

T7 Release 5.0

Xetra Instrument Reference Data Guide

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Abstract

This document provides an overview about the instrument reference data for Xetra Frankfurt customers on T7.

Keywords

Xetra, T7, Reference Data Interface, Reference Data File, Common Report Engine

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1 List of Abbreviations, Acronyms and Definitions

Please find a list of all the abbreviations used in the document.

CRE	Common Report Engine
CSV	Comma-separated-values
ETC	Exchange Traded Commodities
ETF	Exchange Traded Funds
ETN	Exchange Traded Notes
MIC	Market Identifier Code
RDF	Reference Data File
RDI	Reference Data Interface
T7	Trading System developed by Deutsche Börse Group

2 Introduction

T7 for Cash Market offers instrument reference data on four different sources:

- **Common Report Engine:** On the Common Report Engine the Reference Data File (T7 RDF) is available containing all tradable instruments for the current business day. It is generated one time per day and its creation is on each Start-Of-Day. For more information, please refer to *T7 Market & Reference Data Interfaces* on the path

*Xetra.com / Technology / T7 trading architecture / System documentation /
Market and Reference Data Interfaces*

Please find more details about the Common Report Engine in the document *Common Report Engine User Guide* in the following path

*Xetra.com / Technology / T7 trading architecture / System documentation / Reports /
Common Report Engine User Guide*

- **Reference Data Interface (T7 RDI):** This interface provides products' and instruments' reference data which are available for trading on T7. For more information, please refer to *T7 Market & Reference Data Interfaces* on the path

*Xetra.com / Technology / T7 trading architecture / System documentation /
Market and Reference Data Interfaces*

- **Cash Market Member Section:** In the Cash Market member section the instrument Reference Data File (T7 RDF) will be available on the following path:

*Deutsche-boerse-cash-market.com / Member Section / Cash Market Member Section /
Cash Market Resources / Instruments*

For more information regarding the instrument reference data file, please refer to *T7 Market & Reference Data Interfaces* on the path:

*Xetra.com / Technology / T7 trading architecture / System documentation /
Market and Reference Data Interfaces*

- **Instrument reference data on public website:** Instrument reference data (asci file) will be available on public website xetra.com on the following path:

Instruments > All tradable instruments

Besides instrument reference data, csv-files will be generated which contains static information for each instrument. These will only be changed 1-2 times a year, for example order profiles and trading schedules. Major changes of the static files will be communicated in advance with sufficient lead-time.

3 Change Log

Date	Version	Description
12.04.2017	1.0	Creation of version 1.0.
27.04.2017	1.1	Creation of version 1.1: <ul style="list-style-type: none">• Added Chapter 3 Change Log.• Modified description of file name of instrument reference data file on public webpage.• Modified description of file name of static reference data on public webpage.• Modified field name “CCP eligible Code”.

4 Further reading

The following documents provide additional information to complement this manual:

- T7 Functional and Interface Overview
- T7 Functional Reference
- T7 Market Data & Reference Data Interfaces – Manual
- Common Report Engine User Guide

5 Public website

5.1 Formatting of the file

The file is created in accordance with the following specifications:

File extension	CSV
Fields delimiter	; (semicolon)
Decimal symbol	. (point)
Digit grouping symbols (thousands separator)	, (comma)

The name of the file will follow the pattern T7 (XETR) All tradable instruments <BusinessDay>.

With:

BusinessDay: format 'DD.MM.YYYY'

5.2 File Record Layout

All fields listed below are sorted in the same order as shown in the instrument file. All data is provided in string format (Alphanumeric) delimited by semicolon.

Line 1 provides the MIC of the market, e.g. Market: XETR

Line 2 provides the date of the last update of the file, e.g. Date Last Update: 31.03.2017.

Line 3 provides the column names listed below.

