



## NX FIX Specifications

Version 2.0  
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# 1. Introduction

## 1.1 Purpose of document

NX is Nomura's dark crossing platform, providing strategy based and point in time crossing services. NX has been registered in January 2010 as a Multi-lateral Trading Facility (MTF), regulated by the UK Financial Services Authority, and operated by Nomura International plc (Nomura).

Nomura operates four crossing facilities under the NX MTF:

- NX Mid Match (NXMM) – A periodic auction mid point crossing facility
- NX Bid Match (NXBM) - A continuous trading facility crossing at best bid of the primary
- NX Offer Match (NXOM) – A continuous trading facility crossing at best offer of the primary
- NX Strategy Match (NXSM) – Continuous algorithmic order crossing

This document defines the implementation of the Financial Information eXchange (FIX) protocol by Nomura on the connectivity platform. It provides guidance and reference for counterparts who wish to establish FIX connectivity and order flow into NX MTF.

This document covers FIX version 4.2 and 4.4.

This document should be read in conjunction with the FIX specifications on the FIX Protocol website (<http://www.fixprotocol.org>).

## 2. FIX Connectivity and Contact Details

### 2.1 Overview of FIX connectivity at Nomura

This document outlines the standard usage and behaviour of FIX protocol based connectivity to Nomura NX MTF. Some options are provided around instrument and product identification. If you require further clarification please do not hesitate to discuss with your sales contact or with contacts listed below.

### 2.2 Contacts

Contact	Details
European Client Connectivity Service Desk	+44 (0)20 7103 1211 <a href="mailto:FIX-Client-Connectivity@uk.nomura.com">FIX-Client-Connectivity@uk.nomura.com</a>
European Product Management	Andrew Bowley +44 (0)20 7103 9894 <a href="mailto:andrew.bowley@nomura.com">andrew.bowley@nomura.com</a>  Varsha Pitre +44 (0)20 7103 3217 <a href="mailto:varsha.pitre@nomura.com">varsha.pitre@nomura.com</a>

### 2.3 Version History

Version	Date	Comments
2.0	16 September 2011	Added details for two new crossing facilities NXBM and NXOM

### 2.4 Logon Details

Production and Integration	Details
CompID	NOMURA and NOMURATEST
SubID	SenderSubID and OnBehalfOfCompID supported
Encryption (Tag 98=5)	PGP-DES-MD5
Encryption Version	2.6.2
FIX Version	4.2 or 4.4
Session Start Time	Available from 22:30 GMT
Session End Time	22.00 GMT
Session Initiator	Client (preferred)
Heartbeat Interval	60 seconds
UTC Timestamp format	YYYYMMDD-HH:MM:SS.sss (milliseconds) format

### 3. FIX Message Structures

Nomura FIX development, application and development is based on FIX version 4.2 and FIX 4.4 (see the FIX website <http://www.fixprotocol.org>).

#### 3.1 Administrative Messages

Description	Tag = Value
Logon message	35 = A
Heartbeat	35 = 0
Test request	35 = 1
Resend request	35 = 2
Reject	35 = 3
Sequence reset (Gap fill)	35 = 4
Logout	35 = 5

#### 3.2 Application Messages

Description	Tag = Value
Execution Report	35 = 8
Order Cancel Reject	35 = 9
Order – Single	35 = D
Order Cancel Request	35 = F
Order Cancel / Replace Request	35 = G

##### 3.2.1 FIX Message Constructs

Nomura will ensure that all FIX messages have the required mandatory fields as per the supported version of the FIX protocol. Relevant non-mandatory fields are also documented below. Nomura reserves the right to send additional non-mandatory fields (without notification or revision of this document) provided that the overall validity of the FIX message remains intact.

The following tables represent the key, mainly mandatory, fields that Nomura supports for each message type, and the supported values for each field. Each table does not represent a complete FIX message.

