T7 Release 11.0

Underlying Ticker

Manual – Production Version

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Content

1. Introduction

The Trading System T7 provides market and reference data via a set of multicast interfaces.

In addition to the Market Data Interface (MDI) for netted market data, the Enhanced Market Data Interface (EMDI) for un-netted market data, Enhanced Order Book Interface (EOBI) and the Reference Data Interface (RDI) for reference data, the Extended Market Data Service (EMDS) is also provided.

All interfaces distribute information via UDP multicast, following FIX 5.0 SP2 semantics and are FAST 1.1/1.2 encoded (except EOBI). Messages are in general published on two identical services (A and B) with different multicast addresses (live-live concept).

The present document describes the T7 Underlying Ticker Service.

This document lists the multicast addresses and describes the message layouts of the interface. FAST 1.1 and 1.2 templates for this interface will be provided

- for T7 derivatives markets on www.eurex.com and
- for T7 cash markets on the Xetra website www.xetra.com.

Please note: The present document explains the T7 Underlying Ticker Service only. The other market and reference data interfaces listed above are described in the T7 Market and Reference Data Interfaces Manual, which explains the general rules regarding FIX messages, FAST encoding and the live-live concept.

The Data Interface described in this manual has a version number. The version number is also listed at the beginning of the FAST XML templates.

This manual relates to the interface version number 110.000.000.

2. Multicast addresses

The Underlying Ticker data is disseminated via the following multicast addresses and port combinations in the Deutsche Börse network:

2.1 Production multicast addresses and ports

Service	Multicast - A	Multicast - B	Port
Underlying Ticker Data - Derivatives	224.0.50.75	224.0.50.203	59000
Underlying Ticker Data – Cash (XETR + XFRA)	224.0.161.31	224.0.163.31	59000
Underlying Ticker Data – Cash (XBUL)	224.0.161.49	224.0.163.49	59000

2.2 Simulation multicast addresses and ports

Service	Multicast - A	Multicast - B	Port
Underlying Ticker Data - Derivatives	224.0.50.91	224.0.50.219	59500
Underlying Ticker Data – Cash (XETR + XFRA)	224.0.164.95	224.0.165.95	59500
Underlying Ticker Data – Cash (XBUL)	224.0.164.94	224.0.165.94	59500

2.3 Service availability

The required bandwidth for this service will be limited to 50 kbit/second per channel.

The service will be technically available at least between 7:00 CET and 22:30 CET.

3. Data and service messages

3.1 Packet header (TID = 79)

Each datagram contains a packet header, which is used for identification of datagrams and is sent on a channel basis. Each header contains the following fields:

Field Name	FAST Data Type	Description
SenderCompID	uInt32	Unique id for a sender Each multicast channel uses the same logic.
PacketSeqNum	ByteVector	Datagram/packet sequence number Contiguous. Can be used for gap detection. Sequenced for each multicast channel itself. The PacketSeqNum's in the packet header are contiguous per SenderCompID, multicast address and port combination.
SendingTime	ByteVector	Time at which this packet left the sender (in nanoseconds since epoch).

The following table shows the structure of the block header before FAST-decoding:

1 Byte	1 Byte	1 Byte	1 Byte	4 Bytes	1 Byte	8 Bytes
PMAP	**TID**	**Sender Comp ID**	**Length**	**PacketSeqNum**	**Length**	**SendingTime**
1	2	3	4	8	9	17

3.2 Underlying Ticker Message (TID = 180)

FIX Tag	FIX Field Name	Req'd	FAST Data Type	Description
35	MsgType	Y	string	Constant Always 'X'=MarketDataIncrementalRefresh
34	MsgSeqNum	Y	uint32	The sequence number of the message is incremented per stream message
49	SenderCompID	Y	uint32	Source ID of the sender
<MDIncGrp> sequence starts				
268	NoMDEntries	Y	length	Defines the size of the array
269	> MDEntryType	Y	enum	Market Data Entry Type • 0 = Bid • 1 = Offer • 2 = Trade
279	> MDUpdateAction	Y	enum	Type of Market Data update action Always '0' = New
48	> SecurityID	Y	string	Internal identifier for instrument (ISIN)
22	> SecurityIDSource	Y	string	Source Identification Always '4' = ISIN
270	> MDEntryPx	Y	decimal	Price or index value
271	> MDEntrySize	N	decimal	Quantity (not set for indexes)
273	> MDEntryTime	N	timestamp	Time of market data entry
15	> Currency	N	string	Price currency
1500	> MDStreamID	Y	string	Name of the price source, e.g. • XETR • XFRA • XIDX • XSTX • XEEE • XHEL • XKRX • XBUL
< MDIncGrp> sequence ends				

4. Change log

No	Chapter, page	Date	Change
7.00	General	Aug 03, 2018	Creation of Simulation Version for T7 7.0
7.01	General	Nov 05, 2018	Creation of Production Version for T7 7.0
7.10	General	Feb 27, 2019	Creation of Simulation Version for T7 7.1, removed DUB
7.11	Ch. 2, Pg. 4	May 08, 2019	Added Multicast addresses for BUL (Bulgaria)
8.00	General	Jul 24, 2019	Creation of Simulation Version for T7 8.0
8.01	General	Sep 17, 2019	Creation of Production Version for T7 8.0
8.02	Ch. 2, Pg.4	Dec 19, 2019	Removal of Xetra Vienna Underlying Ticker
8.10	General	Mar 19, 2020	Creation of Simulation Version for T7 8.1
8.11	General	Jun 9, 2020	Creation of Production version for T7 8.1
9.00	General	Aug 04, 2020	Creation of Simulation Version for T7 9.0, updated interface version no and packet header TID
9.01	General	Oct 12, 2020	Creation of Production version for T7 9.0
9.10	General	Mar 26, 2021	Creation of Simulation version for T7 9.1
9.11	General	May 10, 2021	Creation of production version for T7 9.1
10.00	General	July 27, 2021	Creation of Simulation version for T7 10.0, updated interface version no and packet header TID
10.01	General	Sep 22, 2021	Creation of Production version for T710.0
10.10	General	Mar 08, 2022	Creation of Simulation version for T7 10.1
10.11	General	May 13, 2022	Creation of Production version for T7 10.1
11.00	General	July 21, 2022	Creation of Simulation version for T7 11.0
11.01	General	Oct 04, 2022	Creation of Production version for T7 11.0