XDP BBO Client specification

NYSE BBO, NYSE Arca BBO and NYSE MKT BBO

Version	Date
2.3a	29 July 2014

Preface

Document History

The following table provides a description of all changes to this document.

Version No.	Date	Change Description
1.0a	12/15/10	Initial distribution
1.0b	2/17/11	Changes to Symbol Index Map message
		Addition of the vendor mapping message
1.0c	3/21/11	Clarification on the vendor mapping message
1.0d	3/23/11	Addition of the Ticker Designation field to the FTP symbol mapping file.
1.0e	9/29/11	– Split original spec into two and created a new "XDP Common Client Spec"
		– Removed the reference to the line handler
		– Added Refresh Message types
		– Format changes throughout
1.1	01/11/12	Addition of chapter on Product ID
1.2	05/17/2012	Changed name to NYSE MKT throughout
	08/14/2012	Rebranded document with new NYSE Technologies template
1.3	04/08/2013	Addition of ArcaEdge BBO XDP messages
1.4	05/07/2013	Removal of ArcaEdge XDP messages
1.5	07/12/2013	Overview amended
1.6	08/20/2013	Addition of the RPI field and clarifying statements within QuoteCondition field
2.0	09/24/2013	Several updates to section 2.1 Message Structure
2.1	11/06/2013	Removal of Quote Conditions values in Section 2.1 Message Structure
2.2	11/29/2013	Note added to table 5 in section 2.1
2.3	07/28/2014	Rebranded document with new NYSE template
2.3a	07/29/2014	Updated note for Transaction ID now available on NYSE and NYSE MKT

Reference Material

The following lists the associated documents, which either should be read in conjunction with this document or which provide other relevant information for the user:

- SFTI US Technical Specification
- SFTI US Customer Guide
- NYSE Symbology

Contact Information

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Further Information

- For additional product information please visit, http://www.nyxdata.com

- For updated capacity figures, visit our capacity pages at: http://www.nyxdata.com/capacity

- For details of IP addresses, visit our IP address pages at: http://www.nyxdata.com/ipaddresses

- For a full glossary, visit: http://www.nyxdata.com/glossary/

Contents

1.   BBO Quote Information

1.1   Overview

This real-time product provides quote data for all traded securities on the respective NYSE exchanges. This quote data is intended for anyone who uses trading applications that require a direct, unconsolidated feed and timestamps of top of book information provided directly from the Exchange matching engines.

1.2   Publication Times

Table 1 Normal Trading Days (All times are EST)

MsgType	Description	NYSE / NYSE MKT	NYSE Arca
140	Quote Message	9:30am – 4:00pm	4:00am – 8:00pm

Table 2 Early Closing Days (All times are EST)

MsgType	Description	NYSE / NYSE MKT	NYSE Arca
140	Quote Message	9:30am – 1:00pm	4:00am – 1:00pm

1.3   Control Message Types
Table 3 Control Message Types used in the Data Feed

MsgType	Description	NYSE	MKT	Arca
1	Sequence Number Reset	x	x	x
2	Time Reference Message	x	x	x
3	Symbol Index Mapping	x	x	x
4	Vendor Mapping Message			
5	Option Series Index Mapping			
10	Retransmission Request Message	x	x	x
11	Request Response Message	x	x	x
12	Heartbeat Response Message	x	x	x
13	Symbol Index Mapping Request Message	x	x	x
15	Refresh Request Message	x	x	x
31	Message Unavailable	x	x	x
32	Symbol Clear	x	x	x
33	Trading Session Change	x	x	x
34	Security Status Message	x	x	x
35	Refresh Header Message	x	x	x

1.4   Refresh Message Types
Table 4 Refresh Message Types used in the Refresh Feed

MsgType	Description

MsgType	Description
35	Refresh Header Message
3	Symbol Index Mapping
34	Security Status Message
33	Trading Session Change
140	Quote Message

2.   Quote Message – Msg Type '140'

2.1   Message Structure

Table 5 describes the body fields of a Quote message, MsgType '140'.

Table 5 Quote Message Fields

Field Name	Offset	Size (Bytes)	Format	Description
Msg Size	0	2	Binary Integer	Size of the message: ▪ NYSE Quotes – 38 Bytes ▪ NYSE Arca Quotes – 33 bytes ▪ NYSE MKT Quotes - 38 bytes
Msg Type	2	2	Binary Integer	This field identifies the type of message: ▪ '140' – Quote Message
SourceTimeNS	4	4	Binary Integer	This field specifies the number represents the nanosecond portion offset (UTC Time) from the time reference message.
SymbolIndex	8	4	Binary Integer	This field identifies the numerical representation of the symbol. This field is unique for products within each respective market and cannot be used to cross reference a security between markets.
SymbolSeqNum	12	4	Binary Integer	This field contains the symbol sequence number.
Ask Price	16	4	Binary Integer	This field specifies the Ask price. Use the Price scale from the symbol mapping index.
Ask Volume	20	4	Binary Integer	This field contains the Ask size of the order.
Bid Price	24	4	Binary Integer	This field specifies the Bid price. Use the Price scale from the symbol mapping index.
Bid Volume	28	4	Binary Integer	This field contains the Bid size.
Quote Condition	32	1	ASCII Character	Valid values: ▪ 'C' - Closing ▪ 'E' - Slow on the Bid Due to an LRP or depletion of 100 shares ▪ 'F' - Slow on the Ask Due to an LRP or depletion of 100 shares ▪ 'O' - Opening Quote ▪ 'R' - Regular Quote ▪ 'U' - Slow on the Bid and Ask Due to an LRP or Gap Quote ▪ 'W' - Slow on the Bid and Ask due to a "Set Slow List" Note: For NYSE Arca, only condition R is

Field Name	Offset	Size (Bytes)	Format	Description
				applicable.
RPI Indicator	33	1	ASCII Char	This field indicates the side(s) where Retail Price Indication (RPI orders exist. The valid values are (for NYSE and NYSE MKT only): ▪ ' ' – Space representing no Retail Interest (Default) ▪ 'A' – Represents Retail Interest on Bid Quote ▪ 'B' – Represents Retail Interest on Offer Quote ▪ 'C' – Represents Retail Interest on both the Bid and Offer Quote Note: This field is only valid for NYSE and NYSE MKT, but is left as a future release on NYSE Arca.
Transaction ID	34	4	Binary Integer	This is a unique key per symbol across all messages within a transaction. Users will be able to map the Transaction ID across the respective depth of book, trades, BBO, and Integrated Book products for each market. Note: This field is available on NYSE and NYSE MKT only, and is left as a future enhancement on Arca. Clients will be notified upon availability.

3.   Product ID

Table 6 describes the Product IDs associated with NYSE, NYSE MKT and NYSE Arca BBO.

3.1   Table 6 Product ID

Exchange	Product ID	Description
NYSE	3	NYSE Quotes
NYSE MKT	52	NYSE MKT Quotes
NYSE Arca	152	NYSE Arca BBO