S&P Capital IQ's Real-Time Solutions

QuantFEED® Feed Description

LIFFE XDP Feed

Reference n°: 20130702

S&P Capital IQ's Real-Time Solutions (QuantHouse®) – QuantFEED®
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Reference 20130702
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Corporate Headquarters
S&P Capital IQ's Real-Time Solutions (QuantHouse®)
52 Rue de la Victoire
75009 Paris
France
Tel: +33 (0) 1 73 02 32 11
Fax: +33 (0) 1 73 02 32 12

UK Office
10 Foster Lane
London EC2V 6HR
United Kingdom
Tel: +44 (0) 203 107 1676

US Offices
55 Water Street, 44th floor
New York, NY 10041
United States of America
Tel: +1-(212)-438-4346

130 East Randolph
One Prudential Plaza, Suite 2900
Chicago, IL 60601
United States of America
Tel: +1-(312)-233-7129

www.quanthouse.com

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QUANTFEED® LIFFE XDP 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 LIFFE XDP market data stream, their possible values and current QuantFEED® technical implementation.

The topics this feed description covers include:

1. Referential Data

The following sections describe the characteristics of the referential data on LIFFE XDP market data stream, in terms of Available Markets and Branches, Types of Instruments and Additional Referential Tags.

1.1. Available Markets and Branches

This section details the list of Markets and Branches available on LIFFE XDP market data stream.

1.1.1. Markets

The LIFFE XDP market data stream broadcasts informations about the following markets:

Table 1 List of markets available on LIFFE XDP market data stream

QuantFEED® Market ID	Market
XMAT	Euronext Paris MATIF
XMON	Euronext Paris MONEP
XEUI	Euronext Amesterdam – Financial Products (Fixed Income)
XEUC	Euronext Amesterdam – Commodity Products (Commodities)

Table 1 List of markets available on LIFFE XDP market data stream (Continued)

QuantFEED® Market ID	Market
XEUE	Euronext Amesterdam – Equity Products (Equity)
XLIF	NYSE Euronext LIFFE
XBRD	NYSE Euronext – Euronext Brussels – Derivatives
MFOX	Euronext Paris MONEP

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

```
MARKETS
market # 78 CC=FR/FRANCE/PARIS,DESCR=EURONEXT PARIS - MATIF,WEB=www.euronext.com
    MIC = XMAT
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
market # 80 CC=FR/FRANCE/PARIS,DESCR=EURONEXT PARIS - MONEP,WEB=www.euronext.com
    MIC = XMON
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
market # 266 CC=NL/THE NETHERLANDS/AMSTERDAM,DESCR=EURONEXT COM; COMMODITIES FUTURES AND
OPTIONS,WEB=
    MIC = XEUC
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
market # 267 CC=NL/THE NETHERLANDS/AMSTERDAM,DESCR=EURONEXT EQF; EQUITIES AND INDICES
DERIVATIVES,WEB=
    MIC = XEUE
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
market # 268 CC=NL/THE NETHERLANDS/AMSTERDAM,DESCR=EURONEXT IRF; INTEREST RATE FUTURE AND
OPTIONS,WEB=
    MIC = XEUI
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
market # 293 CC=GB/UNITED KINGDOM/LONDON,DESCR=LIFFE,WEB=www.liffe.com
    MIC = XLIF
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
market # 449 CC=BE/BELGIUM/BRUSSELS,DESCR=brussels derivatives,WEB=www.euronext.com
    MIC = XBRD
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
market # 450 CC=PT/PORTUGAL/LISBOA,DESCR=NYSE EURONEXT - MERCADO DE FUTUROS E
OPCOES,WEB=www.euronext.com
    MIC = MFOX
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
```

