TRADELOGIQ MARKETS INC.
OMEGA ATS AND LYNX ATS

Functionality Guide

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Contents

1. PURPOSE

This document provides details regarding the trading features on the Omega ATS and Lynx ATS trading venues operated by Tradelogiq Markets Inc. ("Tradelogiq") and will be updated when new features become available.

Detailed specification documents supporting this guide can be found on the Tradelogiq website.

2. CONTACT INFORMATION

The Tradelogiq Operations and Sales teams are the two main points of contact for questions relating to trading functionality and solutions.

Operations and Support: operations@tradelogiq.com 416-646-2428

Business Development & Sales: info@tradelogiq.com
sales@tradelogiq.com

All other inquiries can be directed through the above Operations and Support phone number or visit tradelogiq.com/contact-us for additional contact information.

3. OVERVIEW

3.1 Trading Venue Key Feature Summary

The key features of each of the Tradelogiq trading venues is summarized in the below table. Additional details, including differences in the functioning of the key features, are provided in the subsequent sections of this guide.

	OMEGA ATS	LYNX ATS
Trading hours	8:00am – 5:00pm ET	
Trading model	Continuous auction trading	
Securities traded	All Canadian listed securities (TSX, TSXV, CSE, NEO)	
Order book transparency	Pre-trade transparent order book with partial and fully hidden order types	
Broker attribution	Orders defaulted to anonymous; option to specify attributed	Orders defaulted to attributed; option to specify anonymous
Matching priority	Price / Broker / Time	
Hidden / partially hidden orders	Iceberg, Mid-Point Peg	
Post Only support	Visible and hidden Post Only order types	
Odd lots	Separate book for odd lots and odd lot portion of mixed lots	
Cross types	Intentional, Internal, Derivatives, Bypass, Special Settlement Terms	
Primary fee model	Inverted	Make-Take

3.2 Order Entry and Trade Reporting

Order entry is facilitated through FIX order entry sessions using the FIX 4.2 protocol. Subscribers can access their order and trade information through their FIX order entry sessions, as well as through optional drop copy feeds through a separate FIX drop copy connection.

Available public market data feeds containing full depth-of-book (Level 2) order information are based on the ITCH protocol. See section 7.2 below for additional information regarding the public market data feeds.

Specification documents for FIX order entry and the public market data feeds are available on our website.

3.3 Hours of operation

Continuous auction trading on both Omega ATS and Lynx ATS runs from 8:00am – 5:00pm (Eastern Time), Monday through Friday, other than on holidays where Canadian listing markets are scheduled to be closed.

Orders are only accepted during trading hours. All unfilled resting orders at end of day are cancelled.

Tradelogiq Operations staff are available to provide support from 7:30am to 5:30pm on days that the Tradelogiq trading venues are open for trading.

3.4 Broker attribution

Orders entered on Omega ATS are defaulted to anonymous unless the subscriber has specified that the order be attributed.

On Lynx ATS, orders are defaulted to be attributed, but subscribers may specify that their order be anonymous.

Cross orders entered on either of Omega ATS or Lynx ATS are attributed by default, unless specifically marked as anonymous.

Attribution of an order can affect its matching priority as described in the next section.

3.5 Matching Priority

Orders are matched on each of Omega ATS and Lynx ATS based on price / broker / time priority. A better-priced order will always have priority. Subject to section 3.5.1 below, where there are multiple orders at the same price, orders from the same dealer are executed first according to time priority, followed by all other booked orders according to time.

In accordance with regulatory requirements, displayed volume is always executed before non-displayed volume at the same price level (including in relation to the hidden portion of an iceberg order, which is considered non-displayed for priority purposes).

There is no cross interference on either Omega ATS or Lynx ATS, meaning crosses will execute without interference from resting orders, and may be subject to constraints that would restrict a cross from executing outside of prevailing best prices.

3.5.1 Broker preferencing

Broker preferencing of displayed orders and the hidden portion of icebergs only applies to attributed orders.

For fully hidden orders, broker preferencing applies as follows:

- Omega ATS – only to attributed orders
- Lynx ATS – to both attributed and anonymous orders (based on time)

Orders marked as jitney will not be considered for broker preferencing.

3.5.2 Circumstances affecting an order's priority timestamp

An order will lose its time priority and be assigned a new priority timestamp where:

- displayed volume of the order is increased
- price is amended (including upon the automatic repricing of a pegged order)

4. ORDER TYPES AND FEATURES

Both Omega ATS and Lynx ATS support the order types and features described below.

