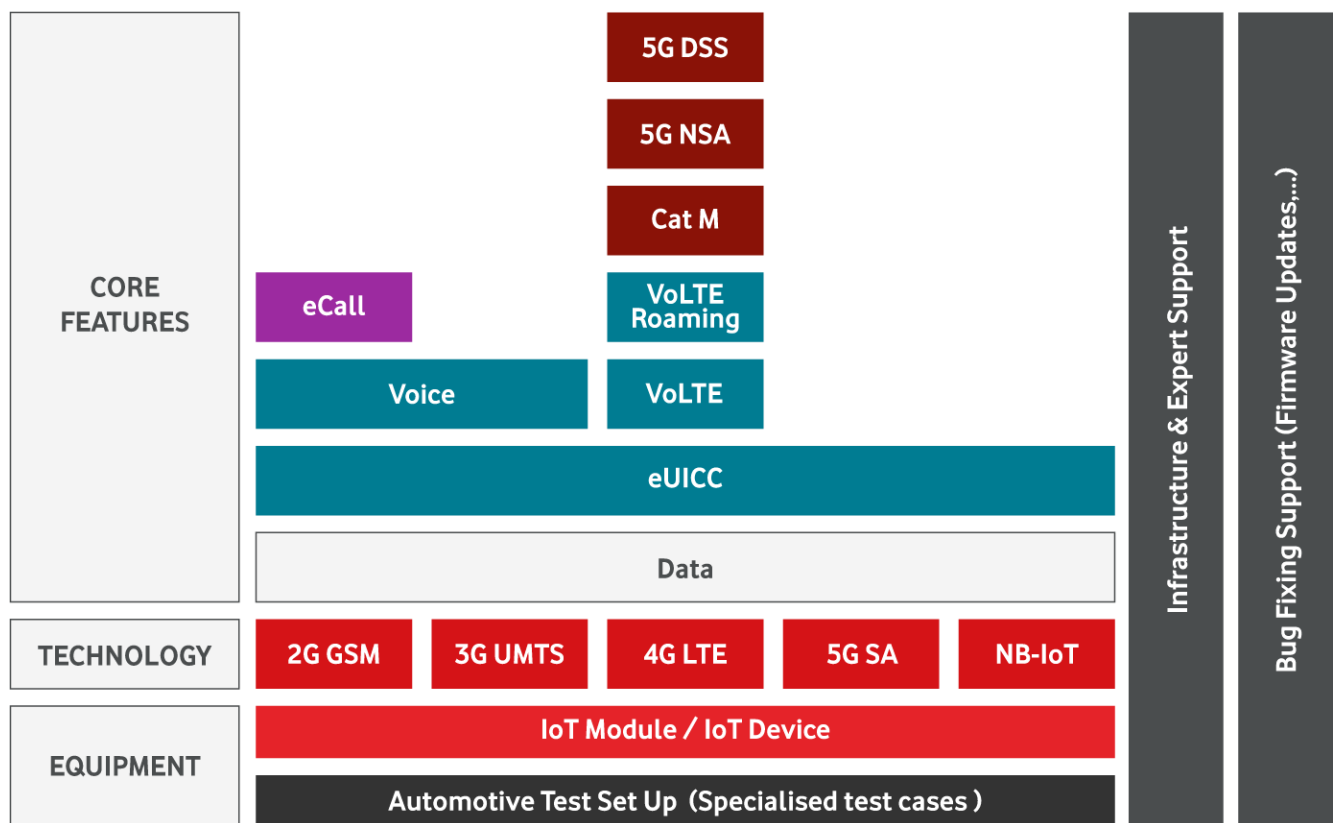




Standard Product – Catalog

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

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www.vodafone.de/innovationpark/iot-future-lab.html

