



ODX Security Token Data File Formats

Version 1.3

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1. Introduction

This document explains the data format of various files provided by Osaka Digital Exchange (ODX) over SFTP service. For further information and inquiries please contact ODX ST Technical Support via email to: sysope@odx.co.jp.

2. Overview

2.1 SFTP

Specified files in this document are exchanged on ODX hosted SFTP server.

ODX will provide userID to access SFTP server and participant need to create **pair of key files with OpenSSH format** and provide public key to ODX. Supported key types are below.

- RSA: rsa-sha2-256, rsa-sha2-512
- ECDSA: ecdsa-sha2-nistp256, ecdsa-sha2-nistp384, ecdsa-sha2-nistp521
- ED25519: ssh-ed25519

2.2 Directory structure

Specified files will be exchanged under the directory below.

File	Date	Time	Directory	Comments
Security Token Master Data File	T-1	18:00	\$HOME/stmaster/	
Settlement Detail Notification File	T+0	16:00	\$HOME /settlement/out	
Settlement Detail Confirmation File	T+1	-14:00	\$HOME /settlement/in	
Settlement Detail Result File	T+1	15:00	\$HOME /settlement/out	
Clearing Summary Notification File	T+0	16:00	\$HOME /clearing/out	
Clearing Summary Confirmation File	T+1	-14:00	\$HOME /clearing/in	
Clearing Summary Result File	T+1	15:00	\$HOME /clearing/out	
Acknowledgement for Settlement	T+1	within 5min	\$HOME /settlement/in	File will be available within 5 minutes after receiving a confirmation file.
Acknowledgement for Clearing	T+1	within 5min	\$HOME /clearing/in	File will be available within 5 minutes after receiving a confirmation file.
Order Trade File	T+0	11:40 15:10	\$HOME /OrderTrade/out	

2.3 Retention period

Retention period of each file is below.

File	Retention period
Security Token Master Data File	90 days
Settlement Detail Notification File	5 business days
Settlement Detail Confirmation File	File will be processed and moved right after participant places
Settlement Detail Result File	5 business days
Clearing Summary Notification File	5 business days
Clearing Summary Confirmation File	File will be processed and moved right after participant places
Clearing Summary Result File	5 business days
Acknowledgement for Settlement	Removed at 0:30 next business day
Acknowledgement for Clearing	Removed at 0:30 next business day
Order Trade File	30 days

2.4 File Format

Files are provided in a CSV format with the follows.

Character code UTF-8 with BOM.

Delimited by comma (.).

Enclosed by double quotation (“”).

New line Code (CRLF).

Type “Num” Length “X.Y” means a precision of X and a scale of Y.

3. Security Token Master Data File

ODX Security Token Master Data File will be available for each trading date. The file is provided a previous trading day and the filename is ODX_SECURITY_TOKEN_MASTER_YYYYMMDD.csv, where YYYYMMDD is a date when this file was generated.

The file is composed of a single header line with field names, followed by 0 or more data lines. The fields in each line are described in the following sections.

3.1 Data line

Name	Type	Length	Req'd	Comments
ISIN Code	Char	12	R	An International Securities Identification Number (ISIN) is a 12 digits alphanumeric code that uniquely identifies a specific security.
Exchange Symbol	Char	12		4 digits code.
Security Token Address	Char	42	R	Security Token identifier on each platform.
Security Token Name	Char	100	R	Indicate a Security Token name.
Security Token Name En	Char	100		Indicate a Security Token name English.
Security Token Short Name	Char	45	R	Indicate a Security Token Short name.
Security Token Short Name En	Char	20		Indicate a Security Token Short name English.