Booked orders can be amended for price and volume, although the priority for matching purposes may be affected as indicated in the preceding section.

4.1 Limit Order

A limit order has a specified price and may be filled upon entry at prices that are equal to or better than (i.e., less aggressive) the specified limit. Any remaining volume of the order will be booked at the specified limit price, subject to the time-in-force conditions applied to the order.

4.2 Iceberg Order

An iceberg order allows a user to specify both a total order size and the amount of that total size to be displayed in the order book.

The displayed portion of an iceberg is subject to the same price / broker / time matching priority as other displayed orders at the same price level. Where an incoming order has executed all displayed liquidity at a given price, it will execute against the hidden reserve quantities of iceberg orders at that price following the same price / broker / time matching priority.

When an iceberg order is refreshed, the displayed portion receives a new priority timestamp. The displayed portion will continue to refresh until the hidden reserve quantity has been fully exhausted. The

refresh size will generally be the lesser of the specified original display size and the remaining order quantity. In circumstances where an incoming order has executed all displayed liquidity at a given price level, iceberg orders whose hidden reserve can trade against the remainder of the incoming order will refresh to satisfy the incoming order (based on priority), immediately followed by the associated trades – the refresh size for a particular iceberg order in this case may be a multiple of its original display size in order to facilitate the subsequent trades.

Iceberg orders must always be entered in round board lot sizes. Iceberg orders entered in odd lot or mixed lot quantities will be rejected.

Example

Iceberg orders at Best Bid (all attributed):

Order	Side	Price	Time Priority	Dealer	Displayed Portion (also original display size)	Hidden Reserve
A	Buy	10.01	10:01:00	101	200	1100
B	Buy	10.01	10:02:00	102	500	2000
C	Buy	10.01	10:03:00	102	300	900

New attributed sell order received at 10:04:00:

Order	Side	Price	Time Priority	Dealer	Size
D	Sell	10.01	IOC	102	2100

Resulting trades against Order D:

Trade	Contra Order	Price	Size	Notes
1	B	10.01	500	Displayed quantity of Order B has priority due to broker preferencing.
2	C	10.01	300	Displayed quantity of Order C has priority over the displayed quantity of Order A due to broker preferencing and has priority over the hidden reserve quantity of Order B.
3	A	10.01	200	Displayed quantity of Order A has priority over all other hidden reserve quantities.
4	B	10.01	1100	All displayed quantity has been exhausted. The hidden reserve quantity of Order B is prioritized over the reserve quantity of order A due to broker preferencing, and is prioritized over the reserve quantity of Order C from same broker based on time priority. To facilitate this outcome, Order B is refreshed with 1500 shares followed by the 1100 share trade against the remainder of Order D. The displayed quantities of orders A and C subsequently refresh, but time priority of each remaining refreshed amount is determined by the original relative time priority.

Orders at Best Bid after above trades, in order of time:

Order	Side	Price	Time Priority	Dealer	Displayed Portion	Hidden Reserve
A	Buy	10.01	10:04.001	101	200	900
B	Buy	10.01	10:04.001	102	400	500
C	Buy	10.01	10:04.001	102	300	600

4.3 Mid-Point Peg Orders

A Mid-Point Peg (MPP) order is a non-displayed order that is pegged to execute at the floating midpoint of the Protected NBBO.

MPP orders must be entered with a specified limit price, which may be entered at either a full or half trading increment (i.e., full or half tick) to allow users to better manage their execution risk. MPP orders must always be entered in round board lot sizes. MPP orders entered in odd lot or mixed lot quantities will be rejected.

An MPP order is executable so long as its limit price is at or through the Protected NBBO midpoint. A MPP order with a limit price that does not meet or exceed the Protected NBBO midpoint will be held in a non-executable state until a change in the Protected NBBO allows the MPP order to become executable. Similarly, if the Protected NBBO is locked or crossed, MPP orders will be held in a non-executable state until the Protected NBBO is no longer locked or crossed.

Because displayed orders on Lynx ATS are not protected for OPR purposes, it is possible that displayed prices on Lynx ATS could be better than the protected NBBO, and better than the protected NBBO midpoint. Subscribers should note that midpoint trades on Lynx ATS will be priced at the midpoint of the protected NBBO, which does not take into consideration better-priced non-protected displayed orders on Lynx ATS. In addition, both incoming and resting MPP orders on Lynx ATS will be placed in a non-executable state where the Protected NBBO midpoint is equal to or worse than the displayed Lynx ATS best bid/offer. MPP orders entered into Lynx ATS are only executable when the Protected NBBO midpoint falls inside the Lynx displayed spread.