Legal notice: www.vodafone.de/pflichtangaben



Standard Product – Catalog

Full Test

1 NB-IoT	12 1 Legacy / 4G / VoLTE
2 NB-IoT / 2G	13 1 Legacy / 4G / 5G
3 NB-IoT / LTE Cat M	14 1 Legacy / 4G / 5G / VoLTE
4 NB-IoT / LTE Cat M / 2G	15 4G / 5G
5 LTE Cat M	16 4G / 5G / VoLTE
6 2G / 3G	17 Automotive incl. VoLTE and eCall
7 2G / 3G / 4G	18 Router 2G / 3G / 4G / UI / WLAN
8 2G / 3G / 4G / VoLTE	19 Mobile Device Testing 2G / 3G / 4G
9 2G / 3G / 4G / 5G	20 eUICC – IoT Device 2G / 3G / 4G
10 2G / 3G / 4G / 5G / VoLTE	21 5G – NSA
11 1 Legacy / 4G	22 eCall

Smart Test*

23 NB-IoT	32 2G / 3G / 4G / 5G / VoLTE
24 NB-IoT / 2G	33 1 Legacy / 4G
25 NB-IoT / LTE Cat M	34 1 Legacy / 4G / VoLTE
26 NB-IoT / LTE Cat M / 2G	35 1 Legacy / 4G / 5G
27 LTE Cat M	36 1 Legacy / 4G / 5G / VoLTE
28 2G / 3G	37 4G / 5G
29 2G / 3G / 4G	38 4G / 5G / VoLTE
30 2G / 3G / 4G / VoLTE	39 Automotive incl. VoLTE and eCall
31 2G / 3G / 4G / 5G	40 Router 2G / 3G / 4G / UI / WLAN

Add-ons and More

41 VoLTE	44 From Cat 9 to xx
42 VoLTE Roaming	45 eUICC – IoT Device
43 eCall	

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"/> NB-IoT – Full Test
IoT Bearer | |
| 2 | <input type="checkbox"/> NB-IoT / 2G – Full Test
GSM and Basic Operations
IoT eUICC
SMS
GPRS-EDGE | Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
Speechcodecs & Ciphering
IoT Bearer |
| 3 | <input type="checkbox"/> NB-IoT / LTE Cat M – Full Test
IoT Bearer
NB-IoT | |
| 4 | <input type="checkbox"/> NB-IoT / LTE Cat M / 2G – Full Test
GSM and Basic Operations
IoT eUICC
SMS
GPRS-EDGE | Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
Speechcodecs & Ciphering
IoT Bearer |
| 5 | <input type="checkbox"/> LTE Cat M – Full Test
IoT Bearer | |
| 6 | <input type="checkbox"/> 2G / 3G – Full Test
GSM and Basic Operations
IoT eUICC
SMS
GPRS-EDGE
USIM-ME
PAP/CHAP | Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
3G Datacard
3G Handset |
| 7 | <input type="checkbox"/> 2G / 3G – Full Test
GSM and Basic Operations
IoT eUICC
SMS
GPRS-EDGE
USIM-ME
PAP/CHAP
LTE Data
LTE Voice via CSFB | Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
Speechcodecs & Ciphering
Speechcodecs EVS
Up to CAT 9
3G Datacard
3G Handset |



8	<input type="checkbox"/> 2G / 3G / 4G / VoLTE – Full Test	<p>GSM and Basic Operations IoT eUICC SMS GPRS-EDGE USIM-ME PAP/CHAP LTE Data LTE Advanced</p>	<p>LTE Voice via CSFB Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 Speechcodecs & Ciphering Speechcodecs EVS VoLTE 3G Datacard 3G Handset</p>
9	<input type="checkbox"/> 2G / 3G / 4G / 5G – Full Test	<p>GSM and Basic Operations GPRS-EDGE 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC</p>	<p>LTE Data LTE Advanced LTE Voice via CSFB 5G Bearer PAP/CHAP SMS Speechcodecs & Ciphering Speechcodecs EVS</p>
10	<input type="checkbox"/> 2G / 3G / 4G / 5G / VoLTE – Full Test	<p>GSM and Basic Operations GPRS-EDGE 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data</p>	<p>LTE Advanced LTE Voice via CSFB 5G Bearer PAP/CHAP SMS Speechcodecs & Ciphering Speechcodecs EVS VoLTE</p>
11	1 Legacy / 4G – Full Test	<input type="checkbox"/> 2G / 4G:	<input type="checkbox"/> 3G / 4G:
		<p>GSM and Basic Operations SMS GPRS-EDGE Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB Speechcodecs & Ciphering</p>	<p>SMS 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB</p>



