arrowhead

Market Information System
FLEX Connection Specifications
High-speed Index

Ver.DS.17.3

Applicable from April 1, 2021.

Tokyo Stock Exchange

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Inquiries on these connection specifications: Tokyo Stock Exchange (Service Desk)

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1. OUTLINE

1.1. Purpose

This document contains information on the types and format of messages of High-Speed Indexes (such as TOPIX that is calculated and disseminated each time there is a new or updated price of an index components (*), not at regular intervals.)
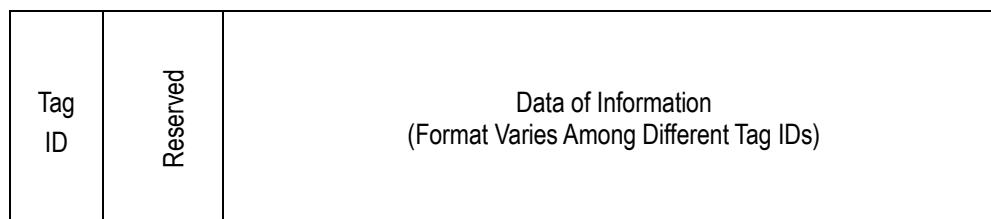
*for receiving FLEX Standard

2. USER DATA SECTION

The user data section will be edited by combining different tags.

2.1. Definition of Tags

Tags will be used as a means of outputting information. Different tags will be used for different information classifications; the same tag will never be used in different messages.
When information to be newly output occurs, a tag may be newly set for such information. Therefore, each client system must be in such specification that allows the operator to determine specific tags to be used and to receive and dispose of such tags if the operator considers it appropriate.

2.1.1. Basic Tag Format

Each tag has its own format. For formats of different tags, refer to "2.4 Information Concerning Individual Tags".
The following diagram shows the basic format of tags.

Tag ID	Reserved	Data of Information (Format Varies Among Different Tag IDs)

* Tag ID will be numbered using 1 to 9 and A to Z

* Reserved is Space(2bytes)

2.1.2. Output Conditions for Tags

About output conditions for each tag, refer to "2.4 Information Concerning Individual Tags".

2.2. List of Tags Used for Each Message Type

2.2.1. Index Message (High-speed Index)

Item No.	Tag ID	Name	Description
1	SN	Serial number	In this tag, the serial number of realtime issue message (stock, CB) which triggered the calculation of the index is set.
2	SI	High-speed stock index	High-speed stock index information.
3	AI	High-speed index(Best Ask Quote)	High-speed index(Best Ask Quote).
4	BI	High-speed index(Best Bid Quote)	High-speed index(Best Bid Quote).

2.2.2. Control Message

Item No.	Tag ID	Name	Description
5	LC	Control	Various types of Control Information.

2.3. List of Issue Classification Codes/Applicable Tags

2.3.1. High-speed index message

Only changed tag is set and output.

Tags in the same message are set in the order of "SN" through "BI" as described below.

Message Type	Issue Classification Code	Tag ID / Tag Name — Exchange Code	**SN** Serial Number	**SI** High-Speed Stock Index	**AI** High-Speed Index (Best Ask Quote)	**BI** High-Speed Index(Best Bid Quote)
Index Message (High-Speed Index) (305)	-	1 (TSE)	*	*	*	*

2.3.2. Control message

Message Type	Issue Classification Code	Tag ID / Tag Name — Exchange Code	**LC** Control
Control Message (900，905)	—	—	*

2.4. Information Concerning Individual Tags

The following pages describe the output conditions and the formats of individual tags.

The table below shows main reference for output condition or format, etc.

