

# ***BlueStar Israel Global Technology Index***

## **Index Methodology Guide 1.5**

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## Chapter 1: Introduction and Index Description

This document summarizes the methodology and rules used to construct, calculate, and maintain the BlueStar Israel Global Technology Index (“BIGITech”). BlueStar Indexes launched the first version of this index, called the BlueStar Israel Global Technology Index in 2013. In 2015 the Tel Aviv Stock Exchange adopted the index as part of its family of indexes. This resulted in a rebranding of the index which is now called the BlueStar Israel Global Technology Index. A senior members of the Tel Aviv Stock Exchange is part of the BlueStar Index Advisory Committee as it relates to the BIGITech Index.

The BlueStar Israel Global Technology Index is a rules-based index that provides a benchmark for investors interested in tracking the broadest and deepest universe of Israeli publicly-traded equities, regardless of listing venue, involved in a range of innovative industries such information technology, biotechnology, defense-technology and clean energy and water technology. The index is constructed using BlueStar’s proprietary methodology and database of Israeli companies.

Components of BIGITech are weighted based on a modified market capitalization weighting strategy, as described in this methodology guide. Index components are reviewed semi-annually for eligibility, and the weights are re-set accordingly.

Companies may not apply, and may not be nominated, for inclusion in the Index. Companies are added or removed by BlueStar based on the methodology described herein. The BlueStar Index Advisory Committee advises on the construction of and changes to the index methodology, and provides oversight on the adherence to the rules described in this methodology guide. Whenever possible, BlueStar will publicly announce changes to the index on its website at least five trading days in advance of the actual change. The Index is calculated and maintained by Standard & Poor’s based on a methodology developed by BlueStar.

BIGITech is calculated on a price, total return and net total return basis in real-time; these are disseminated in real-time via the CME Group, Inc (CME) and market data vendors every day the Israeli or U.S. equity markets are open, respectively. Real-time index values for the price, total return, and net total return indexes are available on Bloomberg by entering “BGTH INDEX <GO>”, “BGTHTR INDEX <GO>”, “BGTHNTR INDEX <GO>”, and end-of-day values are freely available on BlueStar’s website, [www.bluestarindexes.com](http://www.bluestarindexes.com), and/or through market data vendors such as [yahoofinance.com](http://yahoofinance.com).

## Chapter 2: Index Construction

This chapter outlines and defines the key steps in constructing and calculating the index, including: eligibility requirements, formulas, initial component selection, and special adjustments

### 2.1 Base Date and Value

BIGITech has the following variants, base dates and values:

Name	Index Symbol	Base Date	Base Value
BlueStar Israel Global Technology Index (Price Index)	BGTH	December 31, 2003	100
BlueStar Israel Global Technology Index Total Return	BGTHTR	December 31, 2003	100
BlueStar Israel Global Technology Index Net Total Return	BGTHNTR	December 31, 2003	100

### 2.2 Component Eligibility Requirements

All the following requirements must be met for a company's security to be considered eligible for inclusion in BIGITech:

1. BlueStar considers all globally listed equity securities except for those listed on an exchange in a country which employs restrictions on foreign capital investment such that those restrictions render the component effectively non-investable, as determined by BlueStar. Securities must be exchange-listed and, therefore, securities that trade over-the-counter are not eligible. In addition, Tel Aviv Stock Exchange-listed Limited Partnership units are not eligible. Finally, BIGITech members must be operating companies and not a closed-end fund, exchange traded fund, exchange traded note, or other investment vehicles such as CEFs or REITs.
2. BIGITech members must be Israeli according to the rules established by BlueStar Indexes. The definition of an Israeli company, as used in the maintenance of BIGITech, is supported by BlueStar's proprietary research and is based on a range of quantitative and qualitative factors including domicile, country of founding/formation, location of executive primary management team, location of R&D facilities, tax status, and location of company headquarters.
3. BIGITech members must be technology companies according to the rules established by BlueStar Indexes. Technology companies are those involved in certain sectors such as the information technology sector. Additionally, innovative companies involved in industries such as bio-technology, medical devices, aerospace and defense, utilities and consumer may be included.
4. BIGITech members must have a float-adjusted market capitalization of at least \$60 million USD equivalent and a six-month average daily value traded ("ADV") of at least \$200,000 USD equivalent. If six months of trading data are not available, three months of data will be used.

