



---

## PILLAR OPTIONS COMPLEX CLIENT SPECIFICATION

**NYSE ARCA OPTIONS COMPLEX FEED**

**NYSE AMERICAN OPTIONS COMPLEX FEED**

Version

1.0

Date

March 5, 2021

© Copyright 2021 Intercontinental Exchange, Inc. ALL RIGHTS RESERVED. INTERCONTINENTAL EXCHANGE, INC. AND ITS AFFILIATES WHICH INCLUDE THE NEW YORK STOCK EXCHANGE, ("ICE" AND "NYSE") MAKE NO WARRANTY WHATSOEVER AS TO THE PRODUCT DESCRIBED IN THESE MATERIALS EXPRESS OR IMPLIED, AND THE PRODUCT IS PROVIDED ON AN "AS IS" BASIS. ICE AND NYSE EXPRESSLY DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER ICE, NYSE NOR THEIR RESPECTIVE DIRECTORS, MANAGERS, OFFICERS, AFFILIATES, SUBSIDIARIES, SHAREHOLDERS, EMPLOYEES OR AGENTS MAKE ANY WARRANTY WITH RESPECT TO, AND NO SUCH PARTY SHALL HAVE ANY LIABILITY FOR (i) THE ACCURACY, TIMELINESS, COMPLETENESS, RELIABILITY, PERFORMANCE OR CONTINUED AVAILABILITY OF PRODUCT, OR (ii) DELAYS, OMISSIONS OR INTERRUPTIONS THEREIN. ICE AND NYSE DO NOT, AND SHALL HAVE NO DUTY OR OBLIGATION TO, VERIFY, MONITOR, CONTROL OR REVIEW ANY INFORMATION IN RELATION TO THE PRODUCT.

## PREFACE

---

### DOCUMENT HISTORY

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

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	March 5, 2021	Added complex series support for NYSE Arca and American Options

### 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:

- [IGN Information](#)
- [NYSE Symbology](#)
- [IP Addresses](#)

### CONTACT INFORMATION

- Connectivity: [connectivity@nyse.com](mailto:connectivity@nyse.com)
- Telephone: +1 212 896-2830

### FURTHER INFORMATION

- For additional information about the product, visit the [PILLAR COMPLEX Feed Product Page](#)
- For updated capacity statistics, visit the [Capacity](#) page.

**CONTENTS**

---

**PREFACE ..... 2**

**CONTENTS ..... 3**

**1. INTRODUCTION ..... 4**

**1.1 PUBLICATION TIMES ..... 4**

**2. CONTROL MESSAGE TYPES USED IN THE DATA FEEDS..... 5**

**3. COMPLEX MESSAGES ..... 6**

**3.1 Options Quote Message – Msg Type 340 ..... 6**

**3.2 Options Trade Message – Msg Type 320 ..... 7**

**3.3 Series RFQ Message - Msg 307..... 10**

## 1. INTRODUCTION

---

This real-time low latency product provides top of book quote, trades and RFQ all traded complex series on the respective NYSE Options exchanges. All message types are identical in format to their equivalents in the Top feed. This data is intended for clients who require a direct, unconsolidated feed and timestamps provided directly from the Exchange matching engines.

### 1.1 PUBLICATION TIMES

Please refer to the market open pre-opening, early trading, core trading and late trading session times on:

<https://www.nyse.com/markets/hours-calendars>

## 2. CONTROL MESSAGE TYPES USED IN THE DATA FEEDS

---

See the Pillar Common Client Specification for details on all control messages.

MSGTYPE	DESCRIPTION
1	Sequence Number Reset
2	Time Reference Message
3	Symbol Index Mapping
10	Retransmission Request Message
11	Request Response Message
12	Heartbeat Response Message
13	Symbol Index Mapping Request Message
15	Refresh Request Message
31	Message Unavailable
32	Symbol Clear
34	Security Status Message
35	Refresh Header Message
50	Outright Series Index Mapping
51	Options Status Message
60	Complex Series Index Mapping

### 3. COMPLEX MESSAGES

#### 3.1 Options Quote Message – Msg Type 340

The Complex Quote message is a two-sided message providing best bid and offer limits of orders on complex symbols with aggregated volumes at each limit. The message also indicates aggregated Customer volumes within the overall volumes. The values published in Options Quote message to Pillar (prices, quantities, quote conditions) shall be the same as the ones published in Quote message to OPRA.

See the Pillar Common Client Specification for details on Symbol/Series Index and Time Reference messages.