Subject to the above circumstances that would otherwise cause an MPP order to be placed in a non-executable state, incoming MPP orders will only execute against other resting MPP orders upon entry.

Once booked, a MPP order is eligible to trade against any other incoming order (subject to any other constraints of the incoming order that would otherwise prevent execution – e.g., see section 4.5.1 below regarding Bypass orders).

At each re-pricing, a resting MPP order is re-entered to the order book and may remove liquidity against other resting MPP orders. It will be assigned a new priority timestamp at each re-pricing.

MPP orders can be entered and are eligible to trade between 8:00am and 5:00pm.

Example A

Protected NBBO:

Best Bid	Best Offer	Midpoint Price
10.00	10.03	10.015

Booked MPP buy order:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
A	Buy	10.01	MPP	FALSE	DAY	1100

New non-MPP sell order received:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
B	Sell	10.01	LIMIT	TRUE	IOC	1100

Result:

No resulting trades. Order A is priced below the Protected NBBO midpoint price and is being held in a non-executable state. Order B cannot interact with Order A even thought it is priced through the midpoint and is cancelled back as it is marked IOC.

Example B

Protected NBBO:

Best Bid	Best Offer	Midpoint Price
10.00	10.03	10.015

Booked MPP buy order:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
A	Buy	10.01	MPP	FALSE	DAY	1100

New MPP sell order received:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
B	Sell	10.01	MPP	TRUE	DAY	1100

Result #1:

No resulting trade upon receipt of MPP sell order B. Order A is priced below the midpoint price and is being held in a non-executable state. Order B cannot interact with Order A even thought it is priced through the midpoint. Order B is booked as it is marked as a DAY order and is held in an executable state, priced at the midpoint of $10.015.

Subsequent Change to Protected NBBO:

Best Bid	Best Offer	Midpoint Price
9.99	10.03	10.01

Result #2:

Trade	Traded Orders	Price	Size	Notes
1	A, B	10.01	1100	The change in NBBO price results in Order A's price becoming executable and eligible to trade with Order B.

Example C – Lynx ATS only

Example of impact of better-priced non-protected displayed orders

Protected NBBO:

Best Bid	Best Offer	Midpoint Price
10.00	10.04	10.02

Booked MPP buy order, followed by buy limit order with limit price equal to protected NBBO mid-point:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
A	Buy	10.025	MPP	TRUE	DAY	1000

MPP Order A is executable upon entry and when initially booked to Lynx ATS given the Protected NBBO midpoint of $10.02 at time of entry was within the MPP order's stated limit price of $10.025, and because the Lynx ATS book did not have non-protected displayed orders priced at or through the Protected NBBO midpoint.

New buy limit orders received:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
A	Buy	10.025	MPP	FALSE	DAY	1000
B	Buy	10.02	Limit	TRUE	DAY	200
C	Buy	10.03	Limit	TRUE	DAY	500

Upon receipt of Order B, MPP Order A was placed in a non-executable state because the Protected NBBO midpoint of $10.02 was no longer inside of the best prices displayed on Lynx ATS (best displayed bid on Lynx ATS after entry of Order B is $10.02 and was then updated to $10.03 upon entry of Order C).

New sell limit order received:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
D	Sell	10.01	Limit	TRUE	DAY	600

Resulting trades involving Order D:

Trade	Contra Order	Price	Size	Notes
1	C	10.03	500	Order D trades with Order C (displayed limit order) first as it is better priced than Order B.
2	B	10.02	100	Order D then trades with Order B (displayed limit order with priority over hidden MPP Order A).

Example D – Lynx ATS only

Change in MPP executable state upon change in Protected NBBO, and subsequent trade with required price improvement

Protected NBBO:

Best Bid	Best Offer	Midpoint Price
10.00	10.04	10.02

Better-priced displayed orders received, followed by MPP order.

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
A	Sell	10.02	Limit	TRUE	DAY	500
B	Buy	10.01	Limit	TRUE	DAY	200
C	Buy	10.02	MPP	FALSE	DAY	500

MPP Order C placed in a non-executable state upon receipt because the Protected NBBO midpoint of $10.02 is not inside of the best displayed prices on Lynx ATS at the time of receipt (being $10.01 x $10.02).

