

UBS ATS

Class A Indirect Subscriber FIX Specification Including Conditional Indications

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1 UBS ATS Operations and UBS Form ATS-N

This specification is intended to be a technical supplement to the UBS Form ATS-N filing, available at <https://www.sec.gov/divisions/marketreg/form-ats-n-filings.htm>.

For a detailed description of the UBS ATS and its operations please refer to the UBS Form ATS-N.

2 FIX Messages

2.1 Pegged Orders (Mid, Primary, Market)

FIX Tag	Field Name	Required	Description / Comment
18	ExecInst	Y	Can only be one of the following values: M (Mid-Price Peg), R (Primary Peg), P (Market Peg). Values unrelated to peg type will be ignored.
40	OrdType	Y	P (Pegged)
44	Price	N	Absolute price constraint.
54	Side	Y	1 (Buy), 2 (Sell), 5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day), 3 (IOC)
110	MinQty	N	Minimum quantity for each execution on the order
439	MPID	N	Nasdaq Assigned MPID of the routing Broker Dealer when applicable. Clearing firm assigned MPID for BD's that are not a member of Nasdaq or FINRA. Sponsored Participants should not send this tag.
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5301	PeggedMidpointMode	N	Valid only for MidPoint Pegged Order. How the crossing engine treats the midpoint (between the bid & ask) for a pegged order. 1 - FillToLimit: Fill to the limit price, meaning it could be away from the midpoint (default) 2 - FillToMidpoint: Executions that add liquidity will execute at the midpoint only. Executions removing liquidity may execute at a price better than the midpoint if the limit price of the order is equal to or more aggressive than the midpoint (ie. a buy order with a limit price at or above the midpoint or a sell order with a limit price at or below the midpoint)
5303	MinQuantityLeavesMode	N	If tag 110 (MinQty) is present, this tag specifies how the order is handled when the leaves quantity of an order becomes smaller than MinQty. Possible values are: 1 - No MinQty in affect when leaves < MinQty (default) 2 - MinQty becomes the leaves quantity when leaves < MinQty 3 - Remainder of order is cancelled if leaves < MinQty. An unsolicited cancel ack ("OUT") message is sent to the originator of the order and the order is removed from the book.
5700	LocateBroker	N	Required on Short Sales of 'hard to borrow' securities from non-BD Subscribers.
6884	ConditionalInviteGrade	N	Minimum Conditional Score required for a Conditional Indication to get invites from this order. 0: Do not generate any invitations to Conditional Indications (default if not sent) 1: invite all 2: invite if score is medium, high or UBS algo 3: invite if score is high or UBS algo 4: invite if score is UBS algo
9004	Crossing Restrictions	Y	1 - No restrictions 3 - Do not execute against UBS Principal orders

			<p>4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client)</p> <p>5- Do not execute against UBS Principal orders or own orders</p> <p>S – Do not execute against Source Category 5 orders</p> <p>T – Do not execute against Source Category 5 or UBS Principal Orders</p> <p>U - Do not execute against Source Category 5 or UBS Principal or own orders</p> <p>V - Do not execute against Source Category 5 or own orders</p>
9007	RoundLotOnly	N	Not supported in Sponsored Participant FIX. Supported via Subscriber FIX and UBP Only.

2.2 Limit Order

FIX Tag	Field Name	Required	Description / Comment
40	OrdType	Y	2 (Limit)
44	Price	Y	Limit Price of order.
54	Side	Y	1 (Buy), 2 (Sell), 5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day), 3(IOC)
110	MinQty	N	Minimum quantity for each execution on the order
439	MPID	N	Nasdaq Assigned MPID of the routing Broker Dealer when applicable. Clearing firm assigned MPID for BD's that are not a member of Nasdaq or FINRA. Sponsored Participants should not send this tag.
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5303	MinQuantityLeavesMode	N	<p>If tag 110 (MinQty) is present, this tag specifies how the order is handled when the leaves quantity of an order becomes smaller than MinQty. Possible values are:</p> <p>1 - No MinQty in affect when leaves < MinQty (default)</p> <p>2 - MinQty becomes the leaves quantity when leaves < MinQty</p> <p>3 - Remainder of order is cancelled if leaves < MinQty. A unsolicited cancel ack ("OUT") message is sent to the originator of the order and the order is removed from the book.</p>
6884	ConditionallInviteGrade	N	<p>Minimum Conditional Score required for a Conditional Indication to get invites from this order.</p> <p>0: Do not generate any invitations to Conditional Indications (default if not sent)</p> <p>1: invite all</p> <p>2: invite if score is medium, high or UBS algo</p> <p>3: invite if score is high or UBS algo</p> <p>4: invite if score is UBS algo</p>
5700	LocateBroker	N	Required on Short Sales of 'hard to borrow' securities from non-BD Subscribers.
9004	Crossing Restrictions	Y	<p>1 - No restrictions</p> <p>3 - Do not execute against UBS principal orders</p> <p>4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client)</p>