BlueStar will, in most cases, use the quantitative ranking and screening system described herein. However, subjective screening based on fundamental analysis or other factors may be used if, in the opinion of BlueStar Indexes, certain components should be included or excluded.

### 2.3 Initial Component Selection

The following steps are taken to select the initial components for BIGITech at each semi-annual rebalance period:

1. Establish the initial list of inclusion-eligible securities, their float-adjusted market capitalizations and six-month average daily value traded, as defined in Chapter 2.2. This shall be referred to as the "Inclusion List".
2. Determine each security in the Inclusion List's "Initial Weight" according to the following set of equations where:

$$IW_i = \frac{\text{Float Adjusted Market Cap in USD of Component } i}{\sum_{i=1}^N \text{Float Adjusted Market Cap in USD of Component } i}$$

Where:

$IW_i$  = Initial Weight of component;  
 $N$  = Number of securities in the Inclusion List

3. Set liquidity thresholds:
  - a. Calculate six-month average daily value traded in USD equivalent for each component based on the daily closing price and number of shares traded
  - b. Set percentage of average daily value traded threshold to 1000%
  - c. Set investment threshold to \$100 million USD
4. Determine component percentage of average daily value traded given the investment threshold and the calculated weight of the component using the following equation:

$$ADV_{\%i} = \frac{IW_i * \$100,000,000}{ADV_{\$i}}$$

Where:

$ADV_{\%i}$  = Percentage of three month average daily value traded for component  $i$   
 $ADV_{\$i}$  = Six month average daily value traded for component  $i$

5. If the component percentage of average daily value traded is less than the percentage average daily value traded threshold then the IW for that component does not need to be adjusted

6. If the component percentage of average daily value traded is greater than the percentage average daily value threshold then assign new component a first modified new weight,  $NW'$ , such that its percentage average daily value traded is equal to the percentage average daily value traded threshold using the following steps:
  - a. Calculate the component's  $NW'$  based on the investment threshold and six-month average daily value traded threshold using the following equation:

$$NW'_i = \frac{1000\% * ADV_{\$i}}{\$100,000,000}$$

Where:

$NW'_i$  = Modified new weight for component  $i$

- b. Take the aggregate difference between the  $IW$  and  $NW'$  of those components whose  $IW$  was modified in step 6a, above, and distribute evenly among stocks whose  $NW$  was not modified in step 6a, above to find their modified new weight such that each component now has a modified new weight,  $NW'_i$ .
7. Set weight threshold to 7.5%
8. If any component's  $NW'$ , as determined in steps 6a and 6b, above, is greater than the weight threshold, set that component's second modified new weight,  $NW''$ , to 7.5%
9. Take the aggregate difference between the  $NW'$  and  $NW''$  of those components whose  $NW'$  was modified in step 8, above. And distribute evenly among stocks whose  $NW$  was not modified in step 6a, above, and whose  $NW'$  was not modified in step 8, above, to arrive at each component's final weight,  $FW$
10. Repeat steps 5 through 9, above until all components'  $FW$  is less than or equal to 7.5% and each component's average daily value traded percentage is less than or equal to 1000%.

## 2.4 Dividend Treatment

The price index does not take normal dividend payments into account. Dividends are accounted for by reinvesting them on a daily basis. BIGITech uses the ex-dividend date to determine the total daily dividends for each day. Special dividends require an index advisor adjustment, as described in Chapter 3, to prevent such distributions from distorting the price index.