Subsequent Change to Protected NBBO:

Best Bid	Best Offer	Midpoint Price
10.00	10.03	10.015

MPP Order C becomes executable upon change in the Protected NBBO midpoint, as the Protected NBBO midpoint of $10.015 is now inside of the best prices displayed on Lynx ATS.

New sell limit order received to interact with displayed Lynx ATS bid:

Order	Side	Limit Price	Order type	Eligible for Execution	TIF	Size
D	Sell	10.01	Limit	TRUE	DAY	200

Resulting trades involving Order D:

Trade	Contra Order	Price	Size	Notes
1	C	10.015	200	Incoming sell order D trades its full quantity against executable MPP buy Order C. Execution occurs at half-tick price improvement to Lynx ATS best bid of $10.01 but provides required minimum full-tick price improvement to protected best bid of $10.00.

4.4 Time-in-Force Conditions

The following time-in-force conditions are supported for orders entered on both Omega ATS and Lynx ATS.

4.4.1 Day Orders

By default, all orders entered on Omega ATS or Lynx ATS are treated as 'day' orders unless another time-in-force condition has been specified.

Day orders remain eligible to trade for the duration of the trading day, unless cancelled by the subscriber. Open day orders at end of day will receive 'done for day' messages indicating the order has been cancelled.

Good Til Cancelled (GTC) and Good Til Date (GTD) conditions are not currently supported.

4.4.2 Immediate or Cancel (IOC)

An order marked as IOC will attempt to fill immediately upon entry up to its specified limit price and quantity, and may receive a partial fill. After exhausting all available contra-side liquidity, any unfilled amount of an IOC order will be cancelled.

4.4.3 Fill or Kill (FOK) / All or None

A FOK order will attempt to immediately execute in full against one or more resting orders. Unlike an IOC order, if the FOK order cannot be fully filled upon entry, the entire order receives no fills and is cancelled.

Orders marked as 'All or None' are also accepted, but are treated as FOK.

4.5 Specialized order markers / features

4.5.1 Bypass order

Orders marked as bypass will only interact with resting displayed liquidity, and will bypass any hidden orders (including the reserve portion of icebergs). Bypass orders will only be accepted if also marked as Immediate or Cancel.

Refer to CIRO UMIR requirements and guidance for information pertaining to the use of a 'bypass order'.

4.5.2 Post Only

Orders marked with the Post Only identifiers are entered by subscribers with the intent that the order not trade actively on entry and only be booked as a resting passive order. Orders marked as Post Only will be rejected upon entry if any portion of the order is immediately executable against another order resting in the order book. In a situation where two resting MPP orders that are

marked Post Only become otherwise executable against each other upon a change in the Protected NBBO, the two orders will remain booked and will be locked with respect to each other, but will be available for execution against incoming contra-side orders.

4.5.3 Short sale orders and related identifiers

A short sale is an order to sell shares the seller does not own.[1] CIRO UMIR imposes requirements to identify a short sale order upon entry unless the order is designated by the user as a 'short-marking exempt order'.

4.5.3.1 Short sell orders

Subscribers may enter sell orders as a Short Sell order. There is no difference in order handling and matching on either of Omega ATS or Lynx ATS for Short Sell orders as compared to regular sell orders.

4.5.3.2 Short-marketing exempt orders

Subscribers may identify their orders as being short-marking exempt (SME) where eligible to do so under CIRO UMIR. The presence of the SME flag has no effect on how an order is handled or matched on Omega ATS or Lynx ATS.

4.5.4 NCIB identifiers

Subscribers have the ability to tag their entered orders and crosses as being associated with a trade being carried out under a Normal Course Issuer Bid (NCIB). It is entered using a private tag that is echoed back to the subscriber through the FIX order entry session. The tag is not publicly disseminated.

Users of the NCIB identifier that wish their NCIB orders and trades to be attributed should note the earlier section on broker attribution that explains the circumstances in which received orders are defaulted to anonymous unless specified as attributed.

4.5.5 Jitney

Orders entered by an executing dealer on behalf of another dealer should be marked as jitney where required by CIRO UMIR. Orders marked as jitney are not eligible for broker preferencing.

4.6 Odd Lots and Mixed Lots

Odd lots are order quantities that do not conform to regular board lot sizes. (See later section of this guide on Board Lot Sizes.)

[1] See CIRO UMIR for detailed definition of "short sale".