1.1.2. Branches

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

```
{ XMAT FUT FCXPSX } qty: 53
{ XMAT FUT FFXCSX } qty: 5
{ XMAT FUT FFXPSX } qty: 26
{ XMAT FUT FXXXXX } qty: 2
{ XMAT MLEG MRXXXX } qty: 2584
{ XMAT OPT OCAXPS } qty: 4248
{ XMAT OPT OCEXCS } qty: 337
{ XMAT OPT OCXXXX } qty: 990
{ XMAT OPT OPAXPS } qty: 4248
{ XMAT OPT OPEXCS } qty: 337
{ XMAT OPT OPXXXX } qty: 990
{ XMON MLEG MRXXXX } qty: 112
{ XMON OPT OCAXPS } qty: 7558
{ XMON OPT OCEXPS } qty: 2846
{ XMON OPT OPAXPS } qty: 7558
{ XMON OPT OPEXPS } qty: 2846
{ XEUE FUT FFXCSX } qty: 8
{ XEUE FUT FFXPSX } qty: 10
{ XEUE MLEG MRXXXX } qty: 9654
{ XEUE OPT OCAXPS } qty: 4743
{ XEUE OPT OCEXCS } qty: 742
{ XEUE OPT OPAXPS } qty: 4743
{ XEUE OPT OPEXCS } qty: 742
{ XEUI FUT FFXPSX } qty: 6
{ XEUI MLEG MRXXXX } qty: 61
{ XEUI OPT OCEXCS } qty: 76
{ XEUI OPT OPEXCS } qty: 76
{ XLIF FUT FCXPSX } qty: 39
{ XLIF FUT FFXCSX } qty: 380
{ XLIF FUT FFXPSX } qty: 140
{ XLIF FUT FXXXXX } qty: 5
{ XLIF MLEG MRXXXX } qty: 3234
{ XLIF OPT OCAXPS } qty: 7675
{ XLIF OPT OCEXCS } qty: 426
{ XLIF OPT OCXXXX } qty: 240
{ XLIF OPT OPAXPS } qty: 7675
{ XLIF OPT OPEXCS } qty: 426
{ XLIF OPT OPXXXX } qty: 240
{ XBRD FUT FFXPSX } qty: 4
{ XBRD MLEG MRXXXX } qty: 194
{ XBRD OPT OCAXPS } qty: 1378
{ XBRD OPT OCEXCS } qty: 91
{ XBRD OPT OPAXPS } qty: 1378
{ XBRD OPT OPEXCS } qty: 91
{ MFOX FUT FFXCSX } qty: 52
{ MFOX FUT FFXPSX } qty: 4
{ MFOX MLEG MRXXXX } qty: 3
```

1.2. Types of Instruments

This section gives you an example of instrument's characteristics on LIFFE XDP market data stream:

```
instr # 78/22700 = 163600556
    PriceCurrency               string{EUR}
    Symbol                      string{FCE}
    Description                 string{Future 2012-09 on CAC 40 Index}
    SecurityType                string{FUT}
    StdMaturity                 string{201209}
    FOSMarketId                 XMAT
    Factor                      float64{5}
    ContractMultiplier          float64{10}
    CFICode                     string{FFXPSX}
    DatedDate                   Timestamp{2011-09-19}
    InternalCreationDate        Timestamp{2012-01-14 13:45:56:535}
    InternalModificationDate    Timestamp{2012-07-19 23:25:23:648}
    InternalSourceId            uint16{178}
    InternalAggregationId       uint16{178}
    LocalCodeStr                string{JFFCE120900000F}
    PriceIncrement_static       float64{0.5}
    UnderlyingFOSMarketId       XPAR
    UnderlyingLocalCodeStr      string{FR0003500008}
    MaturityYear                uint16{2012}
    MaturityMonth               uint8{9}
    MaturityDay                 uint8{21}
    MARKET_LIFFE_XDP_InstrumentDenominator      uint32{10}
```

1.3. Additional Referential Tags

The following Referential tags available on LIFFE XDP market data stream `MARKET_LIFFE_XDP_InstrumentDenominator`, `MARKET_LIFFE_XDP_StrikePriceDecimalLocator` and `MARKET_LIFFE_XDP_StrikePriceDenominator` refer to the calculation methods for decimal prices.

The **Instrument Denominator** is the multiplication factor between the Stated Value and Real Price. For instance, given a Stated Value of `6425` and an Instrument Denominator of `100`, the Real Price is `64.25`.