The instrument reference data starts with line 4:

Sequence Number	Field name	Description
1	Market Segment Status	This field indicates whether the instrument is already tradable in T7. Published = Instrument is not tradable on T7 Active = Instrument is tradable on T7
2	Instrument Status	Instrument Status
3	Instrument	Instrument description
4	ISIN	ISIN of the instrument
5	Product ID	Relevant for ETFs which planned to be grouped along to same underlyings.
6	Instrument ID	Former "Isix": Instrument ID, unique identifier across the corresponding back end environment.
7	WKN	Wertpapierkennnummer
8	Mnemonic	Instrument mnemonic

Sequence Number	Field name	Description
9	MIC Code	MIC Code of the market
10	CCP eligible Code	Indicator whether instrument is CCP eligible.
11	Trading Model Type	Trading Model Types: Continuous Trading with Auctions One Auction Multiple Auction
12	Product Assignment Group	Product Assignment Group, e.g. DAX1.
13	Product Assignment Group Description	Description of the Product Assignment Group.
14	Designated Sponsor Member ID	DS Member Member ID. For more than one DS, Member IDs are separated with "#", the Member ID of the delegating member is separated with "*" at the end of the field.
15	Designated Sponsor	DS Member long name. For more than one DS, members' long names are separated with "#", the members' long name of the delegating member is separated with "*" at the end of the field.
16	Price Range Value	Maximum allowable quote spread (absolute value). Conditionally provided if Price Range Percentage is absent.
17	Price Range Percentage	Maximum allowable quote spread (percentage value). Conditionally provided if Price Range Value is absent.
18	Minimum Quote Size	Market Making Parameter: Minimum Quote Size.
19	Instrument Type	Instrument type, e.g. equity or ETF.
20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58	Tick Size (1-20)	A tick size represents a limit price/range step. Twenty different tick sizes are possible for an instrument.
21	Upper Price Limit Max	Maximum price for that instrument. Upper price limit max represents a limit range for which a tick size applies.
23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59	Upper Price Limit (2-20)	Upper Price Limit represents a limit range for which a tick size applies. There are a total of twenty possible for an instrument.
60	Number of Decimal Digits	Displayed decimals
61	Unit of Quotation	The unit in which an instrument is quoted/stated when buying or selling, e.g. shares (number of items).

Sequence Number	Field name	Description
62	Market Segment	This field indicates the type of Market Admission, e.g. Open Market, Regulated Market.
63	Market Segment Supplement	This field indicates the market segment supplement, e.g. XTF Exchange Traded Funds.
64	Clearing Location	Identifier for the location at which trades are cleared.
65	Primary Market MIC Code	Market Identifier Code (ISO 10383) of the "home market", where the first IPO took place.
66	Reporting Market	Market Identifier Code (ISO 10383) required for reporting to supervisory authority.
67	Settlement Period	This field indicates the number of business days from trade execution after which settlement is to be effected.
68	Settlement Currency	Currency used for settlement.
69	Closed Book Indicator	Indicates whether the Order book is closed during auction trading.
70	Market Imbalance Indicator	Controls if during auction call/volatility interruption/extended volatility interruption phase a surplus (side and volume) at the indicative price (if crossed order book) or the best bid/best ask limit and quantity (if uncrossed order book) is displayed to the market.
71	CUM/EX Indicator	CUM/EX Indicator: 'C' = Cum Capital Adjustment or Dividend: Last trading day before a Capital Adjustment or Dividend. Orders will be deleted for the next trading day. 'E' = Ex Capital Adjustment or Dividend: First trading day after Capital Adjustment or Dividend. Open orders have been deleted before start of day.
72	Minimum Iceberg Total Volume	Minimum Iceberg Total Volume
73	Minimum Iceberg Display Volume	Minimum Iceberg Display Volume (Peak)
74	EMDI Incremental A - Unnetted	Incremental address for EMDI Unnetted multicast stream A.
75	EMDI Incremental A – Unnetted Port	EMDI Port address A for EMDI Unnetted.
76	EMDI Incremental B – Unnetted	Incremental address for EMDI Unnetted multicast stream B.
77	EMDI Incremental B – Unnetted Port	Port address B for EMDI Unnetted.
78	EMDI Snapshot A – Unnetted	Snapshot address for EMDI Unnetted multicast stream A.
79	EMDI Snapshot A – Unnetted Port	EMDI Port address A for EMDI Unnetted.

