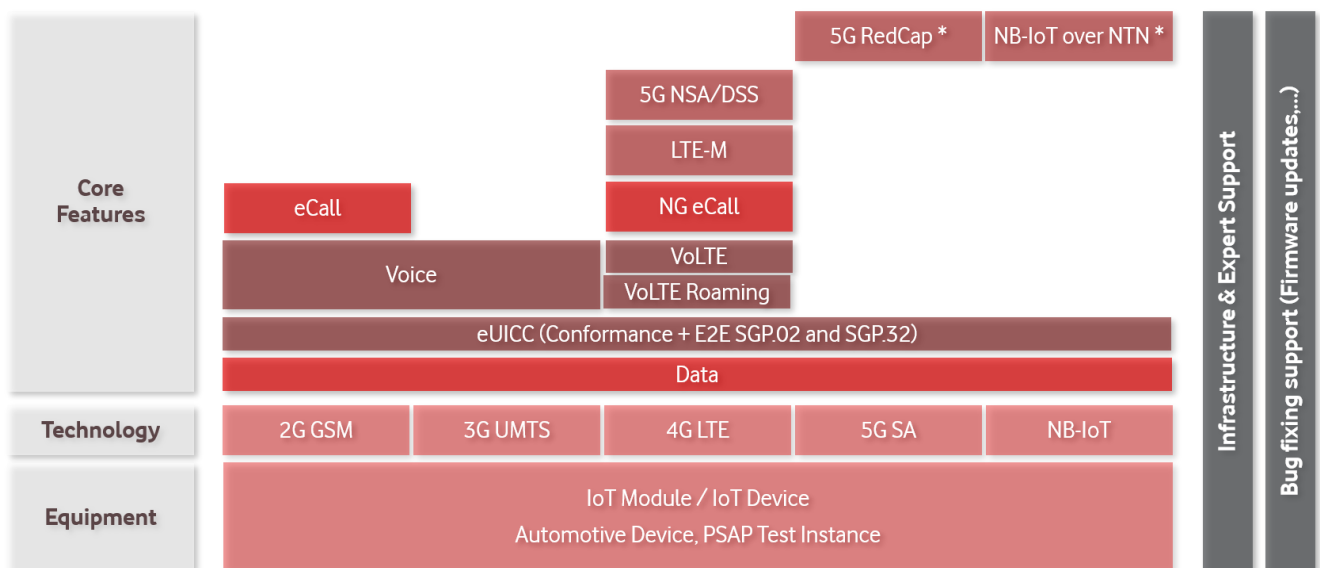




## Standard product – catalog

The Vodafone Innovation Park offers you a realistic multi-vendor test environment and certifies devices against the Vodafone network requirements. We use all current radio and core technologies for this purpose. The result is a successful certification so that the devices can be used in the Vodafone network.

## Device certification overview



### Vodafone GmbH

Ferdinand-Braun-Platz 1, 40549 Düsseldorf, Postfach: 40543 Düsseldorf

Tel.: + 49 (0) 211 / 533 - 0, Fax: + 49 (0) 211 / 533 - 22 00

[www.vodafone.de/innovationpark/iot-future-lab.html](http://www.vodafone.de/innovationpark/iot-future-lab.html)

Legal notice: [www.vodafone.de/pflichtangaben](http://www.vodafone.de/pflichtangaben)



## Standard product – catalog

### Full Test

|                             |                                 |
|-----------------------------|---------------------------------|
| 1   2G                      | 11   2G / 3G / 4G               |
| 2   3G                      | 12   2G / 3G / 4G / VoLTE       |
| 3   4G                      | 13   2G / 3G / 4G / 5G          |
| 4   NB-IoT                  | 14   2G / 3G / 4G / 5G / VoLTE  |
| 5   NB-IoT / 2G             | 15   1 Legacy / 4G              |
| 6   NB-IoT / LTE Cat M      | 16   1 Legacy / 4G / VoLTE      |
| 7   NB-IoT / LTE Cat M / 2G | 17   1 Legacy / 4G / 5G         |
| 8   LTE Cat M               | 18   1 Legacy / 4G / 5G / VoLTE |
| 9   LTE Cat M / 2G          | 19   4G / 5G                    |
| 10   2G / 3G                | 20   4G / 5G / VoLTE            |