The **Strike Price Denominator** and **Strike Price Decimal Locator** are used for calculating fractional prices as a combination of real values (or points) and ticks. The Points represent the integer of the strike, while the Ticks are divided by the strike denominator to get the fractional part. For instance, given the following values:

- Stated Value = `6425`
- Strike Denominator = `100`
- Decimal Locator = `2`
- Points = `int` $(6425 / 10^2) = 64$
- Ticks = `6425 mod` $(10^2) = 25$

the Strike Price is `64 + 25/100 = 64.25`*, based on the following formulae:

* If the Price Denominator is $10^{\text{Decimal Locator}}$, the result is the same as if the price had been divided by the Strike Denominator.

$$StrikePrice = P + \frac{T}{D} \qquad P = int\left(\frac{E}{10^L}\right) \qquad T = E \bmod(10^L)$$

where E = Stated Value, L = Decimal Locator, D = Strike Price Denominator, P = Points, T = Ticks.

Caution	Please note that the values of **Real Price** and **Strike Price** are the results of the calculations based on these formulae, and not the Stated Value. They are broadcast in *Quotation*.

QuantFEED® implementation of the new tag related to the **Instrument Denominator** is described in the following table:

Table 2 NYSE LIFFE XDP Instrument Denominator technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_LIFFE_XDP_InstrumentDenominator`	QuantFEED® tag name.
Numeric ID	`11702`	QuantFEED® unique ID broadcast on QuantHouse®'s data stream. This is the numeric equivalent of the tag name.
Type	`UInt32`	Unsigned integer 32 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value*** concerning the instrument denominator.

QuantFEED® implementation of the new tag related to the **Strike Price Decimal Locator** is described in the table below:

Table 3 NYSE LIFFE XDP Strike Price Decimal Locator technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_LIFFE_XDP_StrikePriceDecimalLocator`	QuantFEED® tag name.
Numeric ID	`11701`	QuantFEED® unique ID broadcast on QuantHouse®'s data stream. This is the numeric equivalent of the tag name.
Type	`UInt16`	Unsigned integer 16 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value*** concerning the strike price decimal locator.

QuantFEED® implementation of the new tag related to the **Strike Price Denominator** is described in the following table:

Table 4 NYSE LIFFE XDP Strike Price Denominator technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_LIFFE_XDP_StrikePriceDenominator`	QuantFEED® tag name.
Numeric ID	`11700`	QuantFEED® unique ID broadcast on QuantHouse®'s data stream. This is the numeric equivalent of the tag name.
Type	`UInt32`	Unsigned integer 32 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value*** concerning the strike price denominator.

2. Quotation Data

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

- 2.2. Trading Status
- 2.3. Additional Quotation Tags.

2.1. Quotation Values

The example below shows the possible values of an instrument on LIFFE XDP market data stream:

```
InstrumentStatusL1
-- 78/22700
        BID: 3250.5     1
        ASK: 3251.5     10
        LastPrice                       float64{3252}
        LastTradeQty                    float64{3}
        DailyHighPrice                  float64{3252}
        DailyLowPrice                   float64{3245.5}
        DailyTotalVolumeTraded          float64{47}
        DailyTotalAssetTraded           float64{279434}
        LastTradePrice                  float64{3252}
        LastTradeTimestamp              Timestamp{2012-07-20 08:54:27:372}
        InternalDailyOpenTimestamp      Timestamp{2012-07-20 06:00:53:076}
        InternalDailyCloseTimestamp     Timestamp{2012-07-19 20:08:04:248}
        InternalDailyHighTimestamp      Timestamp{2012-07-20 08:54:27:373}
        InternalDailyLowTimestamp       Timestamp{2012-07-20 08:37:46:039}
        InternalPriceActivityTimestamp  Timestamp{2012-07-20 09:16:02:357}
        TradingStatus                   17=ReadyToTrade
        LastOffBookTradePrice           float64{3163.5}
        LastOffBookTradeQty             float64{500}
        LastOffBookTradeTimestamp       Timestamp{2012-07-17 14:47:48:584}
        DailyOpeningPrice               float64{3247}
        PreviousDailyTotalVolumeTraded  float64{0}
        PreviousDailyTotalAssetTraded   float64{2348851}
        PreviousDailyClosingPrice       float64{3256.5}
        PreviousBusinessDay             Timestamp{2012-07-19}
        CurrentBusinessDay              Timestamp{2012-07-20}
        PreviousDailySettlementPrice    float64{3256.5}
        LastAuctionPrice                float64{3166.5}
        LastAuctionVolume               float64{4}
        DailyTotalOffBookVolumeTraded   float64{0}
        DailyTotalOffBookAssetTraded    float64{0}
        OpenInterest                    float64{33234}
        InternalLastAuctionTimestamp    Timestamp{2012-07-13 05:58:45:408}
        MARKET_LIFFE_MarketMode         string{32 10 7 23 42 14}
```