Subscribers can submit their orders as odd lots or mixed lots, except in the case of Iceberg and Mid-Point Peg orders which must always be entered in board lot quantities. Received mixed lot orders will be separated into their respective board lot and odd lot portions and sent to the applicable order book.

Odd lots, including the odd lot portion of a received mixed lot, will seek to execute against resting odd lot orders upon entry. Any unfilled amount of an entered odd lot that is marked as a 'day order' will be booked.

Pre-trade transparency of booked odd lot orders is facilitated by the Tradelogiq Level 2 public data feeds for each of Omega ATS and Lynx ATS.

Incoming odd lots may execute against resting odd lots at prices outside of the Protected NBBO as a result of the presence of the DAO instruction on the incoming order.

4.7 Cross types and features

The following intentional cross types and features are supported on both Omega ATS and Lynx ATS.

Crosses entered on either Omega ATS or Lynx ATS are attributed by default unless specifically marked as anonymous. Crosses are not subject to interference from resting booked orders on either of Omega ATS or Lynx ATS.

Crosses are accepted in board lots, mixed lots, and odd lots.

4.7.1 Intentional Cross

Subscribers must identify a cross as an Intentional Cross where not otherwise identifying the cross as an Internal Cross or Derivatives Cross.

4.7.2 Internal Cross

An Internal Cross, defined in CIRO UMIR, is an Intentional Cross between two accounts that are managed by the same portfolio manager.

4.7.3 Derivatives Cross

Subscribers must specify a cross as a Derivatives Cross upon entry if intending to execute a pre-arranged trade to offset a trade in a related derivative instrument. See the definition of 'derivative-related cross' and any associated requirements in CIRO UMIR.

4.7.4 Bypass Cross

Crosses may be marked with or without the bypass marker. Crosses entered with the bypass marker are permitted to execute outside of the Protected NBBO. Crosses without the bypass marker will be rejected if the entered trade price is outside of the Protected NBBO.

Users of the bypass marker on crosses have the responsibility to displace all better priced visible volume before printing the cross. This is generally achieved through the use of bypass orders.

4.7.5 Special Settlement Terms

Subscribers have the option of specifying settlement terms other than regular settlement (T+1) for the above cross types. These terms include cash settlement and the ability to specify delayed delivery dates. Crosses with special settlement terms will be permitted to execute outside of the Protected NBBO.

4.8 Order Protection Rule (OPR) features

Under OPR requirements, Tradelogiq is required to have reasonable policies and procedures to prevent trade-throughs of better-priced displayed orders on protected markets. Various order features are supported to facilitate compliance with OPR.

Users will specify a default OPR treatment to be applied to orders at the session level when a new order entry session is created, but may designate specific OPR handling on an order-by-order basis to override the default. Where the user has not specified OPR handling instructions on an order, the session-level default will apply.

4.8.1 Directed Action Order (DAO)

DAO is defined in National Instrument 23-101 *Trading Rules*.[2]

Orders marked by a subscriber as DAO indicate that the subscriber has already checked the displayed prices on all other protected markets before routing the order to either of Omega ATS or Lynx ATS. DAO orders indicate that the subscriber is opting out of the marketplace's OPR compliance mechanisms and is taking responsibility for preventing trade-throughs and locked or crossed markets in relation to the entered DAO order.

DAO orders are not re-priced by the Tradelogiq trading books and will trade with the best-priced contra-side orders without consideration of prices available on other markets.

4.8.2 OPR Re-price

OPR Re-price will prevent an order that is priced at or through the opposite side of the Protected NBBO from violating OPR. It does this by allowing the order upon entry to only trade at prices up to and including the opposite side of the Protected NBBO. Any unfilled amount will then re-price to book at a price that is one tick inside of the opposite side Protected NBBO.

An order marked OPR Re-price will only be re-priced once upon booking. Once booked, it will not subsequently re-price based on changes to the opposite side Protected NBBO.

[2] Visit the "Instrument, rules and policies" section of the OSC's website at www.osc.ca.

4.8.3 OPR Cancel

OPR Cancel will prevent an order that is priced at or through the opposite side of the Protected NBBO from violating OPR. It does this by allowing the order upon entry to only trade at prices up to and including the opposite side of the Protected NBBO. Any remaining unfilled portion will then be cancelled to prevent the order from locking or crossing the Protected NBBO.

5. SUBSCRIBER RISK MANAGEMENT TOOLS

The following subscriber risk management tools are supported on each of Omega ATS and Lynx ATS.