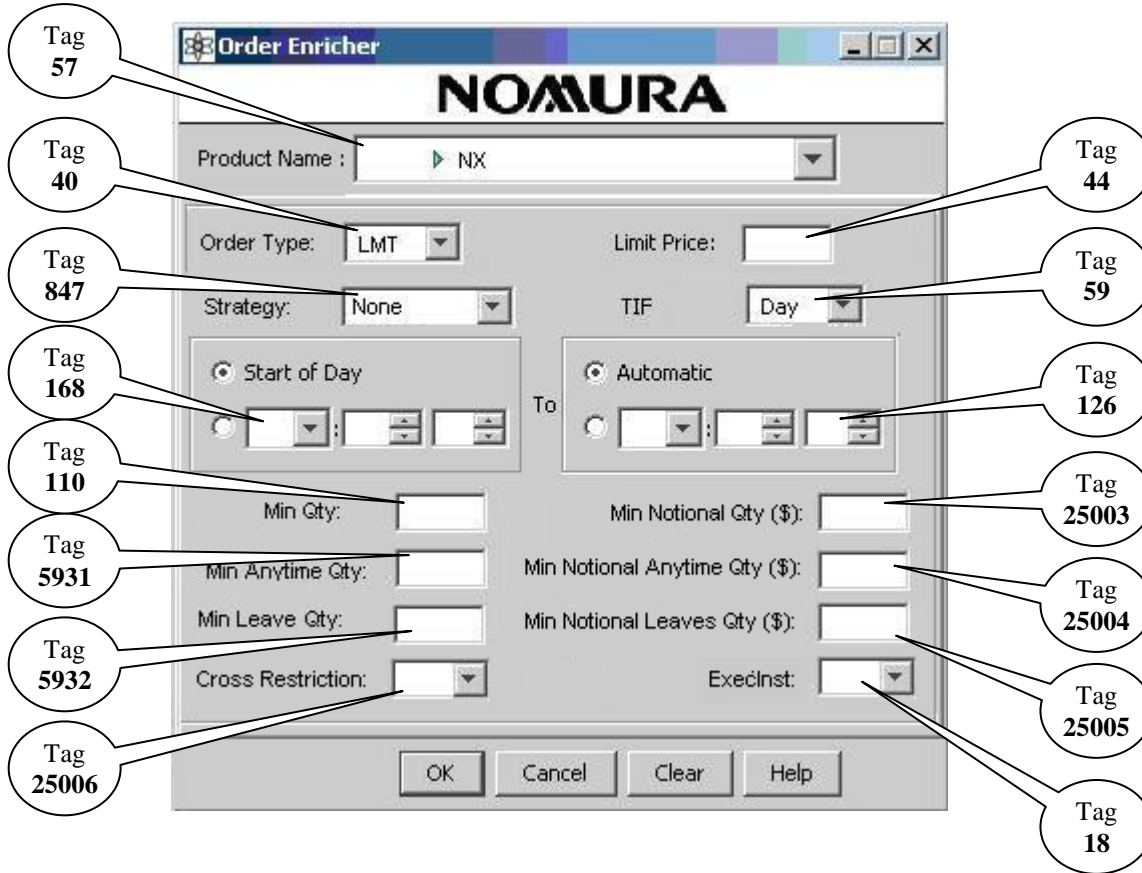
### 3.2.2 Order – Single

The new order message type is used by clients wishing to send single stock orders to Nomura NX MTF

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = D, Order – Single
11	ClOrdID	Y	Unique identifier of the order as assigned by institution. Nomura encourage (but do not require) clients to implement date within this field to ensure uniqueness over time
15	Currency	N	Identifies currency used for price.
18	ExecInst	N	M = Midpoint peg (Default) R= Primary peg (pegged to best bid for buy orders and pegged to best offer for sell orders) P = Market peg (pegged to best bid for sell orders and pegged to best offer for buy orders)  Required for NXMM, NXBM and NXOM orders
21	HandlInst	Y	Supported values: 1 = Automated private
22	IDSource	N	Identifies class of SecurityID. Supported values: 1 = CUSIP 2 = SEDOL 3 = QUIK 4 = ISIN number 5 = RIC code A = Bloomberg Symbol
38	OrderQty	Y	Number of shares ordered
40	OrdType	Y	Supported values: 1 = Market 2 = Limit P = Pegged (Required for NXMM, NXBM and NXOM)
44	Price	N	
48	SecurityID	N	As defined per field 22
54	Side	Y	Supported values: 1 = Buy 2 = Sell
55	Symbol	Y	Nomura supports various codes in this field, as agreed on connection implementation
57	TargetSubId	Y	NX
59	TimeInForce	N	Supported values: 0 = Day 3 = Immediate or Cancel 4 = Fill or Kill
81	ProcessCode	N	Used to identify soft trades at order entry. US markets.
100	ExDestination	N	NXEU
110	MinQty	N	Minimum quantity (number of shares) to be executed in the first fill. Please note if MinQty is greater than the OrderQty, NX will set MinQty