FIELD NAME	OFF SET	SIZE (BYTES )	FORMAT	DESCRIPTION
<b>Msg Size</b>	0	2	Binary	Size of the message: 42 bytes
<b>Msg Type</b>	2	2	Binary	The type of message: 340 – Options Quote Message
<b>SourceTimeNS</b>	4	4	Binary	The nanosecond offset (UTC Time) from the Time Reference message.
<b>SeriesIndex</b>	8	4	Binary	The unique ID of this series within this market.
<b>SeriesSeqNum</b>	12	4	Binary	The series sequence number.
<b>Ask Price</b>	16	4	Signed Binary	The Ask price. A positive value is implicit (no sign), a negative value is indicated by a negative sign. Use the Price scale from the Series Index message.  For Complex Series:  A positive Buy price indicates the Buyer is proposing to pay money for the order. Inversely, a negative Buy price indicates that the Buyer is proposing to receive money for the order.  A positive Sell price indicates the Seller is proposing to receive money for the order. Inversely, a negative Sell price indicates that the Seller is proposing to pay money for the order.
<b>Ask Volume</b>	20	4	Binary	Total quantity available at the above Ask price
<b>Bid Price</b>	24	4	Signed Binary	The Bid price. A positive value is implicit (no sign), a negative value is indicated by a negative sign. Use the Price scale from the Series Index message.

FIELD NAME	OFF SET	SIZE (BYTES )	FORMAT	DESCRIPTION
				For Complex Series:  A positive Buy price indicates the Buyer is proposing to pay money for the order. Inversely, a negative Buy price indicates that the Buyer is proposing to receive money for the order.  A positive Sell price indicates the Seller is proposing to receive money for the order. Inversely, a negative Sell price indicates that the Seller is proposing to pay money for the order.
<b>Bid Volume</b>	28	4	Binary	Total quantity available at the above Bid price.
<b>Quote Condition</b>	32	1	ASCII	<b>All markets</b> <ul style="list-style-type: none"> <li>▪ 1 – Regular Trading</li> <li>▪ 3 – Trading Halted</li> </ul>
<b>Reserved</b>	33	1	ASCII	Reserved for future use
<b>AskCustomerVolume</b>	34	4	Binary	*Total quantity of customer orders at the Ask price
<b>BidCustomerVolume</b>	38	4	Binary	*Total quantity of customer orders at the Bid price

\*For American, customer volume includes non-professional customers only

\*For Arca, customer volume includes non-professional and professional customers

### 3.2 Options Trade Message – Msg Type 320

The Options Trade Message is used to publish the complex Last Sales.

All trades are reported to Pillar regardless of quantity, with the following exceptions:

- a. Cabinet trades
- b. Flex trades
- c. Trades at away exchanges for any routed interest; are not reported to Pillar

See the Pillar Common Client Specification for details on Symbol/Series Index Mapping messages.

FIELD NAME	OFFSET	SIZE (BYTES)	FORMAT	DESCRIPTION
<b>Msg Size</b>	0	2	Binary	Size of the message: 36 bytes
<b>Msg Type</b>	2	2	Binary	The type of message:

FIELD NAME	OFFSET	SIZE (BYTES)	FORMAT	DESCRIPTION
				320 – Options Trade Message
<b>Reserved</b>	4	4	Binary	Reserved for future use
<b>SourceTimeNS</b>	8	4	Binary	The nanosecond offset (UTC Time) from the Time Reference message.
<b>SeriesIndex</b>	12	4	Binary	The unique ID of this series within this market.
<b>SeriesSeqNum</b>	16	4	Binary	The series sequence number.
<b>TradeID</b>	20	4	Binary	Unique identifier for this trade.
<b>Price</b>	24	4	Signed Binary	<p>The price of the Trade is the net amount money made by the Buyer. A positive value is implicit (no sign), a negative value is indicated by a negative sign. Use the Price scale from the series index mapping.*</p> <p>*When a complex instrument is traded:</p> <p>The seller</p> <ul style="list-style-type: none"> <li>• Sells the legs with Side = B and</li> <li>• Buys the legs with Side = S</li> </ul> <p>The buyer</p> <ul style="list-style-type: none"> <li>• Buys the legs with Side = B and</li> <li>• Sells the legs with Side = S</li> </ul>
<b>Volume</b>	28	4	Binary	The volume of the trade in contracts.
<b>TradeCond1</b>	32	1	ASCII	<p>Settlement related conditions. Valid values:</p> <ul style="list-style-type: none"> <li>• “a” – outright series order/quote trading electronically with a outright series CUBE Exposed order or outright series CUBE Exposed order trading electronically with outright series</li> <li>• “c” – trading of a outright series QCC order</li> <li>• “e” – outright series floor trade</li> <li>• “l” – all outright series electronic trades (excluding away market executions) that were not part of the following transactions: <ul style="list-style-type: none"> <li>○ Outright series CUBE</li> <li>○ Outright series QCC</li> </ul> </li> </ul>