12 1 Legacy / 4G / VoLTE – Full Test

- | | |
|---|---|
| <input type="checkbox"/> <u>2G / 4G / VoLTE:</u>
GSM and Basic Operations
IoT eUICC
SMS
GPRS-EDGE
USIM-ME
LTE Data
LTE Advanced
LTE Voice via CSFB
Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
Speechcodecs & Ciphering
Speechcodecs EVS
VoLTE | <input type="checkbox"/> <u>3G / 4G / VoLTE:</u>
SMS
USIM-ME
IoT eUICC
LTE Data
LTE Advanced
LTE Voice via CSFB
Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
Speechcodecs EVS
VoLTE
3G Datacard
3G Handset |
|---|---|
-

13 1 Legacy / 4G / 5G – Full Test

- | | |
|---|--|
| <input type="checkbox"/> <u>2G / 4G / 5G:</u>
GSM and Basic Operations
SMS
GPRS-EDGE
Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
USIM-ME
IoT eUICC
LTE Data
LTE Advanced
LTE Voice via CSFB
Speechcodecs & Ciphering | <input type="checkbox"/> <u>3G / 4G / 5G:</u>
SMS
3G Datacard
3G Handset
Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
USIM-ME
IoT eUICC
LTE Data
LTE Advanced
LTE Voice via CSFB
Speechcodecs EVS
VoLTE |
|---|--|
-

14 1 Legacy / 4G / 5G / VoLTE – Full Test

- | | |
|--|--|
| <input type="checkbox"/> <u>2G / 4G / 5G / VoLTE:</u>
GSM and Basic Operations
SMS
GPRS-EDGE
Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
USIM-ME
IoT eUICC
LTE Data
LTE Advanced
LTE Voice via CSFB
Speechcodecs & Ciphering
Speechcodecs EVS
VoLTE | <input type="checkbox"/> <u>3G / 4G / 5G / VoLTE:</u>
SMS
3G Datacard
3G Handset
Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7
USIM-ME
IoT eUICC
LTE Data
LTE Advanced
LTE Voice via CSFB
Speechcodecs EVS
VoLTE |
|--|--|
-



15	<input type="checkbox"/>	4G / 5G – Full Test	Steering of Roaming based on SIM OTA USIM-ME IoT eUICC LTE Data LTE Advanced	LTE Voice via CSFB 5G Bearer PAP/CHAP SMS
16	<input type="checkbox"/>	4G / 5G / VoLTE – Full Test	Steering of Roaming based on SIM OTA USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB	5G Bearer PAP/CHAP SMS VoLTE Speechcodecs EVS
17	<input type="checkbox"/>	Automotive incl. VoLTE and eCall – Full Test	GSM and Basic Operations IoT eUICC SMS GPRS-EDGE USIM-ME 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7	LTE Data LTE Advanced LTE Voice via CSFB PAP CHAP Speechcodecs & Ciphering Speechcodecs EVS VoLTE IoT eCall Customised test
18	<input type="checkbox"/>	Router 2G / 3G / 4G / UI / WLAN – Full Test	GSM and Basic Operations IoT eUICC SMS GPRS-EDGE USIM-ME 3G Datacard Steering of Roaming based on SIM OTA Steering of Roaming based on SS7	LTE Data LTE Advanced LTE Voice via CSFB USIM-ME IoT eUICC Router WLAN Customised test



19 **Mobile Device Testing 2G / 3G / 4G – Full Test**

Bluetooth	LTE Voice via CSFB
Consumer E-Mail	Mobile Hotspot
Dual SIM	MS Exchange
Exploratory A	OMA CP
FOTA Live	Roaming Data
Google RCS Sanity Check	SoR based on SIM OTA
GPRS-EDGE	SoR based on SS7
GSM and Basic Operations	Speechcodecs & Ciphering
IMEI-SV	Speechcodecs EVS
IPv6	SUPL
3G	USIM-ME
LTE Advanced	VoWiFi
LTE Data	WLAN
VoLTE	