			5- Do not execute against UBS principal orders or own orders S – Do not execute against Source Category 5 orders T – Do not execute against Source Category 5 or UBS Principal Orders U - Do not execute against Source Category 5 or UBS Principal or own orders V - Do not execute against Source Category 5 or own orders
9007	RoundLotOnly	N	Not supported in Sponsored Participant FIX. Supported via Subscriber FIX and UBP Only.

2.3 Execution Message

The following tags comprise the execution messages that the ATS will send back to originating Subscribers and systems:

FIX Tag	Field Name	Required	Description / Comment
29	LastCapacity	Y	2 (Cross as Agent), 4 (Principal), or 5 (Riskless)
30	LastMkt	Y	65 (UBS ATS). Will send MIC code "UBSA" if requested.
76	ExecBroker	Y	UBSA
375	ContraBroker	Y	UBSA
851	LastLiquidityInd	Y	1 (Adding Liquidity), 2 (Removing Liquidity), Y (Add vs Conditional), Z (Remove vs Conditional)

Note: For Riskless fills, UBS has the ability to convert tag 29 from 5 to 4 for any systems that cannot support the Riskless value. Please send a request to ats@ubs.com to request this change.

2.4 Busted Execution Message

UBS ATS may send a bust on an execution, even if the order is already filled or cancelled. A busted execution will never cause a closed order to re-open. Busts are generally only used to comply with industry wide Clearly Erroneous rulings.

FIX Tag	Field Name	Required	Description / Comment
17	ExecId	Y	ExecId of the bust execution message
19	ExecRefId	Y	ExecId of the execution being busted.
20	ExecTransType	Y	"1" (Cancelled Execution)
150	ExecType	Y	"2" (Fill)

3 Conditional Indications (CIs) FIX Messages

Please see "Conditional Orders and Indications of Interest" section of the UBS Form ATS-N for detailed information about CIs.

3.1 Entering a New CI

UBS ATS CIs are sent using the NewOrderSingle (Tag 35=D) message including tag 5253.

FIX Tag	Field Name	Required	Description / Comment
18	ExecInst	N	For Pegged OrdType: P (Market Peg), M (Mid-Price Peg), R (Primary Peg)

38	OrderQty	Y	Conditional Indication Quantity
40	OrdType	Y	1(Market), 2 (Limit), P(Pegged)
44	Price	Y	Limit Price
54	Side	Y	1 (Buy), 2 (Sell),5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day)
110	MinQty	N	Conditional Minimum quantity
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5253	OrdTypeExt	Y	C (Conditional Indication)
6884	ConditionallInviteGrade	Y	Minimum Conditional Score required for a Conditional Indication to get invites from this order. 0: Do not generate any invitations to Conditional Indications (default if not sent) 1: invite all 2: invite if score is medium, high or UBS algo 3: invite if score is high or UBS algo 4: invite if score is UBS algo
9004	Crossing Restrictions	Y	1 - No restrictions 3 - Do not execute against UBS principal orders 4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client) 5- Do not execute against UBS principal orders or own orders S – Do not execute against Source Category 5 orders T – Do not execute against Source Category 5 or UBS Principal Orders U - Do not execute against Source Category 5 or UBS Principal or own orders V - Do not execute against Source Category 5 or own orders

3.2 Receiving an Invite Message

An Invite Message is represented as an UnsolicitedCancel Execution Report (Tag 35=8).

FIX Tag	Field Name	Required	Description / Comment
6	AvgPx	Y	Avg price of executions. 0 since there are no executions
11	ClOrdID	Y	Client order reference number
14	CumQty	Y	Quantity Executed. 0 since there are no executions
17	ExecID	Y	Unique ID for each Execution Report message
20	ExecTransType	Y	Value of 0 (New)
31	LastPx	Y	Value of 0
32	LastShares	Y	Value of 0
39	OrdStatus	Y	Status of the order. Value of 4 (Cancelled)
54	Side	Y	
55	Symbol	Y	
150	ExecType	Y	State of the Execution Report. Value of 4 (Cancelled)
151	LeavesQty	Y	Value of 0

6214	InviteID	Y	Unique ID to be used for reference on the Firm-Up Order
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3.3 Responding to an Invite

The originator of the CI is expected to respond to an Invite Message by sending a Day order (a “Firm-Up Order”) (NewOrderSingle, Tag 35=D) message to the UBS ATS with a reference to the Invite ID.