Name	Type	Length	Req'd	Comments
ST Platform	Char	2	R	Values: 1 = ibet 2 = Progmatt
Security Token Type	Char	2	R	Values: 1 = Real Estate ST 2 = Bonds ST
Lot Size	Num	13	R	Executable quantities like 100,10000, etc.
Trade Suspension Flag	Char	1	R	Indicate if a Security Token is suspended for a day by ODX. Values: S = Suspension A = Active
Market Order Restriction	Char	1	R	Indicate if the Security Token is in market order restriction. 0 = None 1 = Restricted
Attention Flag	Char	1	R	Indicate if it's an attention Security Token. Values: 0 = None 1 = Attention
Termination Flag	Char	1	R	Indicate if it's a termination Security Token. 0 = None 1 = Termination
Listing Date	Char	10	R	Indicate a date when the Security Token is tradable. In YYYY/MM/DD format.
Delisting Date	Char	10		The date (inclusive) from which the Security Token ceases to trade. In YYYY/MM/DD format.
Currency	Char	3	R	JPY
Base Price	Num	14.2	R	Base Price at ODX. Up to 21,474,836.46.
Price Upper Limit	Num	14.2	R	Upper limit for the trading date. Up to 21,474,836.46.
Price Lower Limit	Num	14.2	R	Lower limit for the trading date. Up to 21,474,836.46.
Tick Size Table ID	Char	2	R	Indicate tick size table id for the Security Token. Refer to appendix 1
Bond Code	Char	9		Indicate “公社債コード” which is a 8 or 9 digits alphanumeric code assigned by Securities Identification Code Committee. This code is represented as 9 digits in START market, therefore the left-most digit is padded with zero if the code has 8 digits.

4. ST Settlement Detail Files

ODX Settlement Detail Files will be available after market close.

The file is composed of a single header line with field names, followed by 0 or more data lines. The fields in each line are described in the following sections.

4.1 List of Settlement Detail Files

The following three files will be exchanged between a participant and ODX.

“Company Code” in the file name is 5 digits security company code and “YYYYMMDD” is trade date.

No	Direction	Purpose	File Name
1	ODX ⇒ Participant	Notification	“Company Code”_ODXST_SETTLEMENT_DETAILS_YYYYMMDD.csv
2	Participant ⇒ ODX	Confirmation	“Company Code”_ODXST_SETTLEMENT_CONFIRMATION_YYYYMMDD.csv
3	ODX ⇒ Participant	Result	“Company Code”_ODXST_SETTLEMENT_RESULT_YYYYMMDD.csv

4.2 Notification file data line

Name	Type	Length	Req'd	Comments
Trade Date	Char	10	R	In YYYY/MM/DD format.
Settlement Date	Char	10	R	In YYYY/MM/DD format.
SenderCompID	Char	32	R	FIX SenderCompID or Trading GUI UserID
ClOrdID	Char	32	R	Unique client assigned order id
Session	Char	1	R	Indicate the section in the morning (Session 1) or afternoon (Session 2). Values: 1 = Session 1 2 = Session 2
TrdMatchID	Num	20	R	64-bit integer
ExecID	Num	20	R	64-bit integer
ISIN Code	Char	12	R	An International Securities Identification Number (ISIN) is a 12 digits alphanumeric code that uniquely identifies a specific security.
Exchange Symbol	Char	12		Indicate the 4 digits code of the security token.
Security Token Address	Char	42	R	Security Token identifier on each platform.
Security Token Short Name	Char	45	R	Indicate a Security Token short name.
Security Token Type	Char	2	R	Values: 1 = Real Estate ST 2 = Bonds ST
Side	Char	1	R	Values: B = Buy S = Sell
Agency/Principal	Char	1	R	Designates the Executed type of the firm placing the order. Values: A = Agency P = Principal
Price	Num	18.2	R	Executed price with two decimal places. e.g. 100.00
Quantity	Num	10	R	Executed quantity
Amount	Num	18	R	Executed Amount
Execution time	Char	10	R	In hhmmss.SSS format
Accrued Interest	Num	18		

Name	Type	Length	Req'd	Comments
Blockchain Address (Participant)	Char	60		Participant ibet address or Progmart Participant ID. Required for output(1) and confirmation(2)
ST Platform	Char	2	R	Values: 1 = ibet 2 = Progmart
ContraBroker	Char	5	R	Indicate a 5 digits securities company code. Value = Securities company code.
Client Reference ID	Char	32		Client Reference ID that client can input freely in the GUI.

