

INDEX GUIDELINE

Solactive 5G Technology Performance-Index

Version 1.1

08 December 2022

INDEX GUIDELINE

Solactive 5G Technology Performance-Index

Version 1.1

08 December 2022



Think before you print!



TABLE OF CONTENTS

Introduction	4
1 Index Specifications.....	5
1.1 Short name and ISIN.....	5
1.2 Initial value.....	5
1.3 Distribution.....	5
1.4 Prices and calculation frequency.....	5
1.5 Weighting	5
1.6 Oversight	5
1.7 Publication	6
1.8 Historical Data.....	6
1.9 Licensing.....	6
2 Composition of the Index	7
2.1 Selection of the Index components.....	7
2.2 Ordinary adjustment	9
2.3 Extraordinary adjustment.....	9
3 Calculation of the Index	10
3.1 Index formula	10
3.2 Accuracy	10
3.3 Adjustments.....	10
3.4 Dividends and other distributions	10
3.5 Corporate actions	11
3.5.1 Principles.....	11
3.5.2 Capital increases.....	11
3.5.3 Capital reductions	11
3.5.4 Share splits and par value conversions	12
3.6 Miscellaneous	12
3.6.1 Recalculation	12
3.6.2 Market Disruption	12
4 Definitions.....	13
5 Appendix	19
5.1 Contact data.....	19
5.2 Changes in calculation method	19



INTRODUCTION

This document (the "Guideline") is to be used as a guideline with regard to the composition, calculation and maintenance of the Index. Any changes made to the Guideline are initiated by the Committee specified in Section 1.6. The Index is calculated and published by Solactive AG. The name "Solactive" is trademarked.

It contains the underlying principles and rules regarding the structure and operation of the Solactive 5G Technology Performance-Index (the "Index"). Solactive AG shall make every effort to implement the applicable regulations. Solactive AG does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the Index nor the Index value at any certain point in time nor in any other respect. The Index is merely calculated and published by Solactive AG and it strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for Solactive AG – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the Index. The publication of the Index by Solactive AG does not constitute a recommendation for capital investment and does not contain any assurance or opinion of Solactive AG regarding a possible investment in a financial instrument based on this Index.



1 INDEX SPECIFICATIONS

- > The Solactive 5G Technology Performance-Index (the "Index") is an Index of Solactive AG and is calculated and distributed by Solactive AG.
- > The Index intends to track the price movements of a portfolio of companies with significant economic engagement in the areas of 5G technology, services, and infrastructure.
- > The Index is a Net Total Return index.
- > The Index is published in USD.

1.1 SHORT NAME AND ISIN

The Index is distributed under ISIN DE000SLA6W68; the WKN is SLA6W6. The Index is published on Reuters under the code .SOL5GTECH

1.2 INITIAL VALUE

The Index is based on 100 at the close of trading on 3 December 2018.

1.3 DISTRIBUTION

The Index is published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute/display the Index via its information systems.

1.4 PRICES AND CALCULATION FREQUENCY

The price of the Index is calculated on each Business Day based on the prices on the respective Exchanges on which the Index Components are listed. The most recent prices of all Index Components are used. Prices of Index Components not listed in the Index Currency are translated using spot foreign exchange rates quoted by Reuters. Should there be no current price available on Reuters, the most recent price or the Trading Price on Reuters for the preceding Trading Day is used in the calculation.

The Index is calculated every Business Day from 9:00 a.m. to 10:30 p.m., CET. In the event that data cannot be provided to Reuters or to the pricing services of Boerse Stuttgart AG, the Index cannot be distributed.

1.5 WEIGHTING

On each Adjustment Day, the new Index Components are weighted equally.

1.6 OVERSIGHT

A Committee composed of staff from Solactive AG (the "Committee" or the "Index Committee") is responsible for decisions regarding the composition of the Index as well as any amendments to the rules.

Members of the Committee can recommend changes to the Guideline and submit them to the Committee for approval.



