

TAQ XDP PRODUCTS CLIENT SPECIFICATION INTEGRATED, BBO, TRADES AND IMBALANCES FEEDS NYSE, NYSE MKT

Version

1.0c

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PREFACE

DOCUMENT HISTORY

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	05/19/2015	Version 1.0 Initial Publicaton
1.0a	12/1/2015	PositionChange field in Modify Order message is defaulted to 0
1.0b	12/15/2015	Added DBExecID field to Order Execution Message – MSG TYPE 110 and Non-Displayed Trade Message – MSG TYPE 110.
1.0c	Sept 23, 2016	No change to products. Added text describing use of this document for NYSE/MKT TAQ XDP Imbalances. Revised section 1 for clarity.

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Announcements

• Visit the <u>NYSE Subscription Page</u> to subscribe to product news and operational status notifications for all proprietary data products.

RELATED DOCUMENTATION

For details of related TAQ products and the full range of TAQ offerings, please refer to the <u>Historical Data</u> <u>Products section</u> of NYXData.

For a listing of all Market Data products, please refer to the <u>Data Products section</u> of NYXData.

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1. TAQ XDP Integrated, BBO, Trades and Imbalance Products

1.1 OVERVIEW

In NYSE Group nomenclature, the term TAQ simply denotes a historical data product.

The TAQ XDP Products are a historical record of all data that was published by the NYSE XDP feeds on a particular day. Each TAQ XDP product corresponds to a single NYSE XDP real time feed.

NYSE and MKT Integrated, BBO, Trades, and Imbalance Feed TAQ data is available on an end-of-day basis in flat file format, enabling you to recreate the market for any given time.

1.2 ACCESS AND DATA FORMAT

All TAQ XDP product files consist of newline-delimited records that are in ASCII CSV format. The files are compressed using GNU Zip, and can be downloaded via File Transfer Protocol (FTP) from **ftp2.nyxdata.com**.

Each record in the TAQ file corresponds to a single data event in the real time feed. TAQ file records are in the same order as the data events were in the real time feed.

1.3 NYSE PRODUCTS

1.3.1 NYSE Product Characteristics

PRODUCT	DATA CHANNEL FILES	STOCK SUMMARY FILE	APPROX TOTAL FILE SIZE
TAQ NYSE Integrated Feed	4	Y	3.5 GB
TAQ NYSE BBO	2		1 GB
TAQ NYSE Trades	1	Y	90 MB
TAQ NYSE Order Imbalances	1		XXX MB

1.3.2 NYSE File Paths and filenames

TAQ NYSE INTEGRATED

/EQY_US_NYSE_IBF/EQY_US_NYSE_IBF_yyyy/EQY_US_NYSE_IBF_yyyymm/

EQY_US_NYSE_IBF_1_yyyymmdd.gz EQY_US_NYSE_IBF_2_yyyymmdd.gz EQY_US_NYSE_IBF_3_yyyymmdd.gz

EQY_US_NYSE_IBF_4_yyyymmdd.gz

/EQY_US_NYSE_STOCKSUM/EQY_US_NYSE_STOCKSUM_yyyy/EQY_US_NYSE_STOCKSUM_yyyymm/ EQY_US_NYSE_STOCKSUM_yyyymmdd.gz

TAQ NYSE BBO

/EQY_US_TAQ_NYSE_BBO/EQY_US_TAQ_NYSE_BBO_yyyy/EQY_US_TAQ_NYSE_BBO_yyyymm/ EQY_US_TAQ_NYSE_BBO_1_yyyymmdd.gz EQY_US_TAQ_NYSE_BBO_2_yyyymmdd.gz

TAQ NYSE TRADES

- /EQY_US_TAQ_MKT_TRADE/EQY_US_TAQ_MKT_TRADE_yyyy/EQY_US_TAQ_MKT_TRADE _yyyymm/ EQY_US_TAQ_MKT_TRADE _yyyymmdd.gz
- /EQY_US_MKT_STOCKSUM/EQY_US_MKT_STOCKSUM_yyyy/EQY_US_MKT_STOCKSUM_yyyymm/ EQY_US_MKT_STOCKSUM_yyyymmdd.gz