Sequence Number	Field name	Description
80	EMDI Snapshot B – Unnetted	Snapshot address for EMDI Unnetted multicast stream B.
81	EMDI Snapshot B – Unnetted Port	EMDI Port address B for EMDI Unnetted.
82	EMDI Market Depth – Unnetted	Market depth for EMDI Unnetted.
83	EMDI Snapshot Recovery Time Interval - Unnetted	Recovery interval (duration of one cycle).
84	EMDI Address A - Netted	Incremental address for EMDI Netted multicast stream A.
85	EMDI Port A - Netted	Port address A for EMDI Netted.
86	EMDI Address B - Netted	Incremental address for EMDI Netted multicast stream B.
87	EMDI Port B - Netted	Port address B for EMDI Netted.
88	EMDI Market Depth – Netted	Market depth for EMDI Netted.
89	EMDI Market Depth Time Interval - Netted	Netting interval for low bandwidth feeds (0=no netting).
90	EMDI Recovery Time Interval - Netted	Recovery interval (duration of one cycle).
91	EOBI Incremental A	Address A for EOBI Incremental multicast stream (Order by Order).
92	EOBI Incremental Port A	Port address A for EOBI Incremental.
93	EOBI Incremental B	Address B for EOBI Incremental multicast stream.
94	EOBI Incremental Port B	Port address B for EOBI Incremental.
95	EOBI Snapshot A	Address A for EOBI Snapshot multicast stream.
96	EOBI Snapshot Port A	Port address A for EOBI Snapshot multicast stream.
97	EOBI Snapshot B	Address B for EOBI Snapshot multicast stream.
98	EOBI Snapshot Port B	Port address B for EOBI Snapshot multicast stream.

6 Static Files

In order to reduce the data sent via RDI and the size of the files on the CRE and the Xetra website xetra.com, reference data that rarely change like order profiles or trading schedules will only be provided via static csv-files on the CRE, Cash Market Member Section and the Xetra website xetra.com. Members have to process both files. Major changes of the static files will be communicated in advance with sufficient lead-time. Beside of major changes, the files need to be processed whenever a new instrument is added to Xetra on T7.

The files contain order profiles (e.g. Limit Order allowed) and trading schedules assigned to each Xetra instrument traded on the T7 platform as well as files for the descriptions of the Market Segment Supplements an instrument is assigned.

Static files for Xetra will be available on the Xetra and Cash Market Website under the following path:

*xetra.com or deutsche-boerse-cash-market.com / Instruments /
All tradable instruments*

The name of the zip-file will follow the pattern T7 (XETR) Static Instrument Reference Data <BusinessDay>.

With:

BusinessDay: format 'DD.MM.YYY'

Furthermore, the static file will be available on the Common Report Engine as a zip file. The file name will follow the pattern

<MIC_EnvironmentNr>_<Name>_<ReportID>_<MemberID>_<BusinessDay>_<MIC>.zip

With:

MIC_Environment number, i.e. 51 for production and 52 for simulation

Name: always FIL

ReportID: always RDF02

MemberID: always PUBLI

BusinessDay: format 'YYYYMMDD'

MIC: MIC Code of the market, e.g. XETR

Example:

51FILRDF02PUBLI20170328XETR.zip

6.1 Formatting of the files

Each csv-file will follow basic format rules. Every data record will be in one line; fields separated by a delimiter – “;”.

1. If a field is empty because it is optional and has no value, only the delimiter will be written into the csv-file.
2. The first row in the csv-file contains the column headers.

The file names will follow the pattern <YYYYMMDD>_<name>.csv.

6.2 Order Profile

T7 for Xetra categorizes orders according to Order Profiles. The exchange defines these order profiles and enables or disables them for individual products.

