S&P Capital IQ's Real-Time Solutions

QuantFEED® Feed Description

NASDAQ UTP Feed

Reference n°: 20130830



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TABLE OF CONTENTS

QuantFEED® NASDAQ UTP Feed Description
1. Referential Data
1.1. Available Markets and Branches
1.1.1. Markets
1.1.2. Branches
1.2. Types of Instruments
1.2.1. Equities
1.2.2. Rights
1.2.3. Warrants
1.3. Specific Referential Tags
1.3.1. Price Currency
2. Quotation Data
2.1. Quotation Values
2.2. Trading Status
2.3. Specific Quotation Tags
2.3.1. Trade Conditions
2.3.1.1. Sale Condition
2.3.1.2. Quote Condition
2.3.1.3. Submarket Center ID
2.3.2. Other Values
2.3.2.1. Low Limit Price
2.3.2.2. High Limit Price
2.3.2.3. Limit Up Limit Down Indicator
3. Special Behavior
3.1. Market Wide Circuit Beaker
4. Official Closing Price
5. Finding the Latest Information



QUANTFEED® NASDAQ UTP FEED DESCRIPTION

As part of S&P Capital IQ's Real-Time Solutions's QuantFEED® documentation, this feed description provides you with details about the types of data broadcast on the NASDAQ UTP market data stream, their possible values and current QuantFEED® technical implementation.

The topics this feed description covers include:

- 1. Referential Data
- 2. Quotation Data
- 3. Special Behavior
- 4. Official Closing Price
- 5. Finding the Latest Information.

1. Referential Data

The following sections describe the characteristics of the referential data on NASDAQ UTP market data stream, in terms of:

- 1.1. Available Markets and Branches
- 1.2. Types of Instruments
- 1.3. Specific Referential Tags.

1.1. Available Markets and Branches

This section details the list of markets and branches available on NASDAQ UTP market data stream:

- 1.1.1. Markets
- 1.1.2. Branches.

1.1.1. Markets

The NASDAQ UTP market data stream broadcasts informations about the following markets:

Table 1 List of markets available on NASDAQ UTP market data stream

QuantFEED® Market ID	Market	
CBSX	CBOE Stock Exchange	
EDGA	New York Direct Edge A	
EDGX	New York Direct Edge X	
BATY	BATS Y-Exchange	
XBOS	Boston Stock Exchange	
XCHI	Chicago Stock Exchange	
XCIS	National Stock Exchange	
Xudf	NASDAQ UTP Data Feed National BBO	
XASE	American Stock Exchange	
XISX	International Securities Exchange	
XNAS	New York NASDAQ	
XNYS	New York Stock Exchange	
XPHL	Philadelphia Stock Exchange	
ARCX	NYSE ARCA	
BATS	BATS Exchange	
XADF	FINRA Alternative Display Facility	