TAQ NYSE IMBALANCES

/EQY_US_NYSE_REF_IMBALANCES/EQY_US_NYSE_REF_IMBALANCES_yyyy/ EQY_US_NYSE_REF_IMBALANCES_yyyymm/EQY_US_NYSE_REF_IMBALANCES_yyyymmdd.gz

1.4 MKT PRODUCTS

1.4.1 MKT Product Characteristics

PRODUCT	DATA CHANNEL FILES	STOCK SUMMARY FILE	APPROX FILE SIZE
TAQ NYSE MKT Integrated Feed	1	Y	48 MB
TAQ NYSE MKT BBO	1		23 MB
TAQ NYSE MKT Trades	1	Y	2.3 MB
TAQ NYSE MKT Order Imbalance	1		XXX KB

1.4.2 MKT File Paths and filenames

TAQ NYSE MKT ORDER INTEGRATED

- /EQY_US_MKT_IBF/EQY_US_MKT_IBF_yyyy/EQY_US_MKT_IBF_yyyymm/ EQY_US_MKT_IBF_yyyymmdd.gz
- /EQY_US_MKT_STOCKSUM/EQY_US_MKT_STOCKSUM_yyyy/EQY_US_MKT_STOCKSUM_yyyymm/ EQY_US_MKT_STOCKSUM_yyyymmdd.gz

TAQ MKT TAQ BBO

/EQY_US_TAQ_MKT_BBO/EQY_US_TAQ_MKT_BBO_yyyy/EQY_US_TAQ_MKT_BBO_yyyymm/ EQY_US_TAQ_MKT_BBO_yyyymmdd.gz

TAQ MKT TAQ TRADE

- /EQY_US_TAQ_MKT_TRADE/EQY_US_TAQ_MKT_TRADE_yyyy/EQY_US_TAQ_MKT_TRADE _yyyymm/ EQY_US_TAQ_MKT_TRADE _yyyymmdd.gz
- /EQY_US_MKT_STOCKSUM/EQY_US_MKT_STOCKSUM_yyyy/EQY_US_MKT_STOCKSUM_yyyymm/ EQY_US_MKT_STOCKSUM_yyyymmdd.gz

TAQ NYSE MKT ORDER IMBALANCE

/EQY_US_MKT_REF_IMBALANCES /EQY_US_ MKT_REF_IMBALANCES _YYYY/EQY_US_ MKT _REF_IMBALANCES _YYYYMM/EQY_US_ MKT _REF_IMBALANCES _YYYYMMDD.gz

1.5 SAMPLE DATA

Sample data is available on our public ftp server.

1.6 CONTRACTS AND LICENSING

Subscribers must execute the appropriate agreement (Exhibit A and/or NYSE Vendor Agreement) which will be generated upon submission of the online order from the product page for each product on the NYXdata website. Upon the approval, NYSE will issue the ftp credentials for accessing the data. Please allow up to an hour for newly purchased data product(s) from the FTP directory setup to complete. Subscribers may download the data once and place the data on their internal database for internal users to access the data.

2. Message and Field Level Data

2.1 DISTRIBUTION OF MESSAGE TYPES AMONG TAQ XDP FILE PRODUCTS

Each TAQ XDP product contains a subset of all the message types described in this document, as shown below.

MSG TYPE	DESCRIPTION	INTEGRATED	BBO	TRADES	IMBALANCES
3	Symbol Index Mapping Message	Y	Y	Y	Y
34	Security Status Message	Y	Y	Y	Y
100	Add Order Message	Y			
101	Modify Order Message	Y			
104	Replace Order Message	Y			
102	Delete Order Message	Y			
103	Order Execution Message	Y			
110	Non-Displayed Trade Message	Y			
112	Trade Cancel Message	Y			
111	Cross Trade Message	Y			
113	Cross Correction Message	Y			
105	Imbalance Message	Y			У
106	Add Order Refresh Message	Y			
140	Quote Message		Y		
220	Trade Message			У	
221	Trade Cancel Message			У	
222	Trade Correction Message			Y	
223	Stock Summary Message	Y		У	

2.2 DATA TYPES

- 1. Numeric fields consist of numeric ASCII characters only (0-9).
- 2. Alpha fields consist of alphabetic ASCII characters only (a-z and A-Z).
- 3. Prices are in decimal format. Examples; "25.222", "0.125", "100.6", "2.30", "4.444'.
- 4. A sequence number is a monotonically increasing number that uniquely identifies each message per channel. This number starts the day at 1 and increments by 1 for each new message per channel.
- 5. Timestamps are in hours, minutes, seconds, and microseconds, eg: "12:32:44.123456".
- 6. For all default values of 0 and blanks in the real time feeds, there is no value in CSV, eg: ",,".
- 7. All symbols are expressed in <u>NYSE Symbology</u>.

