

The Nasdaq Opening and Closing Crosses

Quick Reference Guide

The Nasdaq Opening CrossSM and Closing CrossSM are open to all securities listed on the Nasdaq, NYSE, Amex and NYSE Arca exchanges.

Opening Order Types

Regular Hours Orders: Executable from 9:30 a.m. to 4:00 p.m., Eastern Time* (ET), including during the cross.

- Includes Day, GTC and IOC orders.
- Market Orders placed after 9:28 a.m. will be held until the market opens and will not participate in the Opening Cross.

On-Open (OO) Orders: Executable only during the cross.

- Market-on-open (MOO) must be received prior to 9:28 a.m.
- Limit-on-open (LOO) orders may be entered until 9:29:30 a.m. However, LOO orders entered after 9:28 a.m. will be accepted at their limit price, unless its limit price is more aggressive than the 9:28 a.m. Reference Price or the security's previous day's official Closing Price, in which case the Late LOO order will re-price to the more aggressive of the two prices.
- LOO orders with a TIF other than IOC received after 9:29:30 a.m. are treated as Imbalance-Only orders.

System Hours Orders: Are posted and available for execution immediately and may participate in the Opening Cross.

- Includes, extended Day, extended GTC and extended immediate-or-cancel orders.
- Executable during normal and extended hours (4:00 a.m. to 8:00 p.m.). No market orders during extended hours.

Imbalance-Only (IO) Orders: Executable only during the Cross.

- Liquidity-providing orders that stabilize the crossing price.
- IO orders to buy (or sell) that are priced more aggressively than the 9:30 a.m., Nasdaq bid (or ask) will be adjusted to the Nasdaq bid (or ask) prior to the execution of the Cross.

Opening Timeline of Events

4:00 A.M.

Trading and order entry begins.

- Nasdaq begins accepting entry of orders.
- Entered orders can be canceled.
- Pre-open trading session begins for system hours orders.
- System hours orders are firm and are disseminated over market data feeds.

9:25 A.M.

- Dissemination of opening order imbalance information begins.
- MOO, LOO and IO orders may be submitted but not updated or canceled.

9:28 A.M.

- MOO orders may no longer be entered, canceled or canceled/replaced.
- LOO orders may be entered until 9:29:30 a.m., but may not be canceled or modified after posting on the order book.

9:29:30 A.M.

- LOO orders received after 9:29:30 a.m. are treated as Imbalance-Only orders.
- IO orders may be submitted but not updated or canceled.

9:30 A.M.

The Opening Cross occurs.

- The Opening Cross process begins, Nasdaq Official Opening Prices are disseminated, and executions are sent to the tape.

Opening Cross Execution Priority¹

- MOO orders and early (pre-9:28 a.m.) regular hours market orders.
- Orders priced more aggressively than the crossing price, including:
 - LOO orders, early regular hours limit orders (display and reserve), IO orders, and extended hours orders (display and reserve).
- Orders priced at the crossing price, including:
 - LOO orders, IO orders and displayed portion of early regular hours limit orders and extended hours orders in time priority.
 - Extended hours orders reserve in time priority.

Nasdaq Cross Times (all times Eastern)

Opening Cross

4:00 a.m.	Trading and order entry begins
9:25 a.m.	Dissemination of imbalance information begins
9:30 a.m.	The Opening Cross initiated

Closing Cross

3:50 p.m.	Dissemination of imbalance information begins
4:00 p.m.	The Closing Cross initiated

Closing Order Types

On-Close (OC) Orders: Executable only during the Cross.

- Market-on-close (MOC) must be received prior to 3:55 p.m.
- Imbalance-Only (IO) Orders: Executable only during the Cross.
- Limit-on-close (LOC) received after 3:55 p.m. will be accepted at its limit price, unless its limit price is more aggressive than the 3:50 p.m. or the 3:55 p.m. Reference Prices, in which case the Late LOC order will re-price to the more aggressive of the two Prices. LOC orders must be received prior to 3:58 p.m. Note: If there is no crossing interest eligible for the Closing Cross and thus no 3:50 p.m. and no 3:55 p.m. Reference prices, LOC orders received after 3:55 p.m. will not be accepted

- IO orders to buy (or sell) that are priced more aggressively than the 4:00 p.m. Nasdaq bid (or ask) will be adjusted to the Nasdaq bid (or ask) prior to the execution of the Cross.

Closing Timeline of Events

PRIOR TO 3:55 P.M.

Nasdaq begins accepting MOC, LOC and IO orders.

- Entered orders can be canceled.

3:55 P.M.

Dissemination of closing order imbalance information begins.

- Nasdaq stops accepting entry, cancellation or cancel/replacement of MOC orders.
- LOC Orders may be entered until 3:58 p.m. ET, but may not be canceled or modified after posting on the order book

3:58 P.M.

- Nasdaq stops accepting entry of LOC orders.
- IO orders may be submitted but not updated or canceled.

4:00 P.M.

The Closing Cross occurs.

- Nasdaq Official Closing Prices are disseminated and executions are sent to the tape.

Closing Cross Execution Priority¹

- MOC orders in price/time priority.
 - IO orders and displayed interest of limit orders/quotes in price/time priority.
 - Reserve size for the above executes last at each price level before moving on to the next price level.
- LOC orders in price/time priority.

¹ Priority for IO orders will be applied after the limit prices of IO orders have been adjusted to reflect the Nasdaq Inside at the time of the Opening / Closing Cross.

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