1.7 PUBLICATION

All specifications and information relevant for calculating the Index are made available on the <http://www.solactive.com> web page and sub-pages.

1.8 HISTORICAL DATA

Historical data will be maintained from the launch of the Index on 4 December 2018.

1.9 LICENSING

Licenses to use the Index as the underlying value for derivative instruments are issued to stock exchanges, banks, financial services providers and investment houses by Solactive AG.



2 COMPOSITION OF THE INDEX

2.1 SELECTION OF THE INDEX COMPONENTS

The initial composition of the Index as well as any ongoing adjustment are based on the following non-discretionary rules.

On the Selection Days, Solactive AG defines the Index Universe as outlined in Section 4. The selection of the Index Components proceeds as follows:

- 1) Thematic Score: the following two criteria are used to calculate the Thematic score for each stock in the Index Universe

- a) Number of 5G Patent filings:

Number of 5G Patents	0	≥1	≥5	≥10	≥20	≥30	≥40	≥50	≥70	≥100
Punkte	0	10	20	30	40	50	60	70	80	100

- b) Foundation, membership, and/or active participation in 5G Consortia

Number of 5G Consortia	0	≥1	≥2	≥3	≥4	≥5	≥6	≥7	≥10	≥20
Punkte	0	10	20	30	40	50	60	70	80	100

The Thematic Score is then calculated as the sum of the points of the four criteria a. – b.

From each Category defined in section 4, the 10 companies with the highest Thematic Score are selected. If two or more companies have the same thematic score and would all rank 10th within the respective Category, the company with the highest Financial Score (as defined below) will be selected. If the Financial Score is also the same for all companies, the company with the highest market capitalization is selected.

The selection of stocks for the Category “Mobile Network Tower Infrastructure Provider” deviates from the aforementioned methodology. In this Category, all available stocks are selected and eligible for further selection steps as outlined in 2.) below.

The selection of stocks for the Category “Mobile Device Manufacturer” deviates from the aforementioned methodology. In this Category, the three companies with the highest global market share are selected as final Index Constituents at this stage already.

- 2) For each stock in the Index Universe Solactive AG calculates the Financial Score as the sum of points from the five criteria outlined below¹

¹ If $FCF \leq \$10M$, $RG \leq 10\%$, $R\&D \leq \$10M$, $PM \leq 5\%$, $CP \leq \$10M$, the stock receives 0 points



a) Free Cash Flow in the last fiscal year (FCF):

FCF	>\$10M	>\$50M	>\$100M	>\$200M	>\$500M	>\$1BN	>\$2BN	>\$5BN	>\$10BN
Points	10	20	30	40	50	60	70	80	100

b) Revenue Growth in the last five fiscal years (RG):

- i) 10 points if RG > 10 %
- ii) 20 points if RG > 20 %
- iii) 30 points if RG > 30 %

c) Research and Development Expenditures in the last fiscal year (R&D):

R&D	>\$10M	>\$50M	>\$100M	>\$200M	>\$500M	>\$1BN	>\$2BN	>\$5BN	>\$10BN
Points	10	20	30	40	50	60	70	80	100

d) Profit Margin in the last fiscal year (PM):

- i) 10 points if PM > 5 %
- ii) 20 points if PM > 10 %
- iii) 30 points if PM > 15 %
- iv) 40 points if PM > 20 %
- v) 50 points if PM > 30 %

e) Cash Position in the last financial year (CP):

CP	>\$10M	>\$50M	>\$100M	>\$200M	>\$500M	>\$1BN	>\$2BN	>\$5BN	>\$10BN
Points	10	20	30	40	50	60	70	80	100

The Financial Score is the sum of points of the five criteria a. - e.

- 3) First, within each Category, the three companies with the highest Financial Score are selected as Index Components, where companies with the highest Financial Score are selected first within any given Category (with the exception of companies in the Category "Mobile Device Manufacturers", which are treated as outlined in step 1) above). If there are less than three companies available for selection in any Category all available securities from this Category are added to the Index.