3. Symbol Index Mapping Message (Msg Type 3)

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of this message:
			3 – Symbol Index Mapping Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
Symbol	3	ASCII	See <u>NYSE Symbology Specification</u>
Market ID	4	Numeric	 ID of the Originating Market: 1 - NYSE Cash 3 - NYSE Arca Cash 4 - NYSE Arca Options 5 - NYSE Bonds 6 - Global OTC 8 - NYSE Amex Options 9 - NYSE MKT Cash
System ID	5	Numeric	ID of the originating matching engine server
Exchange Code	6	Alpha	 Exchange where the this symbol is listed: 'N' - NYSE 'P' - NYSE Arca 'Q' - NASDAQ 'A' - NYSE MKT 'U' - OTCBB symbols for Global OTC 'V' - Other OTC symbols for Global OTC 'Z' - BATS
Security Type	7	Alpha	Type of Security used Arca: • 'A' – ADR • 'C' - COMMON STOCK • 'D' – DEBENTURES • 'E' – ETF • 'F' – FOREIGN • 'H' – AMERICAN DEPOSITARY SHARES • 'I' – UNITS • 'L' – INDEX LINKED NOTES • 'M' - MISC/LIQUID TRUST • 'O' – ORDINARY SHARES • 'P' - PREFERRED STOCK • 'R' – RIGHTS • 'S' - SHARES OF BENEFICIARY INTEREST • 'U' – UNITS

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
	ORDER		 'W' – WARRANT Type of Security used by NYSE and NYSE MKT: 'A' – COMMON STOCK 'B' – PREFERRED STOCK 'C' – WARRANT 'D' – RIGHT 'E' – CORPORATE BOND 'F' – TREASURY BOND 'G' – STRUCTURED PRODUCT 'H' – ADR COMMON 'I' – ADR PREFERRED 'J'-ADR WARRANTS 'K' – ADR RIGHTS 'L' – ADR CORPORATE BOND 'M' – NY REGISTERED SHARE 'N' – GLOBAL REGISTERED SHARE 'O' – INDEX 'P' – FUND 'Q' – BASKET 'R' – UNIT 'S' – LIQUIDATING TRUST 'U' - UNKOWN
Lot Size	8	Numeric	Round lot size in shares
PrevClosePrice	9	Numeric	The previous day's closing price for this security
PrevCloseVolume	10	Numeric	The previous day's closing volume for the security
Price Resolution	11	Numeric	 0 - All Penny 1 - Penny/Nickel 5 - Nickel/Dime
Round Lot	12	Alpha	Round Lots Accepted: • 'Y' – Yes • 'N' – No
MPV	13	Numeric	Minimum Price Variation
Unit of Trade	14	Numeric	This field specifies the security Unit of Trade in shares. Valid values are 1, 10, 50 and 100

4. Security Status Message (Msg Type 34)

ORDER 1 2 3	Numeric Numeric	The type of this message: 34 – Security Status Message A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
		34 – Security Status Message A unique, sequential message ID that 'tags' each
		A unique, sequential message ID that 'tags' each
3		
	HH:MM:SS. nnnnnn	Timestamp of the matching engine event down to nanosecond accuracy
4	ASCII	See <u>NYSE Symbology Specification</u>
5	Numeric	The unique ID of this message in the sequence of messages published for this specific symbol
6	ASCII	 The following are Halt Status Codes: '3' - Opening Delay (NYSE/MKT only) '4' - Trading Halt '5' - Resume '6' - No open/no resume (NYSE/MKT only) The following are Short Sale Restriction Codes: 'A' - Short Sale Restriction Activated (Day 1) 'C' - Short Sale Restriction Continued (Day 2) 'D' - Short Sale Restriction Deactivated 'E' - Short Sale Restriction in Effect - Arca only. Appears in the event of a prior day correction/cancel affecting the Short Sale restriction NYSE Market State values : 'O' - Opened 'P' - Pre-opening 'X' Closed The following values are the Price Indication values: 'T' - T - Time 'I' - Price Indication
7	ASCII	 'G' – Pre-Opening Price Indication 'R' – Rule 15 Indication Empty when not applicable '~' - Security not delayed/halted 'D' - News dissemination 'I' - Order imbalance
	5	5 Numeric 6 ASCII