Item No.	Name	Reference document	Reference item
1	Index	Common Items	(1) Price, Parity, VWAP, Index
2	Time	5.3.5. General Rules for Data Sets	(5) Time
3	Detail Output Condition of High-Speed Index	System Operation "2.1 Time Schedule of a business day"	Table. 2.1-2 Output time zone(Statistics information, Index information, High Speed Index)

SN: Serial Number

1.   Format (15 bytes)

Tag ID	Reserved	Serial Number
(2)	(2)	(11)

2.   Content and output condition

Content and output condition	Remarks

1. Content
   In this tag, the serial number of realtime issue message (stock, CB) in FLEX Standard which triggered the calculation of the index is set.
   This data appears as part of an index message (High-speed index).
 	
2. Output condition
   When there is a new or change in the price of index components.	

SN : Serial Number

3. Detailed format

Item No.	Name	Location	Byte count	Format	Description	Setting condition
1	Tag ID	0	2	C	Indicates that this is a serial number tag.	"SN" is set.
2	Reserved	2	2	C	This item is reserved for future use.	
3	Serial Number	4	11	C	Indicates the serial number of the issue realtime message which triggered the calculation of the index.	The serial number set in the service header of issue realtime message (message type 100) will be set in the serial number of SN tag. When backup information (message type 101) is distributed during a system failure, the serial number of the backup information is set. However, no message is distributed when the price used for calculating the high-speed Index is same. Issue realtime message (message type 100) Relating issue realtime message with High-Speed Index message High-speed index (message type 305)

SN : Serial Number

SI: High-Speed Stock Index

1. Format (33 bytes)

Tag ID	Reserved	Index Type	High-Speed Index (25)			
			Lot Size Unit Flag	Index	Sign	Time
(2)	(2)	(4)	(1)	(14)	(1)	(9)

2. Content and output condition

Content and output condition	Remarks

1. Content
  In this tag, high-speed stock index information for the TSE will be set.
  This data appears as part of an index message (High-Speed Index).
 	
2. Output condition
  When there is a new or change in the price of index components according to outputting of 4P or Q1(excluding quote flag "0","1","2").	

SI : High-Speed Stock Index

3. Detailed format

Item No.	Name		Location	Byte count	Format	Description	Setting condition
1	Tag ID		0	2	C	Indicates that this is a High-Speed Stock Index.	"SI" is set.
2	Reserved		2	2	C	This item is reserved for future use.	
3	Index Type		4	4	C	Indicates Index Type.	0000：TOPIX 0028：TOPIX Core30 002C：TOPIX500
4	High-Speed Stock Index		8	25		Indicates High-Speed Stock Index.	
		Lot Size Unit Flag	(8)	(1)	C	Indicates Lot Size Unit Flag	"2" is set.
		Index	(9)	(14)	C	Indicates High-Speed Stock Index Unit used for computation:1/100 points	
		Sign	(23)	(1)	C	Indicates Sign.	"＋" is set.
		Time	(24)	(9)	C	Indicates when the High-Speed Stock Index is calculated.	

SI：High-Speed Stock Index

AI: High-Speed Index (Best Ask Quote)

1. Format (33 bytes)

Tag ID	Reserved	Index Type	High-Speed Index (Best Ask Quote) (25)			
			Lot Size Unit Flag	Index	Sign	Time
(2)	(2)	(4)	(1)	(14)	(1)	(9)

2. Content and output condition

Content and output condition	Remarks

1. Content
  In this tag, High-Speed Index (Best Ask Quote) information for the TSE will be set.
  This data appears as part of an index message (High-Speed Index).
 	
2. Output condition
  When there is a new or change in the price of index components according to outputting of Q1.	

AI : High-Speed Index(Best Bid Quote)

3. Detailed format

Item No.	Name		Location	Byte count	Format	Description	Setting condition
1	Tag ID		0	2	C	Indicates that this is a High-Speed Index (Best Ask Quote).	"AI" is set.
2	Reserved		2	2	C	This item is reserved for future use.	
3	Index Type		4	4	C	Indicates index type.	0000：TOPIX 0028：TOPIX Core30 002C：TOPIX500
4	High-Speed Index (Best Ask Quote)		8	25		Indicates High-Speed Index (Best Ask Quote).	
		Lot Size Unit Flag	(8)	(1)	C	Indicates Lot Size Unit Flag	"2" is set.
		Index	(9)	(14)	C	Indicates High-Speed Index (Best Ask Quote). Unit used for computation: 1/100 points	
		Sign	(23)	(1)	C	Indicates Sign.	"＋" is set.
		Time	(24)	(9)	C	Indicates when the High-Speed Index (Best Ask Quote) is calculated.	