			equal to OrderQty
126	EndTime	N	End time for the order (required only for NXSM, defaulted to market close)
168	StartTime	N	Start time for the order (required only for NXSM, defaulted to current time or market start time if sent before open)
207	SecurityExchange	N	Market used to help identify a security
847	TargetStrategy	N	1 = VWAP (NXSM) 0 = None (NXMM), is the default
5931	MinAnytimeQty	N	Minimum anytime fill quantity (number of shares) on the order, for subsequent fills (for NXMM only)
5932	MinLeavesQty	N	Minimum order quantity (number of shares) that could be left at the completion of the order (for NXMM only)
25003	MinNotionalQty	N	Minimum notional quantity (in USD) to be executed (for NXMM only). Please note that if MinQty and MinNotionalQty are both sent on an order, the higher quantity will be used.
25004	MinNotionalAnytimeQty	N	Minimum anytime fill notional quantity (in USD) on the order, for subsequent fills (for NXMM only). Please note that if MinAnytimeQty and MinNotionalAnytimeQty are both sent on an order, the higher quantity will be used.
25005	MinNotionalLeavesQty	N	Minimum notional order quantity (in USD) to be left on the order (for NXMM only) Please note that if MinLeavesQty and MinNotionalLeavesQty are both sent on an order, the higher quantity will be used.
25006	CrossRestriction	N	Restricting order to be crossed against IOC order only, and/or Passive orders only. By default, if nothing is specified (for NXMM only), both IOC and Limit crossings can happen. Possible Values: 0 = Cross Against any order (Default) 1 = Cross Against IOC Only 2 = Cross Against Passive Only Please note that CrossRestriction is only relevant for NXMM orders.

### Suggested GUI design for order enrichment screens



### 3.2.3 Order Cancel Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = F
11	ClOrdID	Y	
22	IDSource	N	Must match the original order
41	OrigClOrdID	Y	ClOrdID of the order to be cancelled
48	SecurityID	N	Must match the original order
54	Side	Y	Must match the original order
55	Symbol	Y	Must match the original order
57	TargetSubID	Y	NX
60	TransactionTime	Y	

The order cancel request is used to request the cancellation of the remaining quantity of an existing order. An immediate response to this message will be sent:

An ExecutionRpt with ExecType = Pending Cancel will be sent unless the Order Cancel Request has been immediately rejected (Order Cancel Reject message). The sending of an ExecutionRpt with an ExecType = Pending Cancel indicates Nomura receipt of the Order Cancel Request but does not mean that the Order Cancel has been accepted.

### 3.2.4 Order Cancel/Replace Request

The Order Cancel/Replace Request message type is used to change the parameters of an existing order. Modifiable fields are marked with an asterisk (\*).

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = G
11	ClOrdID	Y	Unique identifier of replacement order
15	Currency	N	Must match the original order
18	ExecInst	N	Must match the original order. Required for pegged orders. Please note that reference price (Midpoint, Best Bid or Best Offer) cannot be changed using Order Cancel/Replace request. To access a different crossing facility, cancel the original order and send a new one.
21	HandlInst	Y	
22	IDSource	N	Must match the original order
37	OrderID	N	
38*	OrderQty	N	
40	OrdType	Y	Must match the original order
41	OrigClOrdID	Y	ClOrdID of the previous order
44*	Price	N	Required for Limit orders
48	SecurityID	N	Must match the original order
54	Side	Y	Must match the original order
55	Symbol	Y	Must match the original order
57	TargetSubID	Y	NX
59	TimeInForce	N	Must match the original order
60	TransactTime	Y	
110*	MinQty	N	MinQty = 0 on order cancel/replace request will remove existing MinQty restriction.
126*	EndTime	N	Only for NXSM
168*	StartTime	N	Only for NXSM
207	SecurityExchange	N	Must match the original order
5931*	MinAnytimeQty	N	MinAnytimeQty = 0 on an order cancel/replace request will remove existing MinLeavesQty restriction.
5932*	MinLeavesQty	N	MinLeavesQty = 0 on an order cancel/replace request will remove existing MinLeavesQty restriction.
25003*	MinNotionalQty	N	MinNotionalQty = 0 on an order cancel/replace request will remove existing MinLeavesQty restriction.
25004*	MinNotionalAnytimeQty	N	MinNotionalAnytimeQty = 0 on an order cancel/replace request will remove existing MinLeavesQty restriction.
25005*	MinNotionalLeavesQty	N	MinNotionalLeavesQty = 0 on an order cancel/replace request will remove existing MinLeavesQty restriction.
25006*	CrossRestriction	N	CrossRestriction = 0 on an order cancel/replace request will remove existing MinLeavesQty restriction.