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### Smart Test\*

|                              |                                 |
|------------------------------|---------------------------------|
| 21   2G                      | 31   2G / 3G / 4G               |
| 22   3G                      | 32   2G / 3G / 4G / VoLTE       |
| 23   4G                      | 33   2G / 3G / 4G / 5G          |
| 24   NB-IoT                  | 34   2G / 3G / 4G / 5G / VoLTE  |
| 25   NB-IoT / 2G             | 35   1 Legacy / 4G              |
| 26   NB-IoT / LTE Cat M      | 36   1 Legacy / 4G / VoLTE      |
| 27   NB-IoT / LTE Cat M / 2G | 37   1 Legacy / 4G / 5G         |
| 28   LTE Cat M               | 38   1 Legacy / 4G / 5G / VoLTE |
| 29   LTE Cat M / 2G          | 39   4G / 5G                    |
| 30   2G / 3G                 | 40   4G / 5G / VoLTE            |

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### Add-ons and more

|                            |                                      |
|----------------------------|--------------------------------------|
| 41   5G SA                 | 45   LTE Advanced (from Cat 9 to xx) |
| 42   VoLTE Roaming (GDSP)  | 46   eUICC NW Conformance            |
| 43   eCall                 | 47   eUICC E2E                       |
| 44   Next Generation eCall | 48   5G RedCap                       |

**Customised support and joined sessions can be offered for all available technologies and features. Please contact us if you are interested in an individual offer.**

\* Smart Tests have a smaller test scope and are used for verification.



## Product description – Full Test scope

|   |                          |                                                                                                        |                                                                |
|---|--------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| 1 | <input type="checkbox"/> | <b>2G – Full Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE                                  | USIM-ME<br>PAP/CHAP<br>Speechcodecs & Ciphery                  |
| 2 | <input type="checkbox"/> | <b>3G – Full Test</b><br>3G Datarcard<br>PAP/CHAP<br>SMS                                               | USIM-ME<br>Speechcodecs & Ciphery                              |
| 3 | <input type="checkbox"/> | <b>4G – Full Test</b><br>LTE-Data<br>PAP/CHAP<br>SMS                                                   | USIM-ME<br>LTE Voice via CSFB                                  |
| 4 | <input type="checkbox"/> | <b>NB-IoT – Full Test</b><br>IoT Bearer_NB-IoT<br>USIM_ME                                              |                                                                |
| 5 | <input type="checkbox"/> | <b>NB-IoT / 2G – Full Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>PAP/CHAP             | Speechcodecs & Ciphery<br>IoT Bearer_NB_IoT<br>USIM-ME         |
| 6 | <input type="checkbox"/> | <b>NB-IoT / LTE Cat M – Full Test</b><br>IoT Bearer_NB-IoT<br>IoT Bearer_LTE-M<br>USIM_ME              |                                                                |
| 7 | <input type="checkbox"/> | <b>NB-IoT / LTE Cat M / 2G – Full Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>PAP/CHAP | Speechcodecs & Ciphery<br>IoT Bearer_NB_IoT & LTE-M<br>USIM-ME |
| 8 | <input type="checkbox"/> | <b>LTE Cat M – Full Test</b><br>IoT Bearer_LTE-M<br>USIM_ME                                            |                                                                |