Please note that Invite Grade (Tag 6884) is not supported on a Firm-Up order and a Firm-Up Order should not include Tag 5253 (OrdTypeExt).

FIX Tag	Field Name	Required	Description / Comment
18	ExecInst	N	For Pegged OrdType: P (Market Peg), M (Mid-Price Peg), R (Primary Peg)
38	OrderQty	Y	Order Quantity
40	OrdType	Y	1(Market), 2 (Limit), P(Pegged)
44	Price	Y	Limit Price
54	Side	Y	1 (Buy), 2 (Sell),5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day)
110	MinQty	N	Minimum quantity
439	MPID	N	Nasdaq Assigned MPID of the routing Broker Dealer when applicable. Clearing firm assigned MPID for BD's that are not a member of Nasdaq or FINRA. Sponsored Participants should not send this tag.
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5301	PeggedMidpointMode	N	How the crossing engine treats the midpoint (between the bid & ask) for a pegged order. 1 - FillToLimit: Fill to the limit price, meaning it could be away from the midpoint (default) 2 - FillToMidpoint: Executions that add liquidity will execute at the midpoint only. Executions removing liquidity may execute at a price better than the midpoint if the limit price of the order is equal to or more aggressive than the midpoint (ie. a buy order with a limit price at or above the midpoint or a sell order with a limit price at or below the midpoint)
5303	MinQuantityLeavesMode	N	If tag 110 (MinQty) is present, this tag specifies how the order is handled when the leaves quantity of an order becomes smaller than MinQty. Possible values are: 1 - No MinQty in affect when leaves < MinQty (default) 2 - MinQty becomes the leaves quantity when leaves < MinQty 3 - Remainder of order is cancelled if leaves < MinQty. An unsolicited cancel ack (“OUT”) message is sent to the originator of the order and the order is removed from the book.
5700	LocateBroker	N	Required on Short Sales of 'hard to borrow' securities from non-BD Subscribers.
6214	InviteID	Y	Unique ID to reference the Invite
9004	Crossing Restrictions	Y	1 - No restrictions 3 - Do not execute against UBS principal orders 4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client) 5- Do not execute against UBS principal orders or own orders 5 – Do not execute against Source Category 5 orders



			T – Do not execute against Source Category 5 or UBS Principal Orders
			U - Do not execute against Source Category 5 or UBS Principal or own orders
			V - Do not execute against Source Category 5 or own orders

3.4 Execution Messages for Firmed Up Orders

Fill Execution Reports (Tag 35=8) will not occur for Conditional Indications and will only be received based on Firm-Up Orders. The Fill Execution Reports are in the same format as described in section 2.

FIX Tag	Field Name	Required	Description / Comment
29	LastCapacity	Y	2 (Cross as Agent), 4 (Principal), or 5 (Riskless)
30	LastMarket	Y	65 (UBS ATS)
375	ContraBroker	Y	UBSA
851	Liquidity	Y	1 (Adding Liquidity), 2 (Removing Liquidity), Y (Add vs Conditional), Z (Remove vs Conditional)

Note: For Riskless fills, UBS has the ability to convert tag 29 from 5 to 4 for any systems that cannot support the Riskless value. Please send a request to ats@ubs.com to request this change.

4 Regulatory Reporting

When a match occurs, the UBS ATS will report the trade to a recognized trade reporting facility (TRF) operated by a self-regulatory organization using the UBSA MPID. The UBS ATS has the ability to report trades to the NYSE TRF and the NASDAQ TRF. Both are used as primary and backup for each other and both are actively used on a regular basis.

For OATS and OTS reporting orders sent to UBS ATS, please use the following information, for linkage:

Item	Related To	Value
Clearing Number	DTCC	642
Executing Broker	TRF	UBSA
Sent to Firm MPID	OATS	UBSA
Destination Code	OATS	M
Recipient's Market Participant Symbol	OTS	8-22651
Recipient Type	OTS	M
Last Market (UBS ATS)	FIX	65
MIC Code	FIX	UBSA

5 Clearing

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For more information regarding clearing please see "Clearance and Settlement" section of the UBS Form ATS-N.



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