Then, the remaining stocks are added to the index based on their Financial score (stocks with a higher Financial Score are added first) until 20 Index Components are reached. This last step is carried out subject to the constraint that the number of Index Components from one Category cannot exceed 10.

If two or more companies from the same Category have the same Financial Score, their market capitalizations serve as the tie-breaker, i.e. the stock with the higher market capitalization is selected.



If two or more companies have the same Financial Score, the company with the higher Thematic score is added to the Index. If the Thematic Score is also the same for both companies, their market capitalization serves as the tie-breaker, where the stock with a higher market capitalization is selected for inclusion in the Index.

Category	Number of stocks
Mobile Network Operator	3 to 10
Mobile Network and Optical Network Hardware Manufacturer	3 to 10
Mobile Antennas, Semiconductors, Chips, Signal Processing Equipment, Networking Software	3 to 10
Mobile Device Manufacturer	3
Mobile Network Tower Infrastructure Provider	3 to 10

2.2 ORDINARY ADJUSTMENT

The composition of the Index is adjusted semi-annually. The composition of the Index is reviewed on the Selection Day and necessary changes are announced.

The first adjustment will be made in May 2019, based on the Trading Prices of the Index Components on the Adjustment Day.

Solactive AG shall publish any changes made to the Index composition on the Selection Day and consequently with sufficient notice before the Adjustment Day.

2.3 EXTRAORDINARY ADJUSTMENT

An extraordinary adjustment, if applicable, is triggered and applied in compliance with the rules set forth in the [Solactive Guideline for Extraordinary Corporate Actions](#).



3 CALCULATION OF THE INDEX

3.1 INDEX FORMULA

The Index Value on a Business Day at the relevant time is calculated in accordance with the following formula:

$$Index_t = \sum_{i=1}^n x_{i,t} * p_{i,t}$$

With:

- $x_{i,t}$ = Number of Shares of the Index Component i on Trading Day t
 $p_{i,t}$ = Price of Index Component i on Trading Day t in Index Currency

3.2 ACCURACY

- > The value of the Index will be rounded to 2 decimal places.
- > The Number of Shares of the Index Components will be rounded to six decimal places.

3.3 ADJUSTMENTS

Indices need to be adjusted for systematic changes in prices once these become effective. This requires the new Number of Index Shares of the affected Index Component and the Divisor to be calculated on an ex-ante basis.

Following the Committee's decision, the Index is adjusted for distributions, capital increases and stock splits.

This procedure ensures that the first ex quote can be properly reflected in the calculation of the Index. This ex-ante procedure assumes the general acceptance of the Index calculation formula as well as open access to the parameter values used. The calculation parameters are provided by the Index Calculator.

3.4 DIVIDENDS AND OTHER DISTRIBUTIONS

Dividend payments and other distributions are included in the Index. They cause an adjustment of the Number of Shares. The new Number of Shares is calculated as follows:

$$x_{i,t} = x_{i,t-1} * \frac{p_{i,t-1}}{p_{i,t-1} - D_{i,t}}$$

with:

- $x_{i,t}$ = Number of Shares of the Index Component i on Trading Day t
 $D_{i,t}$ = Payment on Trading Day t multiplied by the Dividend Correction Factor of the respective country



3.5 CORPORATE ACTIONS

3.5.1 Principles

Following the announcement by an issuer of Index Components of the terms and conditions of a corporate action, the Index Calculator determines whether such corporate action has a dilutive, concentrative or similar effect on the price of the respective Index Component.

If this should be the case, the Index Calculator shall make the necessary adjustments that are deemed appropriate in order to take into account the dilutive, concentrative or similar effect and shall determine the date on which this adjustment shall come into effect.

Amongst other things, the Index Calculator can take into account the adjustment made by an Affiliated Exchange as a result of the corporate action with regard to option and futures contracts on the respective share traded on this Affiliated Exchange.