|           |                                                                       |                                                                                                 |                                                                                                                   |
|-----------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>9</b>  | <input type="checkbox"/> <b>LTE Cat M / 2G – Full Test</b>            | GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>PAP/CHAP                                        | Speechcodecs & Ciphering<br>IoT Bearer_LTE-M<br>USIM-ME                                                           |
| <b>10</b> | <input type="checkbox"/> <b>2G / 3G – Full Test</b>                   | GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>PAP/CHAP                                        | Speechcodecs & Ciphering<br>3G Datacard<br>USIM-ME                                                                |
| <b>11</b> | <input type="checkbox"/> <b>2G / 3G / 4G – Full Test</b>              | GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>USIM-ME<br>PAP/CHAP                             | Speechcodecs & Ciphering<br>3G Datacard<br>LTE Voice via CSFB<br>LTE Data                                         |
| <b>12</b> | <input type="checkbox"/> <b>2G / 3G / 4G / VoLTE – Full Test</b>      | GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>USIM-ME<br>PAP/CHAP<br>Speechcodecs & Ciphering | 3G Datacard<br>LTE Data<br>LTE_Voice over LTE<br>LTE Voice via CSFB<br>Speechcodecs EVS                           |
| <b>13</b> | <input type="checkbox"/> <b>2G / 3G / 4G / 5G – Full Test</b>         | GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>3G Datacard<br>USIM-ME                          | LTE Data<br>LTE Voice via CSFB<br>5G Bearer NSA, DSS<br>PAP/CHAP<br>Speechcodecs & Ciphering                      |
| <b>14</b> | <input type="checkbox"/> <b>2G / 3G / 4G / 5G / VoLTE – Full Test</b> | GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>3G Datacard<br>USIM-ME<br>LTE Data              | LTE Voice via CSFB<br>LTE Voice over LTE<br>5G Bearer<br>PAP/CHAP<br>Speechcodecs & Ciphering<br>Speechcodecs EVS |




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**15      1 Legacy / 4G – Full Test**

- |                                                                                                                                                                              |                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <u>2G / 4G:</u><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>USIM-ME<br>LTE Data<br>LTE Voice via CSFB<br>PAP/CHAP<br>Speechcodecs & Cipherng | <input type="checkbox"/> <u>3G / 4G:</u><br>SMS<br>3G Datacard<br>USIM-ME<br>LTE Data<br>LTE Voice via CSFB<br>PAP/CHAP<br>Speechcodecs & Cipherng |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
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**16      1 Legacy / 4G / VoLTE – Full Test**

- |                                                                                                                                                                                                                                |                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <u>2G / 4G / VoLTE:</u><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>USIM-ME<br>LTE Data<br>LTE Voice via CSFB<br>LTE_Voice over LTE<br>PAP/CHAP<br>Speechcodecs & Cipherng<br>Speechcodecs EVS | <input type="checkbox"/> <u>3G / 4G / VoLTE:</u><br>SMS<br>3G Datacard<br>USIM-ME<br>LTE Data<br>LTE Voice via CSFB<br>LTE_Voice over LTE<br>PAP/CHAP<br>Speechcodecs & Cipherng<br>Speechcodecs EVS |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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**17      1 Legacy / 4G / 5G – Full Test**

- |                                                                                                                                                                                                         |                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <u>2G / 4G / 5G:</u><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>USIM-ME<br>LTE Data<br>LTE Voice via CSFB<br>PAP/CHAP<br>Speechcodecs & Cipherng<br>5G Bearer NSA, DSS | <input type="checkbox"/> <u>3G / 4G / 5G:</u><br>SMS<br>3G Datacard<br>USIM-ME<br>LTE Data<br>LTE Voice via CSFB<br>PAP/CHAP<br>Speechcodecs & Cipherng<br>5G Bearer NSA, DSS |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>18</b> | <div data-bbox="215 369 766 403"><b>1 Legacy / 4G / 5G / VoLTE – Full Test</b></div> <div data-bbox="215 414 766 828"> <input type="checkbox"/> <u>2G / 4G / 5G / VoLTE:</u><br/> GSM and Basic Operations<br/> GPRS-EDGE<br/> SMS<br/> USIM-ME<br/> LTE Data<br/> LTE Voice via CSFB<br/> LTE Voice over LTE<br/> PAP/CHAP<br/> Speechcodecs &amp; Ciphering<br/> 5G Bearer NSA, DSS<br/> Speechcodecs EVS </div> <div data-bbox="774 414 1260 828"> <input type="checkbox"/> <u>3G / 4G / 5G / VoLTE:</u><br/> SMS<br/> 3G Datacard<br/> USIM-ME<br/> LTE Data<br/> LTE Voice via CSFB<br/> LTE Voice over LTE<br/> PAP/CHAP<br/> 5G Bearer NSA, DSS<br/> Speechcodecs EVS </div> |
| <b>19</b> | <div data-bbox="215 873 766 907"><b>4G / 5G – Full Test</b></div> <div data-bbox="215 918 766 1052"> <input type="checkbox"/> LTE Data<br/> LTE Voice via CSFB<br/> 5G Bearer NSA, DSS<br/> PAP/CHAP </div> <div data-bbox="774 918 1260 1052"> <input type="checkbox"/> SMS<br/> USIM-ME<br/> Speechcodecs &amp; Ciphering </div>                                                                                                                                                                                                                                                                                                                                                  |
| <b>20</b> | <div data-bbox="215 1097 766 1131"><b>4G / 5G / VoLTE – Full Test</b></div> <div data-bbox="215 1142 766 1276"> <input type="checkbox"/> LTE Data<br/> LTE Voice via CSFB<br/> LTE Voice over LTE<br/> 5G Bearer NSA, DSS </div> <div data-bbox="774 1142 1260 1276"> <input type="checkbox"/> PAP/CHAP<br/> SMS<br/> USIM-ME<br/> Speechcodecs EVS </div>                                                                                                                                                                                                                                                                                                                          |