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
			 'P' - News pending 'M' - LULD pause 'S' - Related security (not used) 'X' - Equipment changeover 'Z' - No open/No resume Market Wide Circuit Breakers: '1' - Market Wide Circuit Breaker Halt Level 1 '2' - Market Wide Circuit Breaker Halt Level 2
Price 1	8	Numeric	 '3' - Market Wide Circuit Breaker Halt Level 3 If securityStatus = 'A', then this is the SSR Triggering Trade Price
			 If securityStatus = 'G', then this is Pre-Opening Low Price Indication.
			 If securityStatus = 'l', then this is Low Price Indication
			 If securityStatus = 'R', then this is Rule 15 Low Indication Price.
			 If none of the above, then this field is empty
Price 2	9	Numeric	 If securityStatus = 'I', then this is High Price Indication
			 If securityStatus = 'G', then this is Pre-Opening Price Indication
			 If securityStatus = 'R', then this is Rule 15 High Price Indication
			 If none of the above, then this field is empty
SSR Triggering Exchange ID	10	Alpha	Populated when securityStatus = 'A'. Empty when not populated Valid Values are:
			 'N' - NYSE 'P' - NYSE Arca 'Q' - NASDAQ 'A' - NYSE MKT 'U' - OTCBB symbol for Global OTC 'V' - Other OTC symbols for Global OTC
			 'B' – NASDAQ OMX BX 'C' – NSX 'D' – FINRA 'I' – ISE

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
			 'J' – EDGA 'K' – EDGX 'M' – CHX 'N' – NYSE 'S' – CTS 'T' – NASDAQ OMX 'W' – CBSX 'X' – NASDAQ OMX PSX 'Y' – BATS Y 'Z' – BATS
SSR Triggering Volume	11	Numeric	This field is only populated when securityStatus = 'A' otherwise it's empty
Time	12	Numeric	 If securityStatus = 'A', then this is SSR Trigger Time If securityStatus = 'T', then it is T-Time If none of the above, then it is empty
SSRState	13	ASCII	 Short Sale Restriction values: '~' - No Short Sale in Effect 'E' - Short Sale Restriction in Effect
MarketState	14	ASCII	Market State values: • 'O' – Opened • 'P' – Pre-Opening • 'X' – Closed

5. Add Order Message – Msg Type 100

An Add Order message is published when a new visible order has been received and added to the book. The Order ID is assigned by the matching engine and is unique for this symbol for today only.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message:
			100 – Add Order Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
OrderID	6	Numeric	The unique ID assigned by the matching engine to this order
Price	7	Numeric	The order price
Volume	8	Numeric	The order quantity in shares
Side	9	Alpha	 The side of the order (Buy/Sell). Valid values: 'B' – Buy 'S' – Sell
FirmID	10	Alpha	The market participant's firm ID, or blank-filled if firm ID was not specified
NumParitySplits	11	Numeric	Resulting number of splits at this price level
			 0 = The number of parity splits at this price level is between 1 and 4 inclusive
			 5-254 = The number of parity splits at this price level
			 255 = 255 or more splits at this price level

6. Modify Order Message – Msg Type 101

A Modify Order message is sent when the price or volume of an order is changed due to an event other than a cancel-replace, or full or partial execution. The content of the price and volume fields represent the new values after modification.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message: 101 – Modify Order Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
OrderID	6	Numeric	The unique ID assigned by the matching engine to the existing order to be modified
Price	7	Numeric	The new order price
Volume	8	Numeric	The new order quantity in shares
PositionChange	9	Numeric	 Will be implemented in a future release and is defaulted to 0 currently. 0 – Kept position in book 1 –Lost position in book
PrevPriceParitySplits	10	Numeric	Resulting number of splits at previous price
			 0 = The number of parity splits at this price level is between 1 and 4 inclusive
			 5-254 = The number of parity splits at this price level
			 255 = 255 or more splits at this price level
NewPriceParitySplits	11	Numeric	 Resulting number of splits at the new price (If price does not change, same as PrevPriceParitySplits) Values same as PrevPriceParitySplits