FIELD NAME	OFFSET	SIZE (BYTES)	FORMAT	DESCRIPTION
				<ul style="list-style-type: none"> <li>○ Complex order trading electronically with the outright series orders/quotes</li> <li>○ ISO trade</li> <li>● “S” – all outright series trades that are generated as part of an Intermarket Sweep order</li> <li>● “D” = any of the above published after 90 seconds of occurring</li> <li>● “I” = complex order trades that were not part of the following transactions <ul style="list-style-type: none"> <li>○ Complex CUBE</li> <li>○ Complex QCC</li> <li>○ Complex order trading electronically with the outright series orders/quotes</li> </ul> </li> <li>● “g” = complex order trading electronically with a complex CUBE Exposed order or complex CUBE Exposed order trading electronically with Complex CUBE Covered order</li> <li>● “h” = trading of a complex QCC order</li> <li>● “i” = complex order to complex order floor trade</li> <li>● “j” = complex order trading electronically with the outright series orders/quotes</li> <li>● “m” = complex order to outright series order floor trade</li> <li>● “p” = complex order with stock to complex order with stock floor trade</li> <li>● “s” (lowercase) = complex order with stock to outright series order floor trade</li> </ul>
<b>Reserved</b>	33	1	ASCII	Reserved for future use
<b>Reserved</b>	34	1	ASCII	Reserved for future use
<b>Reserved</b>	35	1	ASCII	Reserved for future use

### **3.3 Series RFQ Message - Msg 307**

The Request for Series RFQ message is a pass-through message from the matching engine and is published for both Outright series and Complex series. It is sent out in the event of a COA auction or a CUBE auction on complex orders.

See the Pillar Common Client Specification for details on Symbol/Series Index Mapping messages and Price field format.

FIELD NAME	SIZE	FORMAT	DESCRIPTION
<b>Msg Size</b>	2	Binary	Size of the message: 44 bytes
<b>Msg Type</b>	2	Binary	The type of message 307 - Series RFQ Msg
<b>Reserved</b>	4	Binary	Reserved for future use
<b>SourceTimeNS</b>	4	Binary	The nanosecond offset (UTC Time) from the Time Reference message.
<b>SeriesIndex</b>	4	Binary	The unique ID of this series within this market.
<b>SeriesSeqNum</b>	4	Binary	The sequence number of this message in the set of all messages for this series
<b>Side</b>	1	ASCII	Side of the RFQ* B = Buy S = Sell  *When a complex instrument is traded The seller <ul style="list-style-type: none"> <li>• Sells the legs with Side = S and</li> <li>• Buys the legs with Side = B</li> </ul> The buyer <ul style="list-style-type: none"> <li>• Buys the legs with Side = S and</li> <li>• Sells the legs with Side = B</li> </ul>
<b>Type</b>	1	ASCII	Order Type of CUBE/COA/BOLD  P = Price Improvement F = Facilitation S = Solicitation B = Bold (Outright only) C = COA (Complex only)

<b>Capacity</b>	1	Binary	Customer or Firm capacity specified with the order. Values include: <ul style="list-style-type: none"> <li>• (blank) = information not specified</li> <li>• 0 = Customer</li> <li>• 1 = Firm</li> <li>• 2 = Broker Dealer</li> <li>• 3 = Market Maker</li> <li>• 8 = Professional Customer</li> </ul> Note: This field is only used for BOLD.
<b>Total quantity</b>	4	Binary	Total quantity
<b>Working Price</b>	4	Signed Binary	RFQ Price for CUBE/COA
<b>Participant</b>	4	Binary	OCC number for the Clearing firm specified with the order Blank = No OCC number was specified  Note: This field is used for BOLD only
<b>AuctionID</b>	8	Binary	Auction ID for CUBE/COA
<b>RFQ Status</b>	1	Binary	O - Start of RFQ Auction Q - End of RFQ Auction