## Product description – Smart Test scope

|    |                          |                                                                                             |                                                       |
|----|--------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 21 | <input type="checkbox"/> | <b>2G – Smart Test</b><br>GSM and Basic Operations<br>SMS                                   | GPRS-EDGE<br>Speechcodecs & Ciphering                 |
| 22 | <input type="checkbox"/> | <b>3G – Smart Test</b><br>3G Datacard<br>Speechcodecs & Ciphering<br>SMS                    |                                                       |
| 23 | <input type="checkbox"/> | <b>4G – Smart Test</b><br>LTE-Data<br>LTE Voice via CSFB                                    | Speechcodecs & Ciphering<br>SMS                       |
| 24 | <input type="checkbox"/> | <b>NB-IoT – Smart Test</b><br>IoT Bearer_NB-IoT                                             |                                                       |
| 25 | <input type="checkbox"/> | <b>NB-IoT / 2G – Smart Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE             | Speechcodecs & Ciphering<br>IoT Bearer_NB_IoT         |
| 26 | <input type="checkbox"/> | <b>NB-IoT / LTE Cat M – Smart Test</b><br>IoT Bearer_NB-IoT<br>IoT Bearer_LTE-M             |                                                       |
| 27 | <input type="checkbox"/> | <b>NB-IoT / LTE Cat M / 2G – Smart Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE | Speechcodecs & Ciphering<br>IoT Bearer_NB_IoT & LTE-M |
| 28 | <input type="checkbox"/> | <b>LTE Cat M – Smart Test</b><br>IoT Bearer_LTE-M                                           |                                                       |
| 29 | <input type="checkbox"/> | <b>LTE Cat M / 2G – Smart Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE          | Speechcodecs & Ciphering<br>IoT Bearer_LTE-M          |



|           |                          |                                                                                                                                                                   |                                                                                                                             |
|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>30</b> | <input type="checkbox"/> | <b>2G / 3G – Smart Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE                                                                                       | Speechcodecs & Cipherng<br>3G Datacard                                                                                      |
| <b>31</b> | <input type="checkbox"/> | <b>2G / 3G / 4G – Smart Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>Speechcodecs & Cipherng                                                       | 3G Datacard<br>LTE Data<br>LTE Voice via CSFB                                                                               |
| <b>32</b> | <input type="checkbox"/> | <b>2G / 3G / 4G / VoLTE – Smart Test</b><br>GSM and Basic Operations<br>SMS<br>GPRS-EDGE<br>Speechcodecs & Cipherng<br>3G Datacard                                | LTE Data<br>LTE Voice over LTE<br>LTE Voice via CSFB<br>Speechcodecs EVS                                                    |
| <b>33</b> | <input type="checkbox"/> | <b>2G / 3G / 4G / 5G – Smart Test</b><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>3G Datacard                                                              | LTE Data<br>LTE Voice via CSFB<br>5G Bearer NSA, DSS<br>Speechcodecs & Cipherng                                             |
| <b>34</b> | <input type="checkbox"/> | <b>2G / 3G / 4G / 5G / VoLTE – Smart Test</b><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>3G Datacard<br>LTE Data                                          | LTE Voice over LTE<br>LTE Voice via CSFB<br>5G Bearer NSA, DSS<br>Speechcodecs & Cipherng<br>Speechcodecs EVS               |
| <b>35</b> | <input type="checkbox"/> | <b>1 Legacy / 4G – Smart Test</b><br><u>2G / 4G:</u><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>LTE Data<br>LTE Voice via CSFB<br>Speechcodecs & Cipherng | <input type="checkbox"/> <u>3G / 4G:</u><br>SMS<br>3G Datacard<br>LTE Data<br>LTE Voice via CSFB<br>Speechcodecs & Cipherng |