5.1 Cancel on Disconnect

Subscribers will specify whether to enable 'cancel on disconnect' for each new order entry session. Where 'cancel on disconnect' has been enabled, and a subscriber's FIX session is disconnected, all open orders associated with the session will be cancelled.

5.2 Self-Trade Prevention (STP)

Tradelogiq offers subscribers the following self-trade prevention features to help manage the risk of unintentional wash trades. The features include 'Trade and Suppress', 'Cancel and Decrement', 'Cancel Newest' and 'Cancel Oldest'.

These STP features apply certain restrictions where two offsetting orders for the same symbol, from the same subscriber, and containing the same user-generated 'key' value would otherwise result in a trade. Because STP features rely on a user-generated key, STP is enabled on an order-by-order basis.

For STP to apply, both sides of the order must contain a valid STP instruction, but the instructions do not need to match. Where two offsetting orders with the same symbol, dealer and key contain different STP instructions, the STP instruction assigned to the active order will determine the STP instruction to be applied.

5.2.1 Trade and Suppress

Subscribers have the option of having their STP orders match, but the trade will be suppressed from the public market data feeds. Instead, the public data feeds will reflect a cancellation of the posted order's size for any displayed resting order that was matched. The suppressed trade will still be reported through the user's private FIX order entry session and will also be reported in the daily trade files sent to CDS for clearing and settlement.

Example – Trade and Suppress

Orders at Best Bid:

Order	Side	Limit Price	Time Priority	STP Instruction	STP Key	Dealer	Size
A	Buy	10.01	10:01.001	Trade and Suppress	ABCDEF	123	100
B	Buy	10.01	10:02.001	Cancel and Decrement	123ABC	124	500
C	Buy	10.01	10:03.001	Cancel Newest	MYKEY1	125	100

New sell order received:

Order	Side	Limit Price	STP Instruction	STP Key	Dealer	Size
D	Sell	10.01	Trade and Suppress	ABCDEF	123	500

Result:

Trade	Contra Order	Price	Size	Notes
1	A	10.01	100	Trade executed and reported to private order entry session, but **supressed from the public tape.**
2	B	10.01	400	Order B is prioritized next due to priority timestamp. Trade is executed and reported both privately and publicly. No self-trade prevention actions - matched orders are from different dealers.

5.2.2 Cancel and Decrement

The Cancel and Decrement STP feature will result in the cancellation of the smaller order and a corresponding reduction in the size of the larger order.

Example

Orders at Best Bid:

Order	Side	Limit Price	Time Priority	STP Instruction	STP Key	Dealer	Size
A	Buy	10.01	10:01.001	Trade and Suppress	ABCDEF	123	100
B	Buy	10.01	10:02.001	Trade and Suppress	123ABC	124	500
C	Buy	10.01	10:03.001	Cancel Newest	MYKEY1	125	100

New sell order received:

Order	Side	Limit Price	STP Instruction	STP Key	Dealer	Size
D	Sell	10.01	Cancel and Decrement	123ABC	124	700

Result:

Order B is prioritized against Order D due to broker preferencing, but the smaller Order B is cancelled due to matching dealer and STP key values, and the presence of the Cancel and Decrement instruction on Order D (being the active order). Concurrent with the cancellation of Order B, Order D is decremented to a remaining size of 200 and remains eligible to proceed to trade against other resting orders.

Trade	Contra Order	Price	Size	Notes
1	A	10.01	100	Order A is prioritized next due to priority timestamp. Trade is executed and reported both privately and publicly. No self-trade prevention actions are taken – matched orders are from different dealers.

5.2.3 Cancel Newest / Cancel Oldest

Subscribers can also choose to cancel the incoming order (newest) or the resting order (oldest).

Example

Orders at Best Bid:

Order	Side	Limit Price	Time Priority	STP Instruction	STP Key	Dealer	Size
A	Buy	10.01	10:01.001	Trade and Suppress	ABCDEF	123	100
B	Buy	10.01	10:02.001	Cancel and Decrement	123ABC	124	500
C	Buy	10.01	10:03.001	Cancel Oldest	MYKEY1	125	100

New sell order received:

Order	Side	Limit Price	STP Instruction	STP Key	Dealer	Size
D	Sell	10.01	Cancel Newest	MYKEY1	125	600

Result:

Order C is prioritized against Order D due to broker preferencing, but incoming Order D is cancelled due to matching dealer and STP key values and the presence of Cancel Newest instruction on incoming Order D (being the active order). No trades are executed.