3.5.2 Capital increases

In the case of capital increases (from the company's own resources or through cash contributions) the new Numbers of Shares are calculated as follows:

$$x_{i,t} = x_{i,t-1} * \frac{p_{i,t-1}}{p_{i,t-1} - rB_{i,t-1}} \quad \text{with:} \quad rB_{i,t-1} = \frac{p_{i,t-1} - B - N}{BV + 1}$$

with:

- $x_{i,t}$ = Number of Shares of Index Component i on the day of the distribution
- $x_{i,t-1}$ = Number of Shares of Index Component i on the day prior to the distribution
- $p_{i,t-1}$ = Closing price on the day prior to ex date
- $rB_{i,t-1}$ = Calculated value of rights issue
- B = Price of rights issue
- N = Dividend disadvantage
- BV = Subscription ratio

$B = 0$ if capital is increased from the company's own resources.

The last dividend paid or the announced dividend proposal is applied as the dividend disadvantage.

3.5.3 Capital reductions

In the case of capital reductions, the new Number of Shares is determined as follows:

$$x_{i,t} = x_{i,t-1} * \frac{1}{H_{i,t}}$$



with:

$H_{i,t}$ = Reduction ratio of the company on day t

$x_{i,t}$ = Number of Shares of the affected Index Component on the day of the distribution

$x_{i,t-1}$ = Number of Shares of the affected Index Component on the day prior to the distribution

3.5.4 Share splits and par value conversions

In the case of share splits and par value conversions it is assumed that the prices change in ratio to the number of shares or to the par values. The new Number of Shares is calculated as follows:

$$x_{i,t} = x_{i,t-1} * \frac{N_{i,t-1}}{N_{i,t}}$$

with:

$N_{i,t-1}$ = Former par value of security class i (or new number of shares)

$N_{i,t}$ = New par value of security class i (or former number of shares)

$x_{i,t}$ = Number of Shares of the affected Index Component on the day of the distribution

$x_{i,t-1}$ = Number of Shares of the affected Index Component on the day prior to the distribution

3.6 MISCELLANEOUS

3.6.1 Recalculation

Solactive AG makes the greatest possible efforts to accurately calculate and maintain its indices. However, the occurrence of errors in the index determination process cannot be ruled out. In such cases Solactive AG adheres to its publicly available [Correction Policy](#).

3.6.2 Market Disruption

In periods of market stress Solactive AG calculates its indices following predefined and exhaustive arrangements set out in its publicly available [Disruption Policy](#).



4 DEFINITIONS

The "**Index Universe**" in respect of a Selection Day are companies that fulfill the following criteria:

1. Listed on an Exchange in one of the following countries: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Japan, Netherlands, Norway, New Zealand, Portugal, Singapore, Spain, South Korea, Sweden, Switzerland, United Kingdom, United States of America
2. Market capitalization of at least USD 750 million
3. Average Daily Value Traded of at least USD 2 million over the past three months up to and including the Selection Day
4. Companies must be categorized in one of the following five Categories. The Categorization is carried out by the Index Advisor and follows a rules-based system that places a company in the Category where it generates most of its' revenues:
 - a. Mobile Network Operator
 - b. Mobile Network and Optical Network Hardware Manufacturer
 - c. Mobile Antennas, Semiconductors, Chips, Signal Processing Equipment, Networking Software
 - d. Mobile Device Manufacturer
 - e. Mobile Network Tower Infrastructure Provider
5. Companies from Categories 4.a. – 4.d. must be a member of a 5G Consortium to be included in the Index Universe. Companies from Category 4.e. are eligible for inclusion in the Index Universe even without being a member of any 5G Consortium if they fulfil the remaining criteria defined above.