4.3 Confirmation file data line

Name	Type	Length	Req'd	Comments
Trade Date	Char	10	R	In YYYY/MM/DD format.
Settlement Date	Char	10	R	In YYYY/MM/DD format.
SenderCompID	Char	32	R	FIX SenderCompID or Trading GUI UserID
ClOrdID	Char	32	R	Unique client assigned order id
Session	Char	1	R	Indicate the section in the morning (Session 1) or afternoon (Session 2). Values: 1 = Session 1 2 = Session 2
TrdMatchID	Num	20	R	64-bit integer
ExecID	Num	20	R	64-bit integer
ISIN Code	Char	12	R	An International Securities Identification Number (ISIN) is a 12 digits alphanumeric code that uniquely identifies a specific security.
Exchange Symbol	Char	12		Indicate the 4 digits code of the security token.
Security Token Address	Char	42	R	Security Token identifier on each platform.
Security Token Short Name	Char	45	R	Indicate a Security Token short name.
Security Token Type	Char	2	R	Values: 1 = Real Estate ST 2 = Bonds ST
Side	Char	1	R	Values: B = Buy S = Sell
Agency/Principal	Char	1	R	Designates the Executed type of the firm placing the order. Values: A = Agency P = Principal
Price	Num	18.2	R	Executed price with two decimal places. e.g. 100.00
Quantity	Num	10	R	Executed quantity
Amount	Num	18	R	Executed Amount
Execution time	Char	10	R	In hhmmss.SSS format

Name	Type	Length	Req'd	Comments
Accrued Interest	Num	18		
Blockchain Address (Participant)	Char	60	R	Participant ibet address or Progmart Participant ID. Required for output(1) and confirmation(2)
ST Platform	Char	2	R	Values: 1 = ibet 2 = Progmart
ContraBroker	Char	5	R	Indicate a 5 digits securities company code. Value = Securities company code.
Client Reference ID	Char	32		Client Reference ID that client can input freely in the GUI.

4.4 Result file data line

Name	Type	Length	Req'd	Comments
Trade Date	Char	10	R	In YYYY/MM/DD format.
Settlement Date	Char	10	R	In YYYY/MM/DD format.
SenderCompID	Char	32	R	FIX SenderCompID or Trading GUI UserID
ClOrdID	Char	32	R	Unique client assigned order id
Session	Char	1	R	Indicate the section in the morning (Session 1) or afternoon (Session 2). Values: 1 = Session 1 2 = Session 2
TrdMatchID	Num	20	R	64-bit integer
ExecID	Num	20	R	64-bit integer
ISIN Code	Char	12	R	An International Securities Identification Number (ISIN) is a 12 digits alphanumeric code that uniquely identifies a specific security.
Exchange Symbol	Char	12		Indicate the 4 digits code of the security token.
Security Token Address	Char	42	R	Security Token identifier on each platform.
Security Token Short Name	Char	45	R	Indicate a Security Token short name.
Security Token Type	Char	2	R	Values: 1 = Real Estate ST 2 = Bonds ST
Side	Char	1	R	Values: B = Buy S = Sell
Agency/Principal	Char	1	R	Designates the Executed type of the firm placing the order. Values: A = Agency P = Principal
Price	Num	18.2	R	Executed price with two decimal places. e.g. 100.00
Quantity	Num	10	R	Executed quantity
Amount	Num	18	R	Executed Amount
Execution time	Char	10	R	In hhmmss.SSS format

Name	Type	Length	Req'd	Comments
Accrued Interest	Num	18		
Blockchain Address (Seller)	Char	60	R	Seller ibet address or Progmart Participant ID. Required only for result(3)
Blockchain Address (Buyer)	Char	60	R	Buyer ibet address or Progmart Participant ID. Required only for result(3)
ST Platform	Char	2	R	Values: 1 = ibet 2 = Progmart
ContraBroker	Char	5	R	Indicate a 5 digits securities company code. Value = Securities company code.
Client Reference ID	Char	32		Client Reference ID that client can input freely in the GUI.

5. Clearing Summary files

ODX clearing details files will be available after market close.

The file is composed of a single header line with field names, followed by 0 or more data lines. The fields in each line are described in the following sections.

5.1 List of Clearing Summary Files

The following three files will be exchanged between a participant and ODX.

“Company Code” in the file name is 5 digits security company code and “YYYYMMDD” is trade date.

No	Direction	Purpose	File Name
1	ODX ⇒ Participant	Notification	“CompanyCode”_ODXST_CLEARING_SUMMARY_YYYYMMDD.csv
2	Participant ⇒ ODX	Confirmation	“CompanyCode”_ODXST_CLEARING_CONFIRMATION_YYYYMMDD.csv
3	ODX ⇒ Participant	Result	“CompanyCode”_ODXST_CLEARING_RESULT_YYYYMMDD.csv