## 2.5 Index Equations

1. The price index is calculated using the following basic equations:

$$I_{(t)} = \frac{\sum_{i=1}^n P_{i(t)} * S_{i(t)}}{D_{(t)}}$$

Where:

$I_{(t)}$  = Index value at time  $(t)$   
 $D_{(t)}$  = Divisor at time  $(t)$   
 $N$  = Number of stocks in the index  
 $t$  = The time that the index is calculated  
 $P_{i(t)}$  = Price of stock  $i$  at time  $t$ , in USD terms  
 $S_{i(t)}$  = Number of assigned shares of stock  $i$  at time  $t$

Where:

$$D_{(0)} = \frac{\sum_{i=1}^n P_{i(0)} * S_{i(0)}}{I_{(0)}}$$

Where:

$I_{(0)}$  = Base index value at base date  
 $D_{(0)}$  = Initial divisor at base date  
 $n$  = Number of stocks in the index  
 $P_{i(0)}$  = Closing price of stock  $i$  at base date in USD terms  
 $S_{i(0)}$  = Number of assigned shares of stock  $i$  at base date

2. Assigned shares are the number of shares needed for each component such that the component conforms to the weighting distribution outlined in Chapter 2.3.10
3. Changes to the index composition require divisor adjustments to retain index continuity before and after specific events, as outlined in Chapter 3. Divisor changes are made according to the following equation:

$$D_{(t+1)} = D_{(t)} * \frac{\sum_{i=1}^n P_{i(t+1)} * S_{i(t+1)}}{\sum_{i=1}^n P_{i(t)} * S_{i(t)}}$$

Where:

$D_{(t+1)}$  = Initial Divisor after changes are made to the index

## Chapter 3: Index Maintenance

This chapter describes the circumstances that require index changes, as well as the details on performing those changes

### 3.1 Divisor Changes

Changes to the index composition due to corporate actions or component eligibility changes will require adjustments to the index divisor, as follows:

#### *Spinoff\**

1. Subtract the following from the price of the parent company:

$$\frac{\text{Spinoff stock price}}{\text{Share exchange ratio}}$$

2. Adjust the component's assigned shares such that its weighting is not changed because of the spinoff

#### *Special Cash Dividend*

1. Subtract special dividend from share price

#### *Rights Offering*

1. Subtract the following from the price of the parent company:

$$\frac{\text{Price of rights}}{\text{Rights ratio}}$$

2. Adjust the component's assigned shares such that its weighting is not changed because of the rights offering

Divisor changes are usually made on the date the corporate action becomes effective. For example, BIGITech uses the ex-dividend date rather than the payment date to determine when making divisor adjustments.

\*If a company being spun-off is only trading on a "when-issued" basis, the "when-issued" price will be used to adjust the parent company's closing price.

### 3.2 Details of Share Changes

Stock splits and reverse splits do not require index divisor adjustments because the corresponding change to the stock price equally offsets the number of assigned shares, therefore not affecting the component's influence in the index.

### 3.3 Scheduled Component Changes and Review

BIGITech has a semi-annual review in June and December of each year. Fundamental data, prices and trading volumes are captured on the Tuesday before the second Friday of June and December. The new number of assigned shares for each component is determined based on the component's final weight as determined in Chapter 2.3.10 and the closing price of that component on the Tuesday before the second Friday of June and December. Component changes are announced and made available after the close on the second Friday of June and December. Component changes are made after the close on the third Friday of June and December and are effective at the open on the Sunday following the third Friday of June and December.

### 3.4 Interim Component Changes

1. Component changes may occur between regularly-scheduled review periods if a specific corporate event makes an existing component ineligible. The following events may require a component's removal or replacement:

#### *Merger or Acquisition*

If a merger or acquisition results in one component absorbing another, the resulting company will remain a component and the absorbed company will be removed or replaced. If a non-component company absorbs a component company, the original component will be removed or replaced, unless the combined entity is considered an Israeli company. If a component is the target of an acquisition BlueStar may decide to remove or reduce the weight of that component after the "go-shop" period concludes to reduce potential volatility or liquidity risk in the index.