The following example shows the list of markets available on NASDAQ UTP market data stream and their IDs, returned by the command dumps:

```
MARKETS
market # 35
               CC=US/UNITED STATES OF AMERICA/CHICAGO, DESCR=CBOE STOCK EXCHANGE,
WEB=www.cbsx.com
    MIC = CBSX
   TimeZone = America/Chicago
    Country = US
    NbMaxInstruments = 0
market # 149 CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=DIRECT EDGE A,
WEB=www.directedge.com
    MIC = EDGA
   TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
market # 157 CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=DIRECT EDGE X,
WEB=www.directedge.com
   MIC = EDGX
   TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
market # 158
               CC=US/UNITED STATES OF AMERICA/,DESCR=BATS Y-Exchange,WEB=www.directedge.com
    MIC = BATY
    TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
                                                                          (see next page)
```

```
MARKETS CONTINUED
market # 299
              CC=US/UNITED STATES OF AMERICA/BOSTON, DESCR=BOSTON STOCK EXCHANGE,
WEB=www.bostonstock.com
    MIC = XBOS
   TimeZone = America/Boston
    Country = US
    NbMaxInstruments = 0
market # 307 CC=US/UNITED STATES OF AMERICA/CHICAGO, DESCR=CHICAGO STOCK EXCHANGE; INC.,
WEB=www.chx.com
    MIC = XCHI
   TimeZone = America/Chicago
    Country = US
    NbMaxInstruments = 0
market # 308
              CC=US/UNITED STATES OF AMERICA/CHICAGO, DESCR=NATIONAL STOCK EXCHANGE,
WEB=www.cincinnatistock.com
   MIC = XCIS
   TimeZone = America/Chicago
    Country = US
    NbMaxInstruments = 0
market # 319 CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=NASDAQ UTP Data Feed National
BBO, WEB=www.nasdaq.com
   MIC = Xudf
   TimeZone = America/New_York
    Country = US
   NbMaxInstruments = 0
market # 324 CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=AMERICAN STOCK EXCHANGE,
WEB=www.amex.com
   MIC = XASE
   TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
              CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=INTERNATIONAL SECURITIES
market # 329
EXCHANGE; LLC., WEB=www.iseoptions.com
   MIC = XISX
   TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
              CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=NASDAQ, WEB=www.nasdaq.com
market # 330
    MIC = XNAS
    TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
market # 336 CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=NEW YORK STOCK EXCHANGE; INC.,
WEB=www.nyse.com
    MIC = XNYS
   TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
market # 338
               CC=US/UNITED STATES OF AMERICA/PHILADELPHIA, DESCR=PHILADELPHIA STOCK
EXCHANGE, WEB=www.phlx.com
   MIC = XPHL
   TimeZone = America/Philadelphia
    Country = US
    NbMaxInstruments = 0
                                                                          (see next page)
```

```
MARKETS CONTINUED
market # 359 CC=US/UNITED STATES OF AMERICA/NEW YORK, DESCR=NYSE ARCA,
WEB=www.archipelago.com
    MIC = ARCX
    TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
market # 444 CC=US/UNITED STATES OF AMERICA/KANSAS CITY, DESCR=BATS EXCHANGE,
WEB=www.batstrading.com
    MIC = BATS
   TimeZone = America/New_York
    Country = US
    NbMaxInstruments = 0
market # 511 CC=US/UNITED STATES OF AMERICA/WASHINGTON/NEW YORK, DESCR=FINRA ALTERNATIVE
DISPLAY FACILITY, WEB=www.finra.org
    MIC = XADF
   TimeZone = America/Washington
    Country = US
    NbMaxInstruments = 0
```

1.1.2. Branches

The example below shows the list of branches available on NASDAQ UTP market data stream, returned by the command dumps. Each branch displays the following details: FOSMarketID, SecurityType, CFICode and Quantity (of instruments):

```
BRANCHES
   { CBSX CS ESXXXX } qty: 2700
   { CBSX NONE EUXXXX } qty: 24
   { CBSX NONE RXXXXXX } qty: 2
   { CBSX PS EPXXXX } qty: 47
   { CBSX WAR RWXXXX } qty: 44
   { EDGA CS ESXXXX } qty: 2745
   { EDGA NONE EUXXXX } qty: 27
   { EDGA NONE RXXXXX } qty: 7
   { EDGA PS EPXXXX } qty: 49
   { EDGA WAR RWXXXX } qty: 47
   { EDGX CS ESXXXX } qty: 2745
   { EDGX NONE EUXXXX } qty: 27
   { EDGX NONE RXXXXX } qty: 7
   { EDGX PS EPXXXX } qty: 49
   { EDGX WAR RWXXXX } qty: 47
   { BATY CS ESXXXX } qty: 2740
   { BATY NONE EUXXXX } qty: 25
   { BATY NONE RXXXXX } qty: 3
   { BATY PS EPXXXX } qty: 46
   { BATY WAR RWXXXX } qty: 40
   { XBOS CS ESXXXX } qty: 2732
   { XBOS NONE EUXXXX } qty: 21
   { XBOS NONE RXXXXXX } qty: 4
   { XBOS PS EPXXXX } qty: 46
   { XBOS WAR RWXXXX } qty: 38
   { XCHI CS ESXXXX } qty: 2679
   { XCHI NONE EUXXXX } qty: 27
                                                                      (see next page)
```

```
BRANCHES CONTINUED
   { XCHI NONE RXXXXX } qty: 7
   { XCHI PS EPXXXX } qty: 45
   { XCHI WAR RWXXXX } qty: 49
   { XCIS CS ESXXXX } qty: 2737
   { XCIS NONE EUXXXX } qty: 20
   { XCIS NONE RXXXXXX } qty: 5
   { XCIS PS EPXXXX } qty: 49
   { XCIS WAR RWXXXX } qty: 44
   { Xudf CS ESXXXX } qty: 2760
   { Xudf NONE EUXXXX } qty: 27
   { Xudf NONE RXXXXX } qty: 7
   { Xudf PS EPXXXX } qty: 49
   { Xudf WAR RWXXXX } qty: 49
   { XASE CS ESXXXX } qty: 152
   { XASE PS EPXXXX } qty: 1
   { XNAS CS ESXXXX } qty: 2760
   { XNAS NONE EUXXXX } qty: 27
   { XNAS NONE RXXXXXX } qty: 7
   { XNAS PS EPXXXX } qty: 49
   { XNAS WAR RWXXXX } qty: 49
   { XPHL CS ESXXXX } qty: 2349
   { XPHL NONE EUXXXX } qty: 14
   { XPHL NONE RXXXXX } qty: 3
   { XPHL PS EPXXXX } qty: 21
   { XPHL WAR RWXXXX } qty: 14
   { ARCX CS ESXXXX } qty: 2745
   { ARCX NONE EUXXXX } qty: 27
   { ARCX NONE RXXXXXX } qty: 6
   { ARCX PS EPXXXX } qty: 49
   { ARCX WAR RWXXXX } qty: 48
   { BATS CS ESXXXX } qty: 2745
   { BATS NONE EUXXXX } qty: 27
   { BATS NONE RXXXXX } qty: 6
   { BATS PS EPXXXX } qty: 49
   { BATS WAR RWXXXX } qty: 48
   { XADF CS ESXXXX } qty: 2760
   { XADF NONE EUXXXX } qty: 27
   { XADF NONE RXXXXXX } qty: 7
   { XADF PS EPXXXX } qty: 49
   { XADF WAR RWXXXX } qty: 49
```