5.2 Data line

Name	Type	Length	Req'd	Comments
Trade Date	Char	10	R	In YYYY/MM/DD format.
Settlement Date	Char	10	R	In YYYY/MM/DD format.
ContraBroker	Char	5	R	Indicate a 5 digits securities company code.
Sell Amount	Num	18	R	Indicate the amount a participant should receive after selling ST.
Buy Amount	Num	18	R	Indicate the amount a participant should pay after buying ST.
Net Amount	Num	18	R	Indicate the amount = Sell amount – Buy amount. Negative value for payment
Accrued interest income	Num	18	R	Indicate the amount of the accrued interest that a participant should receive after selling ST.
Accrued interest paid	Num	18	R	Indicate the amount of the accrued interest that a participant should pay after buying ST.
Net accrued interest	Num	18	R	Indicate the net amount of accrued interest. Negative value for payment
Amount received	Num	18	R	Indicate the amount a participant should receive or pay after netting. Negative value for payment

6. Acknowledgement files

ODX Acknowledgement files will be presented after receiving the confirmation files.

6.1 List of Acknowledgement Files

No	Direction	Purpose	File Name
1	ODX ⇒ Participant	Ack for settlement detail	ACK_ODXST_SETTLEMENT_DETAILS.csv
2	ODX ⇒ Participant	Ack for clearing summary	ACK_ODXST_CLEARING_SUMMARY.csv

6.2 Data line of acknowledgement for settlement detail

Name	Type	Length	Comments
Time	Char	23	Indicate when ODX imports and processes the file from the participant. In YYYY/MM/DD hh:mm:ss.SSS format.
Status	Num	1	Indicate the status after processing the file. Values: 0 = Acknowledged 1 = Input check error 2 = Already processed 3 = Operation Required 9 = Out of acceptance time
Error ID	Char	4	Refer to appendix 2.
Allocation Information	Char	Variable	Indicate the line which has an error and separate with “/” In “TrdMatchID” + “:” + “Sell/Buy” format. e.g. xxxxx:S/xxxxx:B. (Whole message is 111:S/222:B/333:S)

6.3 Data Line of acknowledgement for clearing summary

Name	Type	Length	Comments
Time	Char	23	Indicate when ODX imports and processes the file from the participant. In YYYY/MM/DD hh:mm:ss.SSS format.
Status	Num	1	Indicate the status after processing the file. Values: 0 = Acknowledged 1 = Input check error 2 = Already processed 9 = Out of acceptance time
Error ID	Char	4	Refer to appendix 3
Counterparty Information	Char	Variable	Indicate the line which has an error and separate with “/” In ContraBroker format. e.g. xxxxx/yyyyy.

7. Order Trade file

Order and Trade Data Files will be available after each auction sessions on the trading day.

7.1 List of Order Trade Files

No	File	File Name
1	Order Trade File 1	"Company_Code"_ODXST_ORDERTRADE1_YYYYMMDD.csv
2	Order Trade File 2	"Company_Code"_ODXST_ORDERTRADE2_YYYYMMDD.csv

The file is composed of a single header line with field names, followed by 0 or more data lines. The fields in each line are described in the following sections.

7.2 Order Trade File Data line

Name	Type	Length	Req'd	Comments
OrderID	Num	20	R	OrderID (Matching Engine assigned)
MsgType	Char	9	R	"New" / "Amend" / "Cancel" / "Execution" / "Expire"
ExchangeSymbol	Char	12		4 digits code
ISINCode	Char	12	R	ISIN code
SecurityTokenShortName	Char	60	R	Short Name (Japanese)
Side	Char	1	R	1: Buy 2: Sell
Agency/Principal	Char	1	R	A: Agency P: Principal
OrderType	Char	1	R	1: Limit 2: Market 3:MarketOnClose (Only session2) 4:LimitOnClose (Only session2)
TimeInForce		1	R	1:Day 5:AtTheOpening (Only session1)
OrderQuantity	Num	18	R	
OrderPrice	Num	10,2		
ExecutionQuantity	Num	18		Only for Execution
ExecutionPrice	Num	10,2		Only for Execution
TransactTime	Char	12	R	"hh:mm:ss.SSS"
ExecutedSession	Char	1		1: Session1 2: Session2
ContraBroker	Char	5		
ExecID	Num	20	R	Execution ID
TrdMatchID	Num	20		Matching engine assigned TradeID *Same ID is assign to both buy and sell.
LeavesQuantity	Num	18	R	Leaves quantity
Source	Char	1	R	1: FIX 2: TradingGUI

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Name	Type	Length	Req'd	Comments
SenderCompID	Char	32	R	FIX SenderCompID or Trading GUI UserID
ClOrdID	Char	32	R	OrderID (FIX / Trading GUI assigned)
ClientReferenceID	Char	32		OrderID (Client assigned on TradingGUI))
BlockchainAddress	Char	60		ibet address / Progmatt InvestorID

Appendix

Appendix 1

Tick Size table applied until 2024/10/04.