AI ： High-Speed Index(Best Bid Quote)

BI: High-Speed Index (Best Bid Quote)

1. Format (33 bytes)

Tag ID	Reserved	Index Type	High-Speed Index (Best Bid Quote) (25)			
			Lot Size Unit Flag	Index	Sign	Time
(2)	(2)	(4)	(1)	(14)	(1)	(9)

2. Content and output condition

Content and output condition	Remarks

1. Content
  In this tag, High-Speed Index (Best Bid Quote) information for the TSE will be set.
  This data appears as part of a High-Speed Index message.
 	
2. Output condition
  When there is a new or change in the price of index components according to outputting of Q1.	

3. Detailed format

BI ：High-Speed Index(Best Bid Quote)

ItemNo.	Name		Location	Byte count	Format	Description	Setting condition
1	Tag ID		0	2	C	Indicates that this is a High-Speed Index (Best Bid Quote).	"BI" is set.
2	Reserved		2	2	C	This item is reserved for future use.	
3	Index Type		4	4	C	Indicates Index Type.	0000 : TOPIX 0028 : TOPIX Core30 002C : TOPIX500
4	High-Speed Index(Best Bid Quote)		8	25		Indicates High-Speed Index (Best Bid Quote).	
		Lot Size Unit Flag	(8)	(1)	C	Indicates Lot Size Unit Flag	"2" is set.
		Index	(9)	(14)	C	Indicates High-Speed Index (Best Bid Quote). Unit used for computation: 1/100 points	
		Sign	(23)	(1)	C	Indicates Sign.	"＋" is set.
		Time	(24)	(9)	C	Indicates when the High-Speed Index (Best Bid Quote) is calculated.	

BI : High-Speed Index(Best Bid Quote)

LC: Control

1. Format (15bytes)

Tag ID	Reserved	Test Mode Flag	Start/End Flag	Time
(2)	(2)	(1)	(1)	(9)

2. Content and output condition

Content and output condition	Remarks

1. Content
   In this tag, the test mode flag and the start/end flag that are used in a control message will be set.
   This tag will be edited into a control message (communication control and health check control) for output.
 	
2. Output condition
  (1) When this tag is edited into a control message (communication control):
     a. In the case of start of communication, this tag as a rule will be sent at the certain time before the beginning of the morning session.
     b. In the case of end of communication, this tag will be sent at the end of output index message.
 	
  (2)When this tag is edited into a control message (health check control):
     Sent in 1-minute intervals during the period in which the abovementioned control message (Communication Control) is sent (from start to end of communications).
     Even during periods when there is no information being sent through the circuit, this message will be sent to allow users to identify circuit malfunction.	

LC ： Control

3. Detailed format

Item No.	Name	Location	Byte count	Format	Description	Setting condition
1	Tag ID	0	2	C	Indicates that this is a control tag.	"LC" is set.
2	Reserved	2	2	C	This item is reserved for future use.	
3	Test Mode Flag	4	1	C	Indicates the flag for identifying the distinction between real and test operation. This flag will be set in every control message.	1:Real operation 2:Test operation
4	Start/End Flag	5	1	C	Indicates the flag for identifying the distinction between start and end.	(1)In the case of a control message (communication control): 　　1: Start 　　2: End (2) In the case of a control message (health check control): 　　Space
5	Time	6	9	C	Indicates the time.	In the case of a control message (health check control): Time at which this message was sent Other than the above:　Space

LC ： Control