1.2. Types of Instruments

The following sections illustrate the instruments' characteristics on NASDAQ UTP market data stream, according to their type:

- 1.2.1. Equities
- 1.2.2. Rights
- 1.2.3. Warrants.

1.2.1. Equities

The sample below illustrates the details of an equity:

```
instr # 330/500965 = 692561125
   PriceCurrency
                               string{USD}
   Symbol
                               string{MSFT}
   Description
                               string{MICROSOFT CORP}
   SecurityType
                               string{CS}
   FOSMarketId
                               XNAS
   CFTCode
                               string{ESXXXX}
   RoundLot
                               float64{100}
   SecuritySubType
                               string{C}
   InternalCreationDate
                              Timestamp{2012-03-26 08:03:00:063}
   InternalModificationDate Timestamp{2012-11-21 09:03:00:347}
   InternalSourceId
                               uint16{58}
   InternalAggregationId
                               uint16{58}
   LocalCodeStr
                               string{MSFT}
   ForeignFOSMarketId
                               XNAS
   PriceIncrement_dynamic_TableId
                                   uint32{3801188}
```

1.2.2. Rights

The sample below illustrates the details of a right:

```
instr # 330/503144 = 692563304
   PriceCurrency
                               string{USD}
   Symbol 3
                               string{CELGZ}
   Description
                               string{CELGENE CP CVR}
   SecurityType
                               string{NONE}
   FOSMarketId
                               XNAS
   CFICode
                               string{RXXXXX}
   RoundLot
                               float64{100}
   SecuritySubType
                               string{R}
   InternalCreationDate
                              Timestamp{2012-03-26 08:03:00:021}
   InternalModificationDate
                              Timestamp{2012-08-31 08:03:00:376}
   InternalSourceId
                               uint16{58}
   LocalCodeStr
                               string{CELGZ}
   ForeignFOSMarketId
                               XNAS
   PriceIncrement_dynamic_TableId uint32{3801188}
```

1.2.3. Warrants

The sample below illustrates the details of a warrant:

```
instr # 330/500918 = 692561078
    PriceCurrency
                                 string{USD}
    Symbol
                                 string{CRESW}
    Description
                                string{CRESUD S.A.C.I.F. Y}
    SecurityType
                                string{WAR}
    FOSMarketId
                                XNAS
    CFTCode
                                string{RWXXXX}
    RoundLot
                                float64{100}
    SecuritySubType string{W}
InternalCreationDate Timestamp{2012-03-26 08:03:00:046}
    InternalModificationDate Timestamp{2012-08-31 08:03:00:394}
    InternalSourceId
                                uint16{58}
                                string{CRESW}
    LocalCodeStr
    ForeignFOSMarketId
                                XNAS
                                     uint32{3801188}
    PriceIncrement_dynamic_TableId
```

1.3. Specific Referential Tags

The following sections describe additional, specific referential tags, available on NASDAQ UTP market data stream:

• 1.3.1. Price Currency

1.3.1. Price Currency

The values of the referential tag **Price Currency** conveyed on the NASDAQ UTP market data stream are disseminated via QuantFEED*s data stream in *Referential* to identify the currency used for the price.