7. Replace Order Message – Msg Type 104

A Replace Order message is published when a cancel/replace order is received and executed. The sitting order is replaced with a new one containing the same symbol, side and attribution, a new Order ID, and the price and size specified. The sitting order must be removed from the book and replaced with the new order.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message:
			104 – Replace Order Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
OrderID	6	Numeric	The unique ID assigned by the matching engine to the existing order to be replaced
NewOrderID	7	Numeric	The new Order ID of the replacement order
Price	8	Numeric	The new order price
Volume	9	Numeric	The new order quantity in shares
PrevPriceParitySplits	10	Numeric	 Resulting number of splits at previous price 0 = The number of parity splits at this price level is
			between 1 and 4 inclusive
			 5-254 = The number of parity splits at this price level
			 255 = 255 or more splits at this price level
NewPriceParitySplits	11	Numeric	Resulting number of splits at the new price
			 (If price does not change, same as PrevPriceParitySplits)
			 Values same as PrevPriceParitySplits

8. Delete Order Message – Msg Type 102

A Delete Order message is published when an order is taken off of the book for any reason except for full execution, in which case an Order Execution message is sent.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message: 102 – Delete Order Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
OrderID	6	Numeric	The unique ID assigned by the matching engine to the order to be deleted
NumParitySplits	7	Numeric	 Resulting number of splits at this price level 0 = The number of parity splits at this price level is between 1 and 4 inclusive 5-254 = The number of parity splits at this price level 255 = 255 or more splits at this price level

9. Order Execution Message – Msg Type 103

An Order Execution message is sent when an order is partially or fully executed. The Volume field indicates the executed quantity. If the Price field is different from the price of the order, any remaining shares keep their original price. If the Volume field equals the number of shares previously remaining in the order, then the order has been fully executed and should be removed from the book. If the order has been partially executed, further Order Execution messages for this Order ID may be published.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message: 103 – Order Execution Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
OrderID	6	Numeric	The unique ID assigned by the matching engine to the order that was partially or fully executed
TradeID	7	Numeric	Unique identifier for this trade. Allows correlation of Executions to Trades.
Price	8	Numeric	The execution price
Volume	9	Numeric	The executed quantity in shares
PrintableFlag	10	Numeric	 0 = Not Printed to the SIP 1 = Printed to the SIP
NumParitySplits	11	Numeric	Resulting number of splits at this price level
			 0 = The number of parity splits at this price level is between 1 and 4 inclusive
			 5-254 = The number of parity splits at this price level
			255 = 255 or more splits at this price level
DBExecID	12	Numeric	The unique ID assigned by the matching engine to all orders that participated in this trade event. Correllates with the DBExecID field in the gateway Execution Ack msg.

10. Non-Displayed Trade Message – Msg Type 110

An Non Displayed Trade message is sent as a result of a match between two non-displayed orders.

Customers who are only interested in building a book of displayed orders may safely ignore Non-Displayed Trade messages. Customers who are creating statistics or displays requiring the full record of trades in this market will need to process Non-Displayed Trade messages.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message:
			110 – Non-Displayed Trade Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
TradeID	6	Numeric	Unique identifier for this trade
Price	7	Numeric	The execution price
Volume	8	Numeric	Volume of the trade in shares
PrintableFlag	9	Numeric	 0 = Not Printed to the SIP
			1 = Printed to the SIP
DBExecID	10	Numeric	The unique ID assigned by the matching engine to all orders that participated in this trade event. Correllates with the DBExecID field in the gateway Execution Ack msg.

11. Trade Cancel Message – Msg Type 112 and 221

In the event that an earlier trade has been reported in error, a Trade Cancel message is sent. This occurs whether the initial report was an Order Execution or a Non-Displayed Trade message.

Note that since Trade Cancel messages only affect trades that occurred in the past, customers who are only interested in building a book may safely ignore them.