Note that had Order D contained the Cancel Oldest instruction, Order C would have been cancelled as the older order, and Order D would have gone on to trade with Orders A and B.

6. OTHER MARKETPLACE INFORMATION

6.1 Minimum trading increments

Orders may only be entered on Omega ATS and Lynx ATS with valid trading increments based on the minimum trading increments permitted under CIRO UMIR.

Minimum (i.e., full tick) trading increments for order entry are as follows:

- Orders priced ≥ $0.50: Minimum increment is $0.01.
- Orders priced < $0.50: Minimum increment is $0.005.

Mid-Point Peg orders may be entered with a limit price set at a half-tick.

6.2 Board lot sizes

Board lot sizes for trading on Omega ATS and Lynx ATS are determined based on the CIRO UMIR definition of 'standard trading unit' and take into consideration the previous day's closing price on the listing exchange.

Board lot sizes adhere to the following conventions:

Prior Day Closing Price	Board Lot Size
$1.00 and over	100 shares
At least $0.10 and less than $1.00	500 shares
Under $0.10	1,000 shares
Debentures	$1,000 face value

Tradelogiq publishes each security's board lot size in the start of day Stock Directory messages provided through Tradelogiq's public market data feeds.

See the section of this guide on 'Odd Lots and Mixed Lots' for information on the handling of orders that are received in sizes other than round board lots.

6.3 Market regulation and trading controls

6.3.1 Market regulation

CIRO[3] has been retained to act as the regulation services provider for Tradelogiq and conducts market surveillance to ensure that trading is carried out in accordance with UMIR and other CIRO rules. Visit CIRO's website at www.ciro.ca for more information.

Tradelogiq provides streaming data to CIRO to facilitate CIRO's real-time surveillance activities.

6.3.2 Trading halts

CIRO may, at its sole discretion, impose trading halts or suspensions for regulatory purposes. This includes in relation to the triggering of market-wide circuit breakers. The timing for the resumption of trading after a trading halt is also determined by CIRO.

Trading halts other than regulatory halts imposed by the Canadian listing exchanges are co-ordinated with Tradelogiq by CIRO.

Where a trading halt is implemented, all open orders on Omega ATS and Lynx ATS in the halted security (or securities) are cancelled.

[3] CIRO is the self-regulatory organization for investment dealers and mutual fund dealers that is the result of an amalgamation between IIROC and the MFDA in January 2023.

6.3.3 Single stock circuit breakers

Single stock circuit breakers (SSCB) are designed to help mitigate market volatility. SSCBs are applicable to constituents of the S&P/TSX Composite Index, ETFs composed primarily of listed securities, Canadian Depositary Receipts, and securities that otherwise meet activity levels specified by CIRO.

SSCBs are automatically triggered for an SSCB-eligible security by CIRO and implemented across all Canadian marketplaces. In general, an SSCB will be triggered if the price of an eligible security changes by 10% or more within a five-minute period. Trading in the security will then be initially halted for 5 minutes.

Where an SSCB is triggered, all open orders on Omega ATS and Lynx ATS in that security are cancelled.

Based on CIRO instruction, all trades executed at more than 5% beyond the price that triggered the SSCB will be cancelled.

6.3.4 Marketplace thresholds

Marketplaces are required to restrict trades that exceed price and volume thresholds set by their regulation services provider. CIRO sets the minimum thresholds.

Marketplace thresholds on each of Omega ATS and Lynx ATS are applied during core Canadian trading hours of 9:30am to 4:00pm.

The triggering prices for the application of marketplace thresholds are determined in reference to both of the most recent National Last Sale Price, and the National Last Sale Price as of the beginning of the current minute, in accordance with CIRO guidance.

Incoming orders will be permitted to execute up to the threshold, but any amount of an incoming order that would execute beyond the threshold will be rejected.

The marketplace threshold levels applied on Omega ATS and Lynx ATS are as follows:

Class of Security	Price Category	Threshold Level
Securities not subject to SSCBs	$0.00 > to < $0.50	300%
	$0.50 ≥ to < $1.00	50%
	$1.00 ≥ to < $5.00	30%
	$5.00 ≥ to < $10.00	20%
	$10.00 ≥ to < $30.00	15%
	$30.00 and over	10%
Exchange-listed debt	All price categories	20%
ETFs other than Leveraged ETFs	All price categories	10%
Leveraged ETFS	All price categories	Multiple of leverage x 10%
Securities subject to SSCBs (excluding ETFs)	All price categories	10%

6.3.5 Trade Cancellation and Correction Policy

CIRO has the authority to instruct Tradelogiq to cancel or amend trades that have occurred on Omega ATS and Lynx ATS.