QuantFEED*'s implementation of the values currently available for the tag PriceCurrency is described in the table below:

Table 2 PriceCurrency – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	PriceCurrency	QuantFEED® tag name.
Numeric ID	QuantFEED® unique ID disseminate S&P Capital IQ's Real-Time Solution stream. This is the numeric equivalent tag name.	
Туре	String	String data type.
Format	[Exchange Specific Value]	An exchange specific value , identifying the currency used for the price.
Possible Values	USD	US Dollar

2. Quotation Data

The following sections describe the characteristics of the quotation data on NASDAQ UTP market data stream, in terms of:

- 2.1. Quotation Values
- 2.2. Trading Status
- 2.3. Specific Quotation Tags.

2.1. Quotation Values

The examples below shows the possible values of an instrument on NASDAQ UTP market data stream:

```
InstrumentStatusL1
-- 319/501377
       BID: 14.59
                        1500
                        2200
       ASK: 14.6
       LastPrice
                                        float64{14.6}
       LastTradeQty
                                        float64{100}
       DailyHighPrice
                                        float64{15}
       DailyLowPrice
                                        float64{14.32}
       DailyTotalVolumeTraded
                                        float64{8237482}
       DailyTotalAssetTraded
                                        float64{121225428.4199}
       LastTradePrice
                                        float64{14.6}
       LastTradeTimestamp
                                        Timestamp{2013-08-14 15:06:41:336}
       InternalDailyOpenTimestamp
                                        Timestamp{2013-08-14 09:00:00:179}
       InternalDailyCloseTimestamp
                                        Timestamp{2013-08-14 01:00:00:029}
       InternalDailyHighTimestamp
                                        Timestamp{2013-08-14 13:34:43:521}
       InternalDailyLowTimestamp
                                        Timestamp{2013-08-14 14:32:02:416}
       InternalPriceActivityTimestamp
                                        Timestamp{2013-08-14 15:06:41:338}
       LowLimitPrice
                                        float64{13.8}
       HighLimitPrice
                                        float64{15.25}
       TradingStatus
                                        17=ReadyToTrade
       DailyOpeningPrice
                                        float64{14.62}
        PreviousDailyTotalVolumeTraded float64{7966423}
        PreviousDailyTotalAssetTraded
                                        float64{119517731.0189}
        PreviousDailyClosingPrice
                                        float64{14.8}
        PreviousBusinessDay
                                        Timestamp{2013-08-13}
        CurrentBusinessDay
                                        Timestamp\{2013-08-14\}
        LimitUpLimitDownIndicator
                                        char{A}
        PriceActivityMarketTimestamp
                                        Timestamp{2013-08-14 15:06:41:336}
```

For more details about the fields and tags available in quotation data type, and their possible values, see $FeedOS^{T}$ Quotation Tags Guide.

2.2. Trading Status

Each time a modification of the trading status occurs, the values of the quotation tag **Trading Status** conveyed on the NASDAQ UTP market data stream are disseminated via QuantFEED®'s data stream in *Other Values*:

- in the callback carrying the Level1 event notif_TradeEventExt(), for C++
- in the event handler TradeEventExtEventHandler, for C#
- in the callback carrying the Level1 event quotNotifTradeEventExt, for Java.

QuantFEED*'s implementation of the tag TradingStatus is described in the following table:

Table 3 TradingStatus – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	TradingStatus	QuantFEED® tag name.
Numeric ID	9100	QuantFEED® unique ID disseminated on S&P Capital IQ's Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.
Туре	Enum	Enum data type.
Format	[Exchange Specific Value]	An exchange specific value , detailing the characteristics of the trading status.
	2	Trading Halt
Possible Values	5	Price Indication
FUSSIBLE VALUES	17	Ready to Trade
	18	Not Available for Trading

2.3. Specific Quotation Tags

The following sections describe additional, specific quotation tags available on NASDAQ UTP market data stream:

- 2.3.1. Trade Conditions
- 2.3.2. Other Values.