For more details about the fields and tags available in quotation data type, and their possible values, see *FeedOS™ 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 LIFFE XDP 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 5 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.
Type	`Enum`	Enum data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the characteristics of the trading status.
Possible Values	2	Trading Halt
	5	Price Indication
	17	Ready to Trade
	18	Not Available for Trading
	21	Pre-open

2.3. Additional Quotation Tags

The following sections describe additional, specific quotation tags available on LIFFE XDP market data stream:

- 2.3.1. Trade Type Indicator
- 2.3.2. Market Mode.

2.3.1. Trade Type Indicator

The **Trade Type Indicator** tag describes the type of trade and is disseminated via S&P Capital IQ's Real-Time Solutions 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 Level1 event `quotNotifTradeEventExt`, for Java.

QuantFEED® implementation of Trade Type Indicator tag is described in the table below:

Table 6 Trade Type Indicator technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_LIFFE_XDP_TradeTypeIndicator`	QuantFEED® tag name.
Numeric ID	15201	QuantFEED® unique ID broadcast on S&P Capital IQ's Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`String`	String data type.

Table 6 Trade Type Indicator technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	6	Conventional Trade (default value, not sent)
	7	Block Trade
	8	Basis Trade
	9	Prof Trade
	10	Guaranteed Cross Trade
	11	Against Actual Trade
	12	Asset Allocation Trade
	13	External Match Trade
	14	Exchange For Swap Trade
	15	Exchange For Physical Trade
	29	Strategy Leg Conventional Trade
	30	Strategy Leg Block Trade
	31	Strategy Leg Basis Trade
	33	Strategy Leg Guaranteed Cross Trade
	34	Strategy Leg Against Actual Trade
	35	Strategy Leg Asset Allocation Trade
	36	Strategy Leg External Match Trade
	37	Strategy Leg Exchange For Swap Trade
	38	Strategy Leg Exchange For Physical Trade

2.3.2. Market Mode

The **Market Mode** tag describes the trading status and is disseminated via S&P Capital IQ's Real-Time Solutions 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.

`MARKET_LIFFE_MarketMode` simultaneously accepts multiple values, as shown in the example below.

```
MARKET_LIFFE_MarketMode         string{32 10 7 23 42 14}
```

QuantFEED® implementation of Market Mode tag is described in the table below:

Table 7 Market Mode technical implementation in QuantFEED®

	Value	Description
Tag Name	MARKET_LIFFE_MarketMode	QuantFEED® tag name.
Numeric ID	14650	QuantFEED® unique ID broadcast on S&P Capital IQ's Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	String	String data type. MARKET_LIFFE_MarketMode simultaneously accepts multiple values.
Possible Values	1	Closed
	4	ExPit Extend Open
	6	Halted
	7	Open
	8	Pre Closed
	9	Pre Open
	10	Price Limits Enabled
	11	Price Limits Disabled
	12	Restricted Open
	13	Session 1
	14	Session 2
	15	Session 3
	23	Quote Width Exemption 1
	24	Quote Width Exemption 2
	25	Quote Width Exemption 3
	28	Dark Series
	29	Light Series
	30	Trading Unhalt
	31	Terminate
	32	Un-Terminate
	39	Expire
	40	Pre-Expiry
	41	Hold
	42	Unhold

3. Official Closing Price

Usually, the market LIFFE XDP sends the closing price. If the price is not sent, the last trade is used instead. When a stock splits, the closing price is adjusted after the closing. The settlement price is handled by the feed handler when provided by the market.

4. 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.