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**36 1 Legacy / 4G / VoLTE – Smart Test**

- |                                                                                                                                                                                                          |                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <u>2G / 4G / VoLTE:</u><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>LTE Data<br>LTE Voice over LTE<br>LTE Voice via CSFB<br>Speechcodecs & Ciphering<br>Speechcodecs EVS | <input type="checkbox"/> <u>3G / 4G / VoLTE:</u><br>SMS<br>3G Datacard<br>LTE Data<br>LTE Voice over LTE<br>LTE Voice via CSFB<br>Speechcodecs EVS |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
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**37 1 Legacy / 4G / 5G – Smart Test**

- |                                                                                                                                                                                   |                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <u>2G / 4G / 5G:</u><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>LTE Data<br>LTE Voice via CSFB<br>Speechcodecs & Ciphering<br>5G Bearer NSA, DSS | <input type="checkbox"/> <u>3G / 4G / 5G:</u><br>SMS<br>3G Datacard<br>LTE Data<br>LTE Voice via CSFB<br>5G Bearer NSA, DSS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
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**38 1 Legacy / 4G / 5G / VoLTE – Smart Test**

- |                                                                                                                                                                                                                                     |                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <u>2G / 4G / 5G / VoLTE:</u><br>GSM and Basic Operations<br>GPRS-EDGE<br>SMS<br>LTE Data<br>LTE Voice over LTE<br>LTE Voice via CSFB<br>Speechcodecs & Ciphering<br>5G Bearer NSA, DSS<br>Speechcodecs EVS | <input type="checkbox"/> <u>3G / 4G / 5G / VoLTE:</u><br>SMS<br>3G Datacard<br>LTE Data<br>LTE Voice over LTE<br>LTE Voice via CSFB<br>5G Bearer NSA, DSS<br>Speechcodecs EVS |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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**39 ☐ 4G / 5G – Smart Test**

- |                                |                           |
|--------------------------------|---------------------------|
| LTE Data<br>LTE Voice via CSFB | 5G Bearer NSA, DSS<br>SMS |
|--------------------------------|---------------------------|
- 

**40 ☐ 4G / 5G / VoLTE – Smart Test**

- |                                                      |                                               |
|------------------------------------------------------|-----------------------------------------------|
| LTE Data<br>LTE Voice over LTE<br>LTE Voice via CSFB | 5G Bearer NSA, DSS<br>SMS<br>Speechcodecs EVS |
|------------------------------------------------------|-----------------------------------------------|
-



## Product description – Add-ons and more

**41** ☐ **5G SA – Add-on**

5G Bearer SA

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**42** ☐ **VoLTE Roaming (GDSP) – Add-on**

VoLTE customized to IoT  
Speechcodecs EVS

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**43** ☐ **eCall – Add-on**

IoT eCall  
Consulting Service  
dev. Support

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**44** ☐ **NGeCall – Add-on**

IoT eCall  
Consulting Service  
dev. Support

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**45** ☐ **LTE Advanced (from Cat 9 to xx) – Add-on**

LTE Advanced

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**46** ☐ **eUICC NW Conformance – Add-on**

eUICC SIM Toolkit

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**47** ☐ **eUICC E2E – Add-on**

eUICC SIM profile handling

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**48** ☐ **5G RedCap – Add-on**

Release 17

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