

# Nasdaq CTA Smartphone Index<sup>SM</sup> Methodology

## Index Description

The Nasdaq CTA Smartphone Index is designed to track the performance of companies engaged in the Smartphone segment of the telecom and technology sectors. The Index includes companies primarily involved in the building and design of handsets, hardware, software, and mobile networks associated with the development, sale, and usage of Smartphone's. A Smartphone is defined as a wireless, mobile communication device offering advanced capabilities and functionalities, including web access, through the use of an identifiable operating system.

## Index Calculation

The Nasdaq CTA Smartphone Index is a modified equal dollar weighted index. The value of the Index equals the aggregate value of the Index share weights, also known as the Index Shares, of each of the Index Securities multiplied by each such security's Last Sale Price<sup>1</sup>, and divided by the divisor of the Index. The divisor serves the purpose of scaling such aggregate value to a lower order of magnitude which is more desirable for reporting purposes. The Index began on April 12, 2010 at a base value of 250.00.

The formula for index value is as follows:

$$\text{Aggregate Adjusted Market Value/Divisor}$$

The formula for the divisor is as follows:

$$\text{(Market Value after Adjustments/Market Value before Adjustments) X Divisor before Adjustments}$$

Two versions of the Index are calculated – a price return index and a total return index.

- The price return index (Nasdaq: QFON) is ordinarily calculated without regard to cash dividends on Index Securities.
- The total return index (Nasdaq: QFNX) reinvests cash dividends on the ex-date.

All Indexes reflect extraordinary cash distributions.

The Indexes are calculated during the trading day and are disseminated once per second. The Indexes are calculated five (5) days a week, Monday through Friday, starting by the earliest time zone Asia/Tokyo and close by the latest time zone America/New York in USD.

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<sup>1</sup> For purposes of this document, Last Sale Price refers to the last regular way trade reported on such security's Index Market. The Index Market is the listing market for which prices are received and used by Nasdaq in the Index calculation and generally will represent the most liquid trading market of the Index Security. If a security does not trade on its Index Market on a given day or the Index Market has not opened for trading, the most recent last sale price from the Index Market (adjusted for corporate actions, if any) is used. For securities where Nasdaq is Index Market, the Last Sale Price may be the Nasdaq Official Closing Price (NOCP) when Nasdaq is closed.

## **Eligibility**

Index eligibility is limited to specific security types only. The security types eligible for the Index include common stocks, ordinary shares, depositary receipts (both American and Global), depositary shares, shares of beneficial interest or limited partnership interests and tracking stocks.

## **Eligibility Criteria**

To be included in the Index, a security must meet the following criteria:

- be classified as a Smartphone company as determined by Consumer Technology Association (CTA)
- be listed on an index-eligible global stock exchange;
- one security per issuer is permitted<sup>2</sup>;
- have a minimum worldwide market capitalization of \$250 million;
- have a minimum three-month average daily dollar trading volume of \$1 million;
- have a minimum free float of 20%;
- the security foreign ownership restriction limitations have not been met;
- may not have entered into a definitive agreement or other arrangement which would likely result in the security no longer being Index eligible; and
- may not be issued by an issuer currently in bankruptcy proceedings.

## **Index-Eligible Global Stock Exchanges**

Global stock exchanges are reviewed periodically for eligibility. In general, a global exchange will be deemed ineligible if securities cannot be readily obtained either due to foreign investment restrictions or otherwise.

## **Index Evaluation**

The Index Securities are evaluated semi-annually in March and September. The above Eligibility Criteria are applied using market data through the end of February and August respectively. Securities meeting the criteria are included in the Index. Security additions and deletions are made effective after the close of trading on the third Friday in March and September respectively.

Additionally, if at any time during the year other than the Evaluation, an Index Security no longer meets the Eligibility Criteria, or is otherwise determined to have become ineligible for inclusion in the Index, the security is removed from the Index and is not replaced. Furthermore, any Index Security that reaches its foreign investment limit between quarterly rebalances is removed from the Index. In all cases, a security is removed from the Index at its Last Sale Price.

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<sup>2</sup> If an issuer has multiple securities, the security with the highest dollar trading volume will be selected for possible inclusion into the Index.

## **Index Maintenance**

Index Share changes are not made during the quarter however changes arising from stock dividends and stock splits are made to the Index on the evening prior to the effective date of such corporate action. In the case of certain spin-offs or rights issuances, the price of the Index Security is adjusted and a corresponding adjustment is made to the Index Shares such that the weight of the Index Security does not change as a result of the action.

A special cash dividend announced by the listing exchange, will result in an adjustment to the Last Sale Price of an Index Security prior to market open on the ex-date for the special amount distributed. A corresponding adjustment will be made to the Index Shares of the security such that the weight of the Index Security will not change as a result of the action. A special dividend may also be referred to as extra, extraordinary, non-recurring, one-time, unusual, etc.

All changes are announced in advance and are reflected in the Index prior to market open on the Index effective date.

## **Index Rebalancing**

The Index employs a modified equal dollar weighting methodology. At the Evaluation, the Index Securities are classified as Handsets, Software Applications/Hardware Components, or Providers and each sector's weight will be as follows:

Handsets: 45%  
Software Applications/Hardware Components: 45%  
Providers: 10%

**Handsets:** Companies primarily engaged in the manufacturing of wireless equipment, specifically of Smartphone handheld devices.

**Software Applications/Hardware Components:** Companies primarily engaged in the support of Smartphones through creation of operating systems, processor chips, network hardware and software, and other elements to support the operations of a Smartphone.

**Providers:** Companies engaged in providing the wireless network access for use by Smartphones.

At each quarter, the Index Securities float market values are set to an equal dollar value corresponding to an equal percent weight of the market value of their respective sector. The Index Shares are then calculated by dividing this equal dollar value for each Index Security by the corresponding Last Sale Price of the security at the close of the last trading day in February, May, August, and November. The changes are effective after trading on the third Friday in March, June, September, and December.

Nasdaq may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure Index integrity.

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