An additional table is provided that gives the assignment of order profiles, per product and instrument type (Order Profile Assignment Table).

The file name will have the pattern <YYYYMMDD>_orderProfiles.csv.

Example:

20170317_orderProfiles.csv

For additional information, please see the Order Profiles chapter of the Functional Reference document.

The order profile table includes the following attributes:

Field	Description
OrderProfileId	Id of the Order Profile.
Full Name	Name of the Order Profile, e.g. Limit.
Regular	Indicator, which defines whether the order type is a Regular Order (Limit + Market Order).
Stop	Indicator whether Stop Orders are allowed.
TSO	Indicates whether Trailing Stop Order is allowed.
OCO	Indicator whether One-Cancels-the-Other Order is allowed.
Limit	Indicates whether a limit order can be entered for the order profile.
Market	Indicates whether market order can be entered for the order profile.
OAO	Trading of the order is restricted to Opening Auction only.
AOO	Trading of the order is restricted to Auction only.
CAO	Trading of the order is restricted to Closing Auction only.
BOC	Execution restriction Book-or-cancel is allowed.
IOC	Execution restriction Immediate-or-cancel is allowed.
FOK	Execution restriction Fill-or-kill is allowed.
GFD	Validity of the order is Good-For-Day.

Field	Description
GTD/GTC	Validity of the order is Good-Till-Date.

The layout of the order profile will be as follows (example values):

OrderProfileId	Full Name	Regular	Stop	TSO	OCO	AOO	OAO	CAO	BOC	Limit	Market	IOC	FOK	GFD	GTD/GTC
10	Limit	Y	N	N	N	N	N	N	N	Y	N	Y	Y	Y	Y
11	Market	Y	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
...											
...											

6.3 Order Profile Assignment

The following table lists the order profiles assigned to each instrument.

For additional information, please refer to the document "T7 Functional Reference"¹. The file name will have the pattern <YYYYMMDD>_orderProfileAssignment.csv.

The order profile assignments table includes the following fields:

Field	Description
Mnemonic	Mnemonic of the instrument.
ISIN	ISIN of the instrument.
InstrumentId	InstrumentId of the instrument.
OrderProfileId	Name of the Order Profile.

¹ Please refer to the Xetra website xetra.com under the following path: Technology / T7 trading architecture / T7 System documentation / Overview and Functionality.

The layout of the order profile is as following (example values):

Mnemonic	ISIN	InstrumentId	OrderProfileId
BMW	DE000519003	35245	10
BMW	DE000519003	35245	11
.....			
SIE	DE0007236101	45258	10
SIE	DE0007236101	45258	11
.....			

6.4 Trading Schedules

This file lists the trading schedules defined for all Xetra instruments. The reference to the instruments is possible via the identifier "standardSchedule".

The file name will be <YYYYMMDD>_tradingSchedule.csv.

The trading schedule file includes following fields:

Field	Description
standardSchedule	Name of the trading schedule.
event	Name of the event, e.g. Start Of Day.
time	Time of the event.

Only schedules for current business day (vs trading holiday) will be displayed.

The file for customers look like as follows (example values):

standardSchedule	Event	Time
SCHED_FFM_CT1_FULL	Pre Trading	07:00:00
SCHED_FFM_CT1_FULL	Opening Auction	08:50:00
SCHED_FFM_CT1_FULL	Intraday Auction	13:15:00
SCHED_FFM_CT1_FULL	Closing Auction	17:30:30
SCHED_FFM_CT2_FULL	Pre Trading	07:30:00
SCHED_FFM_CT2_FULL	Opening Auction	08:50:00
.....

6.5 Trading Schedule Assignment

The file Trading Schedule Assignment lists for all Xetra instruments the assigned trading schedule the instrument is following.

The file name has the pattern <YYYYMMDD>_tradingScheduleAssignment.csv.

The file includes the fields as below:

Field	Description
InstrumentId	InstrumentId of an instrument.
standardSchedule	Name of the trading schedule.