Customers who are building a complete record of today's trades should remove the cancelled trade from their records and subtract its volume from any statistics.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message:
			112 – Trade Cancel for TAQ Integrated
			221 – Trade Cancel for TAQ Trades
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See NYSE Symbology Specification
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
TradeID	6	Numeric	The TradeID of the original Trade or Execution message to be cancelled

12. Cross Trade Message – Msg Type 111

A Cross Trade message is published on completion of a crossing auction, and shows the bulk volume that traded in the auction. The Reason Code field indicates the auction type. Additionally, a non-printable Order Execution or Trade message will be published for each order that traded.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message: 111 – Cross Trade Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
CrossID	6	Numeric	Unique identifier for this Cross Trade. Used in Cross Correction message to identify the Cross Trade to correct
Price	7	Numeric	The execution price
Volume	8	Numeric	Volume executed in shares
CrossType	9	ASCII	 Reason for the crossing auction. Valid values: 'O' – Market Center Opening Auction '5' – Market Center Reopening Auction '6' – Market Center Closing Auction

13. Cross Correction Message – Msg Type 113

In the event that an earlier Cross Trade has been reported in error, a Cross Correction message is sent.

Note that since Cross Correction messages only affect cross auctions that occurred in the past, customers who are only interested in building a book may safely ignore them.

Customers who are building a complete record of today's volume should remove the previously reported volume from their statistics and add the volume of the Cross Correction to them.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message:
			113 – Cross Correction Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event that resulted in this message down to nanosecond accuracy
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	5	Numeric	The sequence number of this message in the set of all messages for this symbol
CrossID	6	Numeric	The CrossID of the original Cross Trade message to be corrected
Volume	7	Numeric	The corrected volume of Cross Trade message

14. Imbalance Message- Msg Type 105

Imbalance messages are sent periodically to update price and volume information during auctions.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message:
			105 – Imbalance Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event down to nanosecond accuracy
Symbol	5	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	6	Numeric	The sequence number of this message in the set of all messages for this symbol
ReferencePrice	7	Numeric	The Reference Price is the Last Sale if the last sale is at or between the current best quote. Otherwise, the Reference Price is the Bid Price if last sale is lower than Bid price, or the Offer price if last sale is higher than Offer price.
PairedQty	8	Numeric	This field contains the paired off quantity at the reference price point. The number of shares paired off at the reference price point truncated to the round lot. E.g. 1575 shares is published as 1500.
TotalImbalanceQty	9	Numeric	This field contains the total imbalance quantity at the reference price point to the round lot. E.g. 1575 shares is published as 1500. Please note that Total Imbalance Quantity could be negative.
MarketImbalanceQty	10	Numeric	This field indicates the total market order imbalance at the reference price. Unused in NYSE and NYSE MKT, defaulted to 0.
AuctionTime	11	Numeric	Projected Auction Time (hhmm)
AuctionType	12	Alpha	 The reason for the auction. Valid values: 'M' – Open 'H' – Halt 'C' – Closing 'R' – Regulatory Imbalance
ImbalanceSide	13	Alpha	The side of the imbalance (Buy/Sell) Valid values: 'B' – Buy

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
			'S' – SellSpace – No imbalance
ContinuousBook ClearingPrice	14	Numeric	The Continuous Book Clearing Price is defined as the price closest to last sale where imbalance is zero. If a Book Clearing Price is not reached, the Clearing Price, a zero will be published in the Book Clearing Price Field.
ClosingOnly ClearingPrice	15	Numeric	This field contains the indicative price against closing only order. The price closest to the reference price where the imbalance of closing only interest is 0. If a closing only clearing price is not reached, it is defaulted to 0.
SSRFilingPrice	16	Numeric	This field contains the SSR Filing Price. This price is the price at which Sell Short interest will be filed in the matching in the event a Sell Short Restriction is in effect for the security. Note: The SSR Filing price is based on the National Best Bid at 9:30am. This price remains static after the SSR Filing price has been determined.