Tick Size Table ID	Price Level (JPY)		Tick Size (JPY)
1		100,000 or less	1
1	More than 100,000	JPY 1,000,000 or less	5
1	More than 1,000,000		10
2	More than 0		0.01

Tick Size table applied from 2024/10/07

Tick Size Table ID	Price Level (JPY)		Tick Size (JPY)
1		30,000 or less	1
1	More than 30,000	50,000 or less	5
1	More than 50,000	300,000 or less	10
1	More than 300,000	500,000 or less	50
1	More than 500,000		100
2	More than 0		0.01

Appendix

Appendix 2

No.	Name	Item to be check	Error ID
1	Trade Date	Value doesn't match	E101
2	Settlement Date	Value doesn't match	E102
3	SenderCompID	Value doesn't match	E103
4	ClOrdId	Value doesn't match	E104
5	Section	Value doesn't match	E105
6	TrdMatchID	Value doesn't match	E106
7	ExecID	Value doesn't match	E107
8	ISIN Code	Value doesn't match	E108
9	Exchange Symbol	Value doesn't match	E109
10	Security Token Address	Value doesn't match	E110
11	Security Token Short Name	Value doesn't match	E111
12	Security Token Type	Value doesn't match	E112
13	Side	Value doesn't match	E113
14	Agency / Principal	Value doesn't match or invalid value	E114
15	Price	Value doesn't match	E115
16	Quantity	Value doesn't match	E116
17	Amount	Value doesn't match	E117
18	Execution time	Value doesn't match	E118
19	Accrued Interest	Value doesn't match	E119
20	Blockchain Address (Participant)	Value doesn't match or	E201
		Invalid value	E202
21	ST Platform	Value doesn't match	E120
22	ContraBroker	Value doesn't match	E121
23	Client Reference ID	Value doesn't match	E122
24	Number of Records	Number of records doesn't match	E001
25	Number of Columns	Invalid file format	E002
26	Trade Date	Does not match filename date	E003
27	TrdMatchID or Side	TrdMatchID or Side is Invalid value	E004
28	TrdMatchID and Side	TrdMatchID and Side are duplicated.	E005
29	File Format	File format is wrong.	E006

Appendix

Appendix 3

No.	Name	Item to be check	Error ID
1	Trade Date	Value doesn't match	E101
2	Settlement Date	Value doesn't match	E102
3	ContraBroker	Value doesn't match	E103
4	Sell Amount	Value doesn't match	E104
5	Buy Amount	Value doesn't match	E105
6	Net Amount	Value doesn't match	E106
7	Accrued interest income	Value doesn't match	E107
8	Accrued interest paid	Value doesn't match	E108
9	Net accrued interest	Value doesn't match	E109
10	Net amount	Value doesn't match	E110
11	Number of Records	Number of records doesn't match	E001
12	Number of Columns	Invalid file format	E002
13	Trade Date	Does not match filename date	E003
14	ContraBroker	ContraBroker is Invalid value	E004
15	ContraBroker	ContraBroker is duplicated.	E005
16	File Format	File format is wrong.	E006

Revision History

Revision History

Date	Version	Description
2023/11/22	1.0	Initial revision.
2024/04/19	1.1	Section 2.1: Specified rsa_key file format as OpenSSH format
2024/09/06	1.2	Applied from 2024/11/29 in production Section 3.1 <ul style="list-style-type: none">• Add a new field for Bond Code<ul style="list-style-type: none">- With a note on the start date of use• Change the Length in the following items<ul style="list-style-type: none">- Security Token Short Name En: 45 → 20- Base Price: 13.2→14.2- Price Upper Limit: 13.2→14.2- Price Lower Limit: 13.2→14.2 Applied from 2024/10/07 in production Appendix 1 <ul style="list-style-type: none">• Added a new Tick Size table in addition to the current table• Cosmetic change in the Tick Size table
2024/12/26	1.3	Section 2.1: Added supported key type. Section 2.3: Added the retention period of each file.