2.3.1. Trade Conditions

The following subsections describe the trade conditions on NASDAQ UTP market data stream:

- 2.3.1.1. Sale Condition
- 2.3.1.2. Quote Condition
- 2.3.1.3. Submarket Center ID.

2.3.1.1. Sale Condition

Each time an UTP participant enters a transaction, the values of the quotation tag **Sale Condition** conveyed on the NASDAQ UTP market data stream are disseminated via S&P Capital IQ's Real-Time Solutions's data stream in *Context* to indicate the type of trade:

- in the callback carrying the Levell event $notif_TradeEventExt()$, for C++
- in the event handler TradeEventExtEventHandler, for C#

 $\bullet \quad \text{in the callback carrying the Level1 event } \verb"quotNotift" rade \verb"Eventext", for Java.$

 $Quant FEED^* implementation of the tag \verb|MARKET_NASDAQ_UTP_SaleCondition| is described in the table below:$

Table 4 MARKET_NASDAQ_UTP_SaleCondition – technical implementation in QuantFEED®

Component	Value	Description		
Tag Name	MARKET_NASDAQ_UTP_SaleCondition	QuantFEED® tag name.		
Numeric ID	15650	QuantFEED® unique ID broadcast on S&P Capital IQ's Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.		
Туре	String	String data type.		
Format	[Exchange Specific Value]	An exchange specific value , indicating the type of trade transaction entered by an UTP participant.		
	@	Regular Trade		
	F	Intermarket Sweep		
	Т	Form T		
	1	Stopped Stock		
	С	Cash		
	0	Opening Prints		
	L	Sold Last		
	A	Acquisition		
	N	Next Day		
	4	Derivatively Priced		
	Z	Sold (Out of Sequence)		
Possible Values	В	Bunched		
	R	Seller		
	5	Re-Opening Prints		
	U	Extended trading hours – Sold Out of Sequence		
	D	Distribution		
	Υ	Yellow Flag		
	6	Closing Prints		
	E	Placeholder future use		
	7	Placeholder 611 Exempt		
	G	Bunched Sold Trade		
	8	Placeholder 611 Exempt		
	Н	Price Variation Trade		
	9	Placeholder 611 Exempt		
	K	Rule 155		
	М	Market Center Official Close Price		
	Р	Prior Reference Price		
	Q	Market Center Official Open Price		

Table 4 MARKET_NASDAQ_UTP_SaleCondition – technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	S	Split Trade
	V	Stock-Option Trade
	W	Average Price Trade
	х	Cross Trade

2.3.1.2. Quote Condition

Each quote has an applicable condition, the values of the quotation tag **Quote Condition** conveyed on the NASDAQ UTP market data stream are disseminated via S&P Capital IQ's Real-Time Solutions's data stream in *Context*:

- in the callback carrying the Level1 event notif_TradeEventExt(), for C++
- in the event handler TradeEventExtEventHandler, for C#
- in the callback carrying the Levell event quotNotifTradeEventExt, for Java.

QuantFEED* implementation of the tag MARKET_NASDAQ_UTP_QuoteCondition is described in the table below:

Table 5 MARKET_NASDAQ_UTP_QuoteCondition – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	MARKET_NASDAQ_UTP_QuoteCondition	QuantFEED® tag name.
Numeric ID	15651	QuantFEED® unique ID broadcast on S&P Capital IQ's Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.
Туре	Char	Char data type.
Format	[Exchange Specific Value]	An exchange specific value , detailing the quote's applicable condition.
	A	Manual Ask, Automated Bid
	В	Manual Bid, Automated Ask
	0	Opening Quote Automated
	R	Regular, Two-Sided Open Quote Automated
	F	Fast Trading
	U	Manual Bid and Ask (Non-Firm)
Possible Values	Н	Manual Bid and Ask
T OSSISIO VAIAGS	Υ	Automated Bid, No Offer; or Automated Offer, No Bid (One-Sided Automated)
	I	Order Imbalance
	Х	Order Influx
	L	Closed Quote
	Z	No Open/No Resume
	N	Non-Firm Quote