#### *Spin-Off*

If a company splits or spins off a portion of its business to form one or more new companies, the resulting company with the highest market value will remain a component if it meets the eligibility requirement. The remaining companies will be evaluated for eligibility and possible addition to the index.

#### *Bankruptcy*

A component company will be removed and replaced immediately after bankruptcy filing. Exceptions are made on a case-by-case basis. For example, a security may not be removed immediately if bankruptcy filing is not the result of operating or financial difficulties.

#### *Delisting*

A component company will be removed or replaced immediately after being delisted from its primary market.

Whenever possible, interim component changes are announced on BlueStar's publicly-available website at least three trading days prior to component changes becoming effective.

### **3.5 Unscheduled Component Weight Adjustments**

Unscheduled component weight adjustments may occur between review periods if any component accounts for more than 15% of the index weight. The market capitalization of any component representing more than 15% of the index weight will be adjusted such that its new weight is no more than 10%.

Whenever possible, unscheduled component weight adjustments are announced on BlueStar's publicly available website at least three trading days prior to the adjustments becoming effective.

## Chapter 4: Index Calculation and Dissemination

This chapter summarizes calculation and dissemination practices, quality assurance practices, and the circumstances requiring calculation corrections.

### 4.1 Price Calculation

Price, total return, and net total return indexes for BIGITech are calculated by Standard & Poor's on both an end-of-day and real-time basis. The BIGITech is calculated using the last traded price for each company in the Index from the relevant exchanges and markets.

Index values are rounded to two decimal places and divisors are rounded to 14 decimal places.

### 4.2 Calculation Frequency and Dissemination

BIGITech is calculated on a real-time basis beginning when the first traded price of any of the Index components is received by Standard & Poor's. Prices are delivered to CME every 15 seconds and subsequently published at that frequency. Price, total return, net total return, Shekel-denominated net total return, and Shekel-denominated USD exposure-hedged net total return index values are available on a real-time basis through the Bloomberg information system under the index symbols "BGTH INDEX", "BGTHTR INDEX" and "BGTHNTR INDEX", respectively. End-of-day index values are posted on BlueStar's publicly available website, [www.bluestarindexes.com](http://www.bluestarindexes.com).

If the exchange a stock is listed on is closed or if trading in a stock is suspended prior to the market opening, the stock's adjusted closing price from the previous day will be used in the Index calculation until trading commences. If trading in a stock is suspended while the relevant market is open, the last traded price for that stock will be used for all subsequent Index calculations until trading resumes.

### 4.3 Input Data

Standard & Poor's uses various quality assurance tools to audit, monitor, and maintain the accuracy of its input data. While every reasonable effort is taken to ensure high standards of data integrity, there is no guarantee against errors. Please refer to the Data Correction section for more detail.

The index closing price is calculated using the closing prices issued by the primary exchange for each component stock in the index. If the primary exchange changes the closing price of a component stock, the new price will be used to calculate the index closing price. A final check of closing prices is done between one hour and one and one-half hours after the close of markets. This timeframe may be expanded at S&P's discretion on days where trading volume is unusually large at the close. For example, futures and options expiration dates, and large index rebalancing dates often result in unusually large volume. Only changes received prior to this final check are used in the closing price calculation.

#### **4.4 Data Corrections**

Incorrect index component data, corporate action data, or Index Divisors will be corrected upon detection. If such errors are discovered within five days of occurrence, they will be corrected that same day. If discovered after five days, adjustments will be handled on a case-by-case basis depending on the significance of the error and the feasibility of a correction.

Incorrect intraday index tick data will not be corrected. However, incorrect opening and closing values will be corrected as soon as possible after detection.

## Appendices

This section provides additional information related to BIGTech as well as changes to this document.

