0x65/101
symbolId	1	2	Short	
transactTime	3	8	TimeStamp	
orderId	11	8	Long	
qty	19	4	Int	
execId	23	8	Long	

3.5 ExecuteOrderWithPrice

Indicates that an order displayed on the TXSE book has executed in part or in full at this specified price

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	'p'/0x70/112
symbolId	1	2	Short	
transactTime	3	8	TimeStamp	
orderId	11	8	Long	
qty	19	4	Int	
execId	23	8	Long	
execPrice	31	8	Long	

3.6 ModifySizeDown

Modify an order by reducing its size without losing priority on the TXSE book

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	'm'/0x6d/109
symbolId	1	2	Short	
transactTime	3	8	TimeStamp	
orderId	11	8	Long	
qty	19	4	Int	The number of shares by which to reduce the size of the order

3.7 ReplaceOrder

Replace an order, possibly changing price level and size (which can increase), losing priority on the TXSE book

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	'r'/0x72/114
symbolId	1	2	Short	
transactTime	3	8	TimeStamp	
oldOrderId	11	8	Long	Old order identifier which will no longer be used for this trading day
newOrderId	19	8	Long	New order identifier by which activity for this order will be tracked
price	27	8	Long	
qty	35	4	Int	The number of open shares to display after replacing the previous order

3.8 Trade

Execution of non-displayed liquidity

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	't'/0x74/116
symbolId	1	2	Short	
transactTime	3	8	TimeStamp	
price	11	8	Long	
qty	19	4	Int	Number of shares executed (that were not displayed)
execId	23	8	Long	

3.9 BreakTrade

Break a previous trade or execution by execution identifier

Field Name	Offset	Size	Type	Notes
messageType	0	1	Byte	'b'/0x62/98
symbolId	1	2	Short	
transactTime	3	8	TimeStamp	
execId	11	8	Long	The previously published execution identifier of a Trade, ExecuteOrderFull, or ExecuteOrderPartial

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