Subscribers may also request a cancellation or amendment of a trade by contacting Tradelogiq Operations staff. All requests will be confirmed by email. Tradelogiq Operations staff will contact the trade counterparty to request their agreement to cancel or amend the trade, which will also be confirmed by email. Where both parties have agreed to a trade cancellation or amendment, CIRO and the trade counterparties will be notified when the cancellation or amendment has been made. If the counterparty to a trade does not agree to a request to cancel or amend the trade, Tradelogiq will take no further action and the requesting party may contact CIRO to request a trade review.

Tradelogiq is also permitted to cancel or amend a trade that is necessary to correct an error caused by a system or technological malfunction. Tradelogiq will obtain CIRO approval before cancelling or amending a trade in these circumstances.

7. OTHER SERVICES

Tradelogiq also offers smart order router (SOR) and market data services, and provides facilities for users to conduct functional testing.

7.1 Tradelogiq SOR

The Tradelogiq SOR provides customers the option of having their orders routed to trade against the best displayed prices on Canadian protected marketplaces using an iterative sequential routing strategy.

The SOR supports trading in all Canadian listed securities, and currently routes orders to both Omega ATS and Lynx ATS plus all visible protected marketplaces in the following order – Omega ATS; Lynx ATS; Nasdaq CX2; Nasdaq CXC; CSE; TSX/TSXV; NEO-L.

Orders submitted to the SOR will be checked against the opposite side of the Protected NBBO. If the order price is not immediately executable based on displayed volume and OPR considerations, it will be cancelled or posted to Omega ATS or Lynx ATS based on the instruction on the order. Routed orders are sent to each destination marketplace as IOCs and have the opportunity to interact with any hidden liquidity, including midpoint orders, resting on those markets.

Users wishing to take advantage of the free Tradelogiq SOR must first complete an initial set-up consultation with Tradelogiq Operations staff. Subscribers are responsible for ensuring they are approved and enabled members / subscribers of the protected marketplaces serviced by the Tradelogiq SOR.

7.2 Tradelogiq public market data

Tradelogiq offers full depth-of-book (Level 2) public data via multicast that recipients may use to obtain order depth and trade information for each of Omega ATS and Lynx ATS in real-time.

Tradelogiq market data feeds are provided using the ITCH 5.0 message protocol and QTP delivery protocol, via two synchronized multicast ITCH Feed servers. Omega ATS and Lynx ATS multicast events are delivered using unique multicast addresses for each marketplace for each instance. Tradelogiq also provides various options for recovering missed packets / messages, including through message arbitration and a unicast QTP recovery channel.

For further information regarding access to market data or for the technical data specifications, please visit https://tradelogiq.com/market-data/ or contact market data services at marketdata@tradelogiq.com.

7.3 General testing

Users can access Tradelogiq's General Test Environment ("GTE") to perform functional testing. New functionality and code changes to be deployed in production will be deployed first within GTE to provide users with an opportunity to test.

Access to GTE is available to permissioned users through their existing connectivity and is accessible on regular trading days between 7:00am and 10:00pm, Monday through Friday. Access to GTE may be made available for weekend testing, upon request.

Testing within the production environment is possible using the available Uniform Test Symbols ("UTS"). To conduct testing with UTS in the production environment, the following processes must be observed:

- The user must send an email to operations@tradelogiq.com requesting that the desired UTS be made available at a specific time and date. (UTS symbols can only be enabled between 8:00am to 9:00am.) Once the set testing window expires, the symbol will be closed for testing.
- Tradelogiq will contact the TMX IP and inform them of the symbol and test time, and will confirm the nature of the testing to be performed.

NOTE: Under no circumstances will Tradelogiq send any orders to production or set the NBBO for any testing being conducted by users involving UTS within the production environment. Tradelogiq may only accommodate such requests for testing conducted within GTE.

8. Revision History

Date	Revision	Description of Change
June 1, 2023	1.0	Initial Version
November 6, 2023	1.01	Clarifications to Trade Cancellation and Correction Policy
May 27, 2024	1.02	Updates for industry migration to T+1 settlement