At the market open on 4 December 2018, the composition of the Solactive 5G Technology Performance-Index is as follows:

Name	ISIN*	Indexgewicht
APPLE INC	US0378331005	5%
INTEL CORP	US4581401001	5%
SAMSUNG ELECTRONICS CO LTD	KR7005930003	5%
CISCO SYSTEMS INC	US17275R1023	5%
AT&T	US00206R1023	5%
QUALCOMM INC	US7475251036	5%
BROADCOM INC	US11135F1012	5%
NOKIA OYJ	FI0009000681	5%
NTT DOCOMO INC.	JP3165650007	5%
CHINA MOBILE LTD	HK0941009539	5%
LM ERICSSON TELEFON AB CLASS B	SE0000108656	5%



Index Guideline

AMERICAN TOWER CORP	US03027X1000	5%
XIAOMI CORP	KYG9830T1067	5%
CROWN CASTLE INTERNATIONAL CORP	US22822V1017	5%
SBA COMMUNICATIONS CORP-CL A	US78410G1040	5%
CHINA TELECOM CORP LTD	CNE1000002V2	5%
SOFTBANK GROUP CORP	JP3436100006	5%
MITSUBISHI ELECTRIC CORP	JP3902400005	5%
FUJITSU LTD ORD	JP3818000006	5%
KDDI CORP (DDI) ORD	JP3496400007	5%

* as of 16 October 2018

The “**Index Advisor**” is responsible for carrying out step 4 in identifying the Index Universe above. The Index Advisor is:

I&S Internet & Security Consulting GmbH
Thomas Rappold
Hauffweg 5
D-72189 Voehringen
www.silicon-valley.de

The “**Index Component**” is each share currently included in the Index.

The “Number of **Shares**” are in respect of an Index Component and any given Business Day the number or fraction of shares included in the Index. It is calculated for any Index Component as the ratio of (A) the Percentage Weight of an Index Component multiplied by the Index value and (B) its Trading Price (converted into the Index Currency according to the principles laid out in Section 1.4 of this document).

The “**Percentage Weight**” of an Index Component is the ratio of its Trading Price multiplied by its Number of Shares divided by the Index value and the Divisor.

The “**Dividend Correction Factor**” is calculated as 1 minus the applicable withholding tax rate and/or other applicable tax rate currently prevalent in the respective country.

In particular, an “**Extraordinary Event**” is

- > a Merger
- > a Takeover Bid
- > a Delisting
- > the Nationalization of a company
- > Insolvency.

The Trading Price for this Index Component on the day the event came into effect is the last available market price for this Index Component quoted on the Exchange on the day the event came into effect (or, if a market price is not available for the day the event came into effect, the last available market price quoted on the Exchange on a day specified as appropriate by the Index Calculator) as determined by the Index Calculator, and this price is used as the Trading Price of the particular Index Component until the end of the day on which the composition of the Index is next set.



In the event of the Insolvency of an issuer of an Index Component, the Index Component shall remain in the Index until the next Adjustment Day. As long as a market price for the affected Index Component is available on a Business Day, this shall be applied as the Trading Price for this Index Component on the relevant Business Day, as determined in each case by the Index Calculator. If a market price is not available on a Business Day the Trading Price for this Index Component is set to zero. The Committee may also decide to eliminate the respective Index Component at an earlier point in time prior to the next Adjustment Day. The procedure in this case is identical to an elimination due to an Extraordinary Event.

An Index Component is "**delisted**" if the Exchange announces pursuant to the Exchange regulations that the listing of, the trading in, or the issuing of public quotes on the Index Component at the Exchange has ceased immediately or will cease at a later date, for whatever reason (provided the Delisting is not because of a Merger or a Takeover Bid), and the Index Component is not immediately listed, traded or quoted again on an exchange, trading or listing system, acceptable to the Index Calculator.

"**Insolvency**" occurs with regard to an Index Component if (A) all shares of the respective issuer must be transferred to a trustee, liquidator, insolvency administrator or a similar public officer as result of voluntary or compulsory liquidation, insolvency or winding-up proceedings or comparable proceedings affecting the issuer of the Index Components or (B) the holders of the shares of this issuer are legally enjoined from transferring the shares.

A "**Takeover Bid**" is a bid to acquire, an exchange offer, or any other offer or act of a legal person that results in the related legal person acquiring as part of an exchange or otherwise more than 10% and less than 100% of the voting shares in circulation from the issuer of the Index Component or the right to acquire these shares, as determined by the Index Calculator based on notices submitted to public or self-regulatory authorities or other information considered by the Index Calculator to be relevant.