2.3.1.3. Submarket Center ID

Each time a a transaction is collected as a part of a joint trade reporting facility, the values of the quotation tag **Submarket Center ID** conveyed on the NASDAQ UTP market data stream are disseminated via S&P Capital IQ's Real-Time Solutions's data stream in *Context* to indicate the origin market center (the tag OriginFOSMarketIdOf_LastPrice carries the value FINRA, because FINRA acts as the regulator of all over-the-counter transactions):

- in the callback carrying the Level1 event notif_TradeEventExt(), for C++
- in the event handler TradeEventExtEventHandler, for C#
- in the callback carrying the Levell event quotNotifTradeEventExt, for Java.

QuantFEED* implementation of the tag MARKET_NASDAQ_UTP_SubMarketCenterId is described in the table below:

Table 6 MARKET_NASDAQ_UTP_SubMarketCenterId – technical implementation in QuantFEED®

Component	Value Description	
Tag Name	MARKET_NASDAQ_UTP_SubMarketCenterId	QuantFEED® tag name.
Numeric ID	15652	QuantFEED® unique ID broadcast on S&P Capital IQ's Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.
Туре	Char	Char data type.
Format	[Exchange Specific Value] An exchange specific value, indoorigin market center for transaction part of a joint trade reporting facility.	
	A	NYSE Amex
	В	NASDAQ OMX BX
	С	National Stock Exchange
	D	FINRA ADF
	E	Market Independent (Generated by SIP)
	I	International Securities Exchange
	J	EDGA Exchange, Inc
Possible Values	К	EDGX Exchange, Inc
Possible values	М	Chicago Stock Exchange
	N	NYSE Euronext
	Р	NYSE Arca Exchange
	Q	NASDAQ OMX
	W	Chicago Board Options Exchange
	Х	NASDAQ OMX PHLX
	Υ	BATS Y-Exchange, Inc
	Z	BATS Exchange Inc

2.3.2. Other Values

The following subsections describe the other values available on NASDAQ UTP market data stream:

- 2.3.2.1. Low Limit Price
- 2.3.2.2. High Limit Price
- 2.3.2.3. Limit Up Limit Down Indicator.

2.3.2.1. Low Limit Price

The values of the quotation tag **Low Limit Price** are disseminated via QuantFEED®'s data stream in *Other Values* to indicate the inferior price limit:

• in the callback carrying the Level1 event notif_TradeEventExt(), for C++

- in the event handler TradeEventExtEventHandler, for C#
- in the callback carrying the Levell event quotNotifTradeEventExt, for Java.

 $Quant FEED \ensuremath{\mbox{°}} \ensuremath{\mbox{`s}} \ implementation of the tag \ensuremath{\mbox{LowLimitPrice}} \ is described in the following table:$

Table 7 LowLimitPrice – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	LowLimitPrice	QuantFEED® tag name.
Numeric ID	1148	QuantFEED® unique ID disseminated on S&P Capital IQ's Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.
Туре	Float64	Float64 data type.
Format / Possible values	[Exchange Specific Value]	An exchange specific value , indicating the inferior price limit.

2.3.2.2. High Limit Price

The values of the quotation tag **High Limit Price** are disseminated via QuantFEED®'s data stream in *Other Values* to indicate the superior price limit:

- in the callback carrying the Level1 event notif_TradeEventExt(), for C++
- in the event handler TradeEventExtEventHandler, for C#
- in the callback carrying the Levell event quotNotifTradeEventExt, for Java.

QuantFEED*'s implementation of the tag HighLimitPrice is described in the following table:

Table 8 HighLimitPrice – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	HighLimitPrice	QuantFEED® tag name.
Numeric ID	1149	QuantFEED® unique ID disseminated on S&P Capital IQ's Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.
Туре	Float64	Float64 data type.
Format / Possible values	[Exchange Specific Value]	An exchange specific value , indicating the superior price limit.

2.3.2.3. Limit Up Limit Down Indicator

The values of the quotation tag **Limit Up Limit Down Indicator** are disseminated via QuantFEED*'s data stream in *Other Values* to indicate the type of specified price bands:

- in the callback carrying the Level1 event notif_TradeEventExt(), for C++
- in the event handler TradeEventExtEventHandler, for C#
- in the callback carrying the Levell event quotNotifTradeEventExt, for Java.