15. Add Order Refresh Message – Msg Type 106

The Add Order Refresh message can be sent in either of two contexts:

- 1) If a client sends a Refresh Request to the Request Controller, an Add Order Refresh message is sent over the Refresh channels as part of the refresh response for every order currently sitting on the book.
- 2) If a primary XDP Publisher fails over to the backup, for every symbol, the backup sends a Symbol Clear message followed by a full refresh, which includes an Add Order Refresh message for every order currently sitting on the book of the symbol.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message: 106 – Add Order Refresh Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event down to nanosecond accuracy
Symbol	5	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	6	Numeric	The sequence number of this message in the set of all messages for this symbol
OrderID	7	Numeric	The unique ID assigned by the matching engine to this order
Price	8	Numeric	The order price
Volume	9	Numeric	The order quantity in shares
Side	10	Alpha	 The side of the order (Buy/sell). Valid values: 'B' – Buy 'S' – Sell
FirmID	11	ASCII	The participant's firm ID, or blanks if firm ID was not specified
NumParitySplits	12	Numeric	Future use. Defaulted to 0.

16. Quote Message – Msg Type 140

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Binary	The type of message:
			140 – Quote Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event down to nanosecond accuracy
Symbol	5	ASCII	See <u>NYSE Symbology Specification</u>
SymbolSeqNum	6	Binary	The symbol sequence number
Ask Price	7	Binary	The Ask price.
Ask Volume	8	Binary	The aggregate size at the ask price
Bid Price	9	Binary	The Bid price
Bid Volume	10	Binary	The aggregtate size at the bid price
Quote Condition	11	ASCII	 Valid values: 'C' - Closing 'O' - Opening Quote 'R' - Regular Quote 'W' - Slow on the Bid and Ask due to a "Set Slow List"
RPI Indicator	12	ASCII	 The side(s) where Retail Price Indication (RPI orders) exist. Valid values are: '' – Space means no Retail Interest (Default) 'A' – Retail Interest on Bid Quote 'B' – Retail Interest on Offer Quote 'C' – Retail Interest on both the Bid and Offer Quote Note: This field is only valid for NYSE and NYSE MKT. It is left as a future release for NYSE Arca.

17. Trade Message – Msg Type 220

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message:
			220 – Trade Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event down to nanosecond accuracy
Symbol	5	ASCII	See NYSE Symbology Specification
SymbolSeqNum	6	Numeric	The symbol sequence number
TradeID	7	Numeric	Unique identifier for this trade
Price	8	Numeric	The price of the Trade
Volume	9	Numeric	The volume of the trade in shares.
TradeCond1	10	ASCII	 Settlement related conditions. Valid values: '@' – Regular Sale '' – (Blank) Regular Sale 'C' – Cash 'N'– Next Day Trade 'R' – Seller Note: Trade Conditions BLANK, C, N, and R are applicable for NYSE and NYSE MKT only.
TradeCond2	11	ASCII	 The reason for Trade Through Exemptions. Valid values: Empty when N/A 'F' – Intermarket Sweep Order 'O' – Market Center Opening Trade '5' – Market Center Reopening Trade '6' – Market Center Closing Trade '9' – Corrected Last Sale Price Note: Conditions F and O are applicable for NYSE and NYSE MKT only.
TradeCond3	12	ASCII	Extended hours/sequencing related conditions. Valid values: Empty when N/A • 'L' – Sold Last • 'T' – Extended Hours Trade • 'U' – Extended Hours Sold (Out of Sequence)

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
			 'Z' – Sold Note: Condition L is applicable for NYSE and NYSE MKT only. Conditions T, and U are applicable for NYSE Arca only. Condition Z is applicable to all.
TradeCond4	13	ASCII	 SRO Required Detail. Valid values: Empty when N/A '@' - Regular Sale '' - N/A 'H' - Aberrant Trade (Price Variation Trade) 'I' - Odd Lot Trade 'K' - Rule 127 (NYSE) , or Rule 155 (NYSE MKT) 'M' - Official Closing Price 'Q' - Official Open Price Note: Trade conditions BLANK, H and K are applicable to NYSE and NYSE MKT only. Conditions @, M, and Q are applicable to Arca only.