With regard to an Index Component, a "**Merger**" is

- (i) a change in the security class or a conversion of this share class that results in a transfer or an ultimate definite obligation to transfer all the shares in circulation to another legal person,
- (ii) a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer to exchange shares with another legal person (except in a merger or share exchange under which the issuer of this Index Component is the acquiring or remaining company and which does not involve a change in security class or a conversion of all the shares in circulation),
- (iii) a takeover offer, exchange offer, other offer or another act of a legal person for the purposes of acquiring or otherwise obtaining from the issuer 100% of the shares issued that entails a transfer or the irrevocable obligation to transfer all shares (with the exception of shares that are held and controlled by the legal person), or
- (iv) a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer of the share or its subsidiaries to exchange shares with another legal person, whereby the issuer of the share is the acquiring or remaining company and it does not involve a change in the class or a conversion of the all shares issued, but the shares in circulation directly prior to such an event (except for shares held and controlled by the legal person) represent in total less than 50% of the shares in circulation directly subsequent to such an event.



The “**Merger Date**” is the date on which a Merger is concluded or the date specified by the Index Calculator if such a date cannot be determined under the law applicable to the Merger.

“**Nationalization**” is a process whereby all shares or the majority of the assets of the issuer of the shares are nationalized or are expropriated or otherwise must be transferred to public bodies, authorities or institutions.

The “**Exchange**” is, in respect of the Index and every Index Component, the respective primary exchange where the Index Component has its primary listing. The Committee may decide to declare a different stock exchange the “Exchange” for trading reasons, even if the company is only listed there via a Stock Substitute.

A “**Stock Substitute**” includes in particular, American Depositary Receipts (ADR) and Global Depositary Receipts (GDR).

With regard to an Index Component (subject to the provisions given above under “Extraordinary Events”) the “**Trading Price**” in respect of a Trading Day is the closing price on this Trading Day determined in accordance with the Exchange regulations. If the Exchange has no closing price for an Index Component, the Index Calculator shall determine the Trading Price and the time of the quote for the share in question in a manner that appears reasonable to it.

A “**Trading Day**” is in relation to the Index or an Index Component a Trading Day on the Exchange (or a day that would have been such a day if a market disruption had not occurred), excluding days on which trading may be ceased prior to the normal Exchange closing time. The Index Calculator is ultimately responsible as to whether a certain day is a Trading Day with regard to the Index or an Index Component or in any other connection relating to this document.

The “**Index Calculator**” is Solactive AG or any other appropriately appointed successor in this function.

The “**Index Currency**” is USD.

The “**Market Capitalisation**” is with regard to each of the securities in the Index on a Selection Day the share class-specific Market Capitalisation for any security in the Index Universe. It is calculated as the multiplication of the shares outstanding (as sourced from data vendors) with the Trading Price of the share class as of the respective Selection Day.

A “**Business Day**” is any weekday from Monday to Friday.

The “**Adjustment Day**” is the third Wednesday in May and November.

The “**Selection Day**” is the first Wednesday in May and November.

A “**Market Disruption Event**” occurs if

1. one of the following events occurs or exists on a Trading Day prior to the opening quotation time for an Index Component:
 - A) trading is suspended or restricted (due to price movements that exceed the limits allowed by the Exchange or an Affiliated Exchange, or for other reasons):
 - 1.1. across the whole Exchange; or
 - 1.2. in options or futures contracts on or with regard to an Index Component or an Index Component that is quoted on an Affiliated Exchange; or