20 **eUICC– IoT Device 2G / 3G / 4G – Full Test**

GSM and Basic Operations	LTE Data
GPRS-EDGE	LTE Voice via CSFB
3G Datacard	PAP / CHAP
3G Handset	SMS
Steering of Roaming based on SIM OTA	Speechcodecs & Ciphering
Steering of Roaming based on SS7	Speechcodecs EVS
USIM-ME	Up to CAT 9
IoT eUICC	

21 **5G NSA – Full Test**

5G Bearer
Consulting Service
dev. Support

22 **eCall – Full Test**

IoT eCall
Consulting Service
dev. Support



Product Description – Smart Test Scope

23	<input type="checkbox"/>	NB-IoT – Smart Test IoT Bearer	
24	<input type="checkbox"/>	NB-IoT / 2G – Smart Test GSM and Basic Operations IoT eUICC SMS GPRS-EDGE	Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 Speechcodecs & Cipherng IoT Bearer
25	<input type="checkbox"/>	NB-IoT / LTE Cat M – Smart Test IoT Bearer GSM and Basic Operations	
26	<input type="checkbox"/>	NB-IoT / LTE Cat M / 2G – Smart Test GSM and Basic Operations IoT eUICC SMS GPRS-EDGE	Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 Speechcodecs & Cipherng IoT Bearer
27	<input type="checkbox"/>	LTE Cat M – Smart Test IoT Bearer	
28	<input type="checkbox"/>	2G / 3G – Smart Test GSM and Basic Operations SMS GPRS-EDGE 3G Datacard 3G Handset	USIM-ME IoT eUICC Steering of Roaming based on SIM OTA Steering of Roaming based on SS7
29	<input type="checkbox"/>	2G / 3G / 4G – Smart Test GSM and Basic Operations SMS GPRS-EDGE 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7	USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB Speechcodecs & Cipherng Speechcodecs EVS



30 **2G / 3G / 4G / VoLTE – Smart Test**

GSM and Basic Operations	IoT eUICC
SMS	LTE Data
GPRS-EDGE	LTE Advanced
3G Datacard	LTE Voice via CSFB
3G Handset	Speechcodecs & Ciphering
Steering of Roaming based on SIM OTA	Speechcodecs EVS
Steering of Roaming based on SS7	VoLTE
USIM-ME	

31 **2G / 3G / 4G / 5G – Smart Test**

GSM and Basic Operations	LTE Data
GPRS-EDGE	LTE Advanced
3G Datacard	LTE Voice via CSFB
3G Handset	5G Bearer
Steering of Roaming based on SIM OTA	PAP/CHAP
Steering of Roaming based on SS7	SMS
USIM-ME	Speechcodecs & Ciphering
IoT eUICC	

32 **2G / 3G / 4G / 5G / VoLTE – Smart Test**

GSM and Basic Operations	LTE Advanced
GPRS-EDGE	LTE Voice via CSFB
3G Datacard	5G Bearer
3G Handset	PAP/CHAP
Steering of Roaming based on SIM OTA	SMS
Steering of Roaming based on SS7	Speechcodecs & Ciphering
USIM-ME	Speechcodecs EVS
IoT eUICC	VoLTE
LTE Data	

33 **1 Legacy / 4G – Smart Test**

<input type="checkbox"/> <u>2G / 4G:</u>	<input type="checkbox"/> <u>3G / 4G:</u>
GSM and Basic Operations	SMS
SMS	3G Datacard
GPRS-EDGE	3G Handset
Steering of Roaming based on SIM OTA	Steering of Roaming based on SIM OTA
Steering of Roaming based on SS7	Steering of Roaming based on SS7
USIM-ME	USIM-ME
IoT eUICC	IoT eUICC
LTE Data	LTE Data
LTE Advanced	LTE Advanced
LTE Voice via CSFB	LTE Voice via CSFB
Speechcodecs & Ciphering	



34 1 Legacy / 4G / VoLTE – Smart Test

<input type="checkbox"/> <u>2G / 4G / VoLTE:</u> GSM and Basic Operations SMS GPRS-EDGE Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