### Appendix A. BlueStar Israel Global Technology Index Constituents

*As of December 5, 2017*

	Company Name	Ticker	Exchange	Weight
1	AMDOCS LTD	DOX	NDX	10.74%
2	CHECK POINT SOFTWARE TECH	CHKP	NDX	9.87%
3	NICE LTD	NICE	TASE	7.37%
4	TOWER SEMICONDUCTOR LTD	TSEM	TASE	4.74%
5	ELBIT SYSTEMS LTD	ESLT	TASE	4.60%
6	VERINT SYSTEMS INC	VRNT	NDX	3.96%
7	ORMAT TECHNOLOGIES INC	ORA	TASE	3.73%
8	MELLANOX TECHNOLOGIES LTD	MLNX	NDX	3.59%
9	ORBOTECH LTD	ORBK	NDX	3.31%
10	WIX.COM LTD	WIX	NDX	2.86%
11	OPKO HEALTH INC	OPK	TASE	2.47%
12	CYBERARK SOFTWARE LTD/ISRAEL	CYBR	NDX	2.25%
13	NOVOCURE LTD	NVCR	NDX	2.15%
14	MAZOR ROBOTICS LTD	MZOR	TASE	1.96%
15	IMPERVA INC	IMPV	NDX	1.90%
16	SOLAREDEGE TECHNOLOGIES INC	SEDG	NDX	1.81%
17	PLUS500 LTD	PLUS	LSE	1.75%
18	VARONIS SYSTEMS INC	VRNS	NDX	1.57%
19	STRATASYS LTD	SSYS	NDX	1.52%
20	CEVA INC	CEVA	NDX	1.48%
21	RADWARE LTD	RDWR	NDX	1.27%
22	ITURAN LOCATION AND CONTROL	ITRN	NDX	1.18%
23	XLMEDIA PLC	XLM	LSE	1.17%
24	NOVA MEASURING INSTRUMENTS	NVMI	TASE	1.13%
25	888 HOLDINGS PLC	888	LSE	1.10%
26	LIVEPERSON INC	LPSN	TASE	0.98%
27	SILICOM LTD	SILC	NDX	0.87%
28	KORNIT DIGITAL LTD	KRNT	NDX	0.81%
29	MATRIX IT LTD	MTRX	TASE	0.80%
30	GILAT SATELLITE NETWORKS LTD	GILT	TASE	0.70%
31	HILAN LTD	HLAN	TASE	0.69%
32	FORMULA SYSTEMS (1985) LTD	FORTY	TASE	0.66%
33	ENZYMOTEC LTD	ENZY	NDX	0.63%
34	SAPIENS INTERNATIONAL CORP	SPNS	TASE	0.62%
35	DSP GROUP INC	DSPG	NDX	0.61%
36	TAPTICA INTERNATIONAL LTD	TAP	LSE	0.59%
37	SAFECHARGE INTERNATIONAL GRO	SCH	LSE	0.56%
38	MAYTRONICS LTD	MTRN	TASE	0.56%
39	FOAMIX PHARMACEUTICALS LTD	FOMX	NDX	0.55%
40	ALLOT COMMUNICATIONS LTD	ALLT	TASE	0.52%
41	MAGIC SOFTWARE ENTERPRISES	MGIC	TASE	0.51%
42	RADCOM LTD	RDCM	NDX	0.49%
43	AUDIOCODES LTD	AUDC	NDX	0.48%
44	ENLIGHT RENEWABLE ENERGY LTD	ENLT	TASE	0.47%
45	BIOLINERX LTD-SPONS ADR	BLRX	NDX	0.45%
46	VASCULAR BIOGENICS LTD	VBLT	NDX	0.43%
47	CERAGON NETWORKS LTD	CRNT	NDX	0.41%
48	ENERGIX-RENEWABLE ENERGIES	ENRG	TASE	0.41%
49	PLURISTEM THERAPEUTICS INC	PSTI	TASE	0.40%
50	TELIT COMMUNICATIONS PLC	TCM	LSE	0.40%
51	ATTUNITY LTD	ATTU	NDX	0.39%
52	ONE SOFTWARE TECHNOLOGIES LT	ONE	TASE	0.38%
53	AROTECH CORP	ARTX	NDX	0.37%
54	SARINE TECHNOLOGIES LTD	SARINE	SGX	0.36%
55	CAMTEK LTD	CAMT	NDX	0.34%
56	MALAM - TEAM LTD	MLTM	TASE	0.34%
57	ARAD LTD	ARD	TASE	0.34%
58	ORAMED PHARMACEUTICALS INC	ORMP	NDX	0.34%
59	BRAINSTORM CELL THERAPEUTICS	BCLI	NDX	0.34%
60	AEVI GENOMIC MEDICINE INC	GNMX	NDX	0.33%
61	KAMADA LTD	KMDA	TASE	0.32%
62	MAGAL SECURITY SYS LTD	MAGS	NDX	0.31%
63	COMPUGEN LTD	CGEN	TASE	0.29%
64	EVOGENE LTD	EVGN	TASE	0.29%
65	PROTALIX BIOTHERAPEUTICS INC	PLX	TASE	0.28%
66	FLUENCE CORP LTD	FLC	ASX	0.24%
67	SKY AND SPACE GLOBAL LTD	SAS	ASX	0.23%
68	REDHILL BIOPHARMA LTD-SP ADR	RDHL	NDX	0.23%
69	FORESIGHT AUTONOMOUS HOLDING	FRSX	TASE	0.16%