The order cancel/replace request is used to change the parameters of an existing order.

Please note that only OrderQty (tag 38), Price (tag 44), MinQty (tag 110), MinAnytimeQty (tag 5931), MinLeavesQty (tag 5932), MinNotionalQty (tag 25003), MinNotionalAnytimeQty tag

25004), MinNotionalLeavesQty (tag 25005) and CrossRestriction (tag 25006) can be amended on NXMM orders.

Only OrderQty (tag 38), Price (tag 44), MinQty (tag 110), MinAnytimeQty (tag 5931), MinLeavesQty (tag 5932), MinNotionalQty (tag 25003), MinNotionalAnytimeQty tag 25004) and MinNotionalLeavesQty (tag 25005) can be amended on NXBM and NXOM orders.

Only OrderQty (tag 38), Price (tag 44), StartTime (tag 168) and EndTime (tag 126) can be amended on NXSM orders.

A Cancel/Replace request will be rejected immediately if none of the allowable fields have changed.

An ExecutionRpt with ExecType = Pending Replace will be sent unless the Order Cancel/Replace Request has been immediately rejected (Order Cancel Reject message). This does not mean that the amend is valid and may still be rejected later.

### 3.2.5 Execution Report

The Execution Reports sent to the client support the following status.

Description	Tag = Value
New	39 = 0
Partially Filled	39 = 1
Filled	39 = 2
Done For Day	39 = 3
Cancelled	39 = 4
Replaced	39 = 5
Pending Cancel	39 = 6
Pending Replace	39 = E (FIX4.2)
Rejected	39 = 8

Nomura will supply all mandatory fields for execution reports.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 8
	Standard Trailer	Y	
6	AvgPx	Y	
11	ClOrdID	N	Unique identifier of the order as assigned by institution.
14	CumQty	Y	Currently executed shares for chain of orders
15	Currency	N	Only populated when clients are setup to trade pounds for London stocks, in which case the setting will be GBP
17	ExecID	Y	Is unique for each Execution Report message
19	ExecRefID	N	
22	IDSource	N	
30	LastMkt	N	NXEU
31	LastPx	Y	Price of this (last) fill. Please note that LastPx will never exceed Price (tag 44) sent on the order
32	LastShares	Y	Quantity of shares bought/sold on this (last) fill
37	OrderID	Y	Used by Nomura. It is unique for each chain of orders
38	OrderQty	Y	

39	OrdStatus	Y	
40	OrdType	N	
41	OrigClOrdID	N	Conditionally required for response to an electronic Cancel or Cancel/Replace request (ExecType=PendingCancel, Replaced, or Cancelled). ClOrdID of the previous order (NOT the initial order of the day) when cancelling or replacing an order
44	Price	N	Order limit price
48	SecurityID	N	
54	Side	Y	
55	Symbol	Y	
58	Text	N	Error text
60	TransactTime	Y	YYYYMMDD-hh:mm:ss
103	OrdRejReason	N	For optional use with OrdStatus = 8 (Rejected)
150	ExecType	Y	Describes the type of execution report (FIX4.2)
151	LeavesQty	Y	(FIX4.2)
651	UnderlyingLastPx	N	Provides reference mid price at the time of execution. This will be sent on NXMM executions only.

### 3.2.6 Order Cancel Reject

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 9
11	ClOrdID	Y	
37	OrderID	Y	
39	OrdStatus	Y	OrdStatus value after this cancel reject is applied
41	OrigClOrdID	Y	ClOrdID which could not be cancelled/replaced.
58	Text	N	
60	TransactTime	N	
102	CxlRejReason	N	
434	CxlRejResponseTo	Y	Valid values: 1 = Order Cancel Request 2 = Order Replace Request

The order cancel reject message is issued by the broker upon receipt of a cancel request or cancel/replace request message which cannot be honoured. Requests to change price or decrease quantity are executed only when an outstanding quantity exists. Filled orders cannot be changed (i.e. quantity reduced or price change.)

Cancel/Replace requests to change the End Time to before the Start Time or Start Time to after the End Time will be rejected. Cancel/Replace request to change the Start Time to before the Current Time will also be rejected.

## **4. Other Info**

### **Settlement**

Cash Settled (DVP) - Represents physical delivery of stock on a delivery versus payment (DVP) basis. This is the default.

### **Account**

Nomura offer the facility to process order routing via the use of the account Tag 1 subject to notification. Data content should be agreed with your contact at Nomura so as to aid as far as possible the Straight Through Processing (STP) rates.

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