18. Trade Correction Message – Msg Type 222

FIELD NAME	FIELD	FORMAT	DESCRIPTION
Msg Type	ORDER 1	Numeric	The type of message:
	T	. tainione	222 – Trade Correction Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp of the matching engine event down to nanosecond accuracy
Symbol	5	ASCII	See NYSE Symbology Specification
SymbolSeqNum	6	Numeric	The symbol sequence number
OriginalTradelD	7	Numeric	The original TradeID of the Trade message being corrected
TradeID	8	Numeric	The TradeID of the corrected Trade message
Price	9	Numeric	The corrected price of the Trade
Volume	10	Numeric	The corrected volume of the trade in shares
TradeCond1	11	ASCII	 Settlement related conditions. Valid values: '@' - Regular Sale '' - (Blank) Regular Sale 'C' - Cash 'N'- Next Day Trade 'R' - Seller Note: Trade Conditions BLANK, C, N, and R are applicable for NYSE and NYSE MKT only.
TradeCond2	12	ASCII	 The Reason for Trade Through Exemptions. Valid values: '' - (Blank) 'F' - Intermarket Sweep Order 'O' - Market Center Opening Trade '5' - Market Center Reopening Trade '6' - Market Center Closing Trade '9' - Corrected Last Sale Price Conditions F and O are applicable for NYSE and NYSE MKT only.
TradeCond3	13	ASCII	Extended hours/sequencing related conditions Valid values: • '- (Blank) • 'L' - Sold Last • 'T' - Extended Hours Trade • 'U' - Extended Hours Sold (Out of Sequence) • 'Z' - Sold

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
			Note: Condition L is applicable for NYSE and NYSE MKT only. Conditions T and U are applicable for NYSE Arca only. Condition Z is applicable to all.
TradeCond4	14	ASCII	 SRO Required Detail. Valid values: '@' - Regular Sale '' - N/A 'H' - Aberrant Trade (Price Variation Trade) 'I' - Odd Lot Trade 'K' - Rule 127 (NYSE) or Rule 155 (NYSE MKT) 'M' - Official Closing Price 'Q' - Official Open Price Note: Trade conditions BLANK, H and K are applicable to NYSE and NYSE MKT only. Conditions @, M, and Q are applicable to Arca only.

19. Stock Summary Message – Msg Type 223

On a separate channel from the main feed, the Stock Summary channel, a Stock Summary message per symbol is sent every 60 seconds. The message is sent regardless of whether there has been a change to the symbol in the last 60 seconds or not.

FIELD NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg Type	1	Numeric	The type of message: 223 – Stock Summary Message
SequenceNumber	2	Numeric	A unique, sequential message ID that 'tags' each message and allows recipients to identify the message
SourceTime	3	HH:MM:SS. nnnnnn	Timestamp when the matching engine generated this event
Symbol	4	ASCII	See <u>NYSE Symbology Specification</u>
HighPrice	5	Numeric	The exchange high price of this stock for the day
LowPrice	6	Numeric	The exchange Low price of this stock for the day
Open	7	Numeric	The exchange Opening price of this stock for the day
Close	8	Numeric	The exchange Closing price of this stock for the day
TotalVolume	9	Numeric	The exchange cumulative volume for the stock throughout the day

APPENDIX A: Information on Auctions - NYSE and MKT Auctions

FIELD NAME	DESCRIPTION
Opening	 Interest Included All electronic interest eligible to trade in the opening auction DMM interest as needed to offset the imbalance Order Cancellation Orders can be cancelled at any time up to the conclusion of the auction Calculation The Reference Price is equal to the previous close unless there is a Rule 15 or Mandatory indication published, in which case The Reference Price is the indication low price if the indication low price is higher than the previous close The Reference Price is the indication high price if the indication high price is lower than the previous close The Reference Price is the previous close if the previous close is within the indication range The Continuous Book Clearing Price is defaulted to 0 until 2
Closing	 minutes before the opening auction time. Interest Included For Paired Quantity, Total Imbalance Quantity and Closing Only Clearing Price : MOC and LOC orders Closing Only interest (when offsetting the imbalance) Discretionary orders in the last 5 minutes of the auction only For Continuous Book Clearing Price : All electronic interest eligible to trade in the closing auction DMM interest as needed to offset the imbalance Order Cancellation Orders can be cancelled any time during the auction, except for MOC and LOC orders which can be cancelled only up to 2 minute before the conclusion of the auction . Calculation The Continuous Book Clearing Price is defaulted to 0 until 15 minutes before the closing auction time.