The **Limit Up-Limit Down** (LULD) mechanism aims at addressing extraordinary market volatility in U.S. equity markets. This mechanism is intended to prevent trades in National Market System (NMS) securities from occurring outside of specified price bands. The bands would be set at a percentage level above and below the average reference price of the security over the immediately preceding five-minute period.

To accommodate more fundamental price moves, there would be a five-minute trading pause – similar to the pause triggered by the current single-stock circuit breakers – only if trading is unable to occur within the specified price band after 15 seconds.

QuantFEED*'s implementation of the tag LimitUpLimitDownIndicator is described in the following table:

Table 9 LimitUpLimitDownIndicator – technical implementation in QuantFEED®

Component	Value		Description
Tag Name	LimitUpLimitDownIndicator		QuantFEED® tag name.
Numeric ID	9255		QuantFEED® unique ID disseminated on S&P Capital IQ's Real- Time Solutions's data stream. This is the numeric equivalent of the tag name.
Туре	Char		Char data type.
Format	[Exchang	e Specific Value]	An exchange specific value , indicating the type of specified price bands.
		<space></space>	Limit Up Limit Down Not applicable.
	Regional	А	Bid Price above Upper Limit Price Band – Bid is Non-Executable.
	Regional	В	Ask Price below Lower Limit Price Band – Ask is Non-Executable.
		С	Bid and Ask outside price band. Not executable.
		<space></space>	Limit Up Limit Down Not applicable.
		А	National Best Bid and National Best Ask are Executable.
	National E F G	В	National Best Bid below Lower Limit Price Band – National Best Bid is Non-Executable.
		С	National Best Ask above Upper Limit Price Band – National Best Ask is Non-Executable.
Possible values		D	National Best Bid below Lower Limit Price Band and National Best Ask above Upper Limit Price Band – National Best Bid and National Best Ask are Non-Executable.
		Е	National Best Bid equals Upper Limit Price Band – National Best Bid is in Limit State.
		F	National Best Offer equals Lower Limit Price Band – National Best Ask is in Limit State.
		G	National Best Bid equals Upper Limit Price Band – National Best Bid is in Limit State and National Best Ask above Upper Limit Price Band – National Best Ask is Non-Executable.
		н	National Best Ask equals Lower Limit Price Band – National Best Ask is in Limit State and National Best Bid below Lower Limit Price Band – National Best Bid is Non-Executable.
		I	National Best Bid equals Upper Limit Price Band and National Best Ask equals Lower Limit Price Band.

3. Special Behavior

Sometimes, on NASDAQ UTP large Bid-Ask spreads can occur, as the buyer or the seller uses the Bid-Ask spread to get out from the National Best Bid and Offer (NBBO).

3.1. Market Wide Circuit Beaker

Each time an extraordinary market volatility occurs, the values of the Level 1, Level 2 and Level 3 Halts of the Market-Wide Circuit Breakers, which halt the trading in all exchange listed securities throughout the U.S. markets, as well as the breached level conveyed on the NASDAQ UTP market data stream are disseminated via QuantFEED*s data stream in *Market News*:

- in the callback carrying the Levell event notif_MarketNews(), for C++
- in the event handler MarketNewsEventHandler, for C#
- in the callback carrying the Levell event quotNotifMarketNewsEvent, for Java.

The format of the **Market-Wide Content Breaker Decline Level Message**, which conveys the values of the three level halts in the market news, follows the template described below:

```
Market-wide circuit breaker indicator
MarketId=<market ID>
Level1=<level1>
Level2=<level2>
Level3=<level3>

Example:
MN null null XNAS Normal Market-wide circuit breaker level status
MarketId=Q; Level1=144.45; Level2=135.13; Level3=124.26 related_instruments:
```

The format of the **Market-Wide Content Breaker Status Message**, which conveys the breached level in the market news, follows the template described below:

```
Market-wide circuit breaker indicator

MarketId=<market_id >

LevelBreached=<Level>
```

4. Official Closing Price

On the market NASDAQ UTP, the closing price is provided by the market. If it is not sent by the market, the last trade is used as the closing price. There is no settlement price.

5. Finding the Latest Information

For the latest documentation and product updates, additional support and training, please contact our support services one of the following ways:

- E-mail: support@quanthouse.com
- Web: http://support.quanthouse.com.