The standardSchedule denotes the schedule that is valid for the instrument's current Business day. The layout of the file is as follows:

InstrumentId	standardSchedule
35245	SCHED_FFM_CT1_FULL
45258	SCHED_FFM_CT1_FULL
....	
....	

6.6 Market Segment and Market Segment Supplement

This file lists the Identifiers for the Market Segments and the Market Segment Supplements in order to provide the descriptions for them. The file contains all Market Segments and Market Segment Supplements of the market XETR.

The file name has the pattern <YYYYMMDD>_marketSegment.csv.

The file includes following fields:

Field	Description
Content type	Market Segment or Market Segment Supplement.
Identifier	Identifier of the Market Segment and Market Segment Supplement.
Description	Name of the Market Segment and Market Segment Supplement.

The layout of the file is as follows:

Content type	Identifier	Description
Market Segment	45	Regulated Market – Prime Standard
Market Segment	46	Regulated Market – General Standard
....
Market Segment Supplement	DEZ	Exchange Traded Commodities (ETC)
Market Segment Supplement	DX8	Exchange Traded Notes (ETN)
.....

7 Approach during Migration phase

7.1 Process during Migration step 1

Migration step 1 includes the migration of CCP-eligible equities and ETFs traded in Continuous Trading model in XETR.

In order to ease migration of Xetra (XETR), it will be done in two steps:

- Step 1 (26.06.2017) Trading of ETCs (optional for members)
- Step 2 (03.07.2017) Trading of all cash market products

As of 26 June trading of ETCs in Continuous Trading market model (XETR) is only possible on T7. In addition, these products can still be traded in the Continuous Auction market model on Xetra system (XFRA).

The ETCs will still be available on the Xetra system in XETR staying in trading phase "HALT".

The same approach will be applied for the second step of the migration on 3rd July. All instruments with MIC XETR will be traded on T7. On the Xetra system the instruments will still be available in the trading state HALT.

For the identification, which instruments can be traded on T7 and the Xetra system, the field "Market Segment Status" of the T7 reference data can be used. Instruments traded on the Xetra system will have the value "Published" whereas instruments traded on T7 will have the value "Active".

With change of business day from 19 to 20 June all instruments of MIC XETR will be loaded to T7. Starting on 20 June the reference data will be available both in T7 and Xetra and will be published separately for Xetra on the classic trading system and on T7. However, initially after launch of T7 Release 5.0, all instruments can only be traded on the Xetra system.

As of 26 June ETCs of MIC XETR can only be traded on T7. All other instruments can be traded on the Xetra system. In the T7 reference data ETCs are marked as traded on T7 in RDI, RDF and the ascii file (Market Segment Status = Active). All other instruments are still marked as traded on the Xetra system on RDI, RDF and the ascii file (Market Segment Status = Published). On the Xetra system, ETCs are available in the reference data but are set to the trading phase "HALT". Since the trading phase is not provided in the public reference data file, customers can identify the ETCs in the Xetra reference data:

- Xetra Reference Data ascii file on the public webpage field 97 Market Segment Supplement, value: Exchange Traded Commodities, ETC
- Xetra Reference Data File on the CRE field 54 Market Segment Supplement, value: ETC
- Enhanced Broadcast Solution mktSegCod, value: DEZ as Market Segment Supplement

After migration and starting on 3 July all instruments of MIC XETR can only be traded on T7. On T7 all instruments are marked as traded on T7 in RDI, RDF and the ascii file (Market Segment Status = Active). On the Xetra system, all instruments are still available in the reference data but are set to the trading phase "HALT". These instruments can be identified via the field "MIC Code" = XETR.

7.2 Process between Migration step 1 and 2

As the Xetra classic system will continue to host trading venue Börse Frankfurt (XFRA) for at least a year, both infrastructures (T7 for XETR and Xetra classic for XFRA) will run in parallel in the time between migration step 1 and step 2 e.g. the instrument reference data for Börse Frankfurt (XFRA, excluding Structured Products instruments) will still be available until the migration of step 2 has been completed.