- 1.3. on an Exchange or in a trading or quotation system (as determined by the Index Calculator) in which an Index Component is listed or quoted; or
 - B) an event that (in the assessment of the Index Calculator) generally disrupts and affects the opportunities of market participants to execute on the Exchange transactions in respect of a share included in the Index or to determine market values for a share included in the Index or to execute on an Affiliated Exchange transaction with regard to options and futures contracts on these shares or to determine market values for such options or futures contracts.
2. trading on the Exchange or an Affiliated Exchange is ceased prior to the **"Normal Exchange Closing Time"**, which is the time at which the Exchange or an Affiliated Exchange is normally closed on working days without taking into account after-hours trading or other trading activities carried out outside the normal trading hours. An exception to this classification as a Market Disruption Event is where the early cessation of trading is announced by the Exchange or Affiliated Exchange on this Trading Day at least one hour before
 - 2.1. the actual closing time for normal trading on the Exchange or Affiliated Exchange on the Trading Day in question or, if earlier.
 - 2.2. the closing time (if given) of the Exchange or Affiliated Exchange for the execution of orders at the time the quote is given.
 3. a general moratorium is imposed on banking transactions in the country in which the Exchange is resident if the above-mentioned events are material in the assessment of the Index Calculator, whereby the Index Calculator makes its decision based on those circumstances that it considers reasonable and appropriate.

„5G Patent“ The Index takes into consideration 5G-related patents globally. Key words for the patent search are: 5G Radio Access, 5G Modulation, 5G Core Networking, 5G Mobile Broadband, 5G RF Analog/digital Technologies, 5G RF Modules, 5G Radio Access Technologies, 5G Signal Processing, 5G Antenna Devices, 5G Base Station and Architectures, 5G Network Fibre Optics, 5G Monolithic-Microwave-Integrated Circuit (MMIC), 5G Massive Multiple-Input, Multiple-Output (MIMO), 5G Multiple-Output-Antenna, 5G MMWave, NSA 5G NR.

„5G Consortium“ are nationally or internationally organized consortia in the form of working committees made up of companies from the IT and Telecommunications sector. They play an important role in the definition and formulation of 5G standards, possible fields of application and the frequency bands to be used. At the time of creation of this index guideline, the 5G Consortia relevant for the selection process are: 5G Americas, 3GPP (ETSI), 5G Forum (Südkorea), Future Forum (China), 5GPPP Infrastructure Association (Europe), 5GMF (Japan), IMT-2020 (5G) (China), Promotion Group (China). Relevant Consortia founded after the start date of the Index are added to the aforementioned list.

„Mobile Network Operator“ are companies operating public mobile networks and offering services in relation to those networks to private and business clients.

„Mobile Network and Optical Network Hardware Manufacturer“ are manufacturers of mobile/optical network hardware which is used in the construction/provision of 5G networks. Examples include: base stations, switches, routers, mobile gateways, optical networks.



“Mobile Antennas, Semiconductors, Chips, Signal Processing Equipment, Networking Software”

Are manufacturers of important 5G-technology components like antennas, semiconductors, signal processors, testing and measurement devices for the development, setup, operation and ongoing development of 5G networks and network software for the operation of those networks.

“Mobile Device Manufacturer” are manufacturers of mobile devices, especially smartphones. To determine the three companies with the highest global market share, the relevant source used at the time of creation of this index guideline is: <https://www.idc.com/promo/smartphone-market-share/vendor>. Any change of the relevant source will be reflected in this index guideline.

“Mobile Network Tower Infrastructure Provider” are operators and suppliers of cell towers.



5 APPENDIX

5.1 CONTACT DATA

Solactive AG

German Index Engineering

Guiollettstr. 54

60325 Frankfurt am Main

Germany

Tel.: +49 (0) 69 719 160 00

Fax: +49 (0) 69 719 160 25

Email: equity.ops@solactive.com

5.2 CHANGES IN CALCULATION METHOD

The application by the Index Calculator of the method described in this document is final and binding. The Index Calculator shall apply the method described above for the composition and calculation of the Index. However, it cannot be excluded that the market environment, supervisory, legal, financial or tax reasons may require changes to be made to this method. The Index Calculator may also make changes to the terms and conditions of the Index and the method applied to calculate the Index that it deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The Index Calculator is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the Index Calculator will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.