## Appendix B. Index Stats and Allocations

As of September 30, 2017

Geographic Breakdown	
Country of Listing	Weight
Dual (US and Israel)	36%
Israel Only	2%
US Only	57%
UK, Australia, Singapore Only	5%
Sector Breakdown	
GICS Industry	Weight
Software	29.52%
IT Services	13.14%
semiconductors & Semiconducto	12.08%
Biotechnology	6.78%
Internet Software & Services	5.83%
Communications Equipment	5.29%
Aerospace & Defense	5.26%
dependent Power and Renewa	4.33%
Health Care Equipment & Suppl	3.78%
Electronic Equipment, Instrume	3.38%
Pharmaceuticals	2.71%
Technology Hardware, Storage &	1.69%
Diversified Financial Services	1.59%
Machinery	1.21%
Hotels, Restaurants & Leisure	0.98%
Media	0.65%
Other	1.79%

## Appendix C. Document Change History

A history of significant changes to this document is shown in the table below

Issue	Date	Change
1.0	October 16, 2013	Initial publication
1.1	October 31, 2013	Minor Edits
1.2	July 18, 2014	Changes to selection criteria
1.3	October 23, 2015	In March 2015 the TASE adopted the BIGITech Index. As a result, the index was rebranded as BIGITech
1.4	December 5, 2017	Weight limit changed to 7.5%; new format; heavy but non-substantive revisions; removal of ISE; unscheduled component change trigger reduced to 15%; updated constituents
1.5	February 15, 2018	Rebranded to BIGITech and BlueStar Israel Global Technology Index – Removal of TA- and TASE-

## Appendix D. Israel Company Criteria

In order for a company to be considered Israeli, we require that it meet:

- a) At least one criteria from Group A and one criteria from Group B, or
- b) At least one criteria from Group A and two criteria from Group C

Group A		Group B	
1	The company has at least 20% of its employees in Israel or at least 20% of its long-lived assets are located in Israel	A	The company is listed on the TASE
2	The company has a major R&D center in Israel	B	The company's tax status is in Israel or it is incorporated in Israel
		C	The company is headquartered in Israel or has a dual-headquarter in Israel
Group C			
		D	The company has a majority of its Board of Directors or at least two Executive Officers domiciled in Israel
		E	The company's business results would be materially altered without its Israeli assets. These assets may include but are not limited to: intellectual and human capital, or licenses to Israeli technology that materially affect revenue or R&D
		F	The company is a subsidiary or non-Israel operating branch of a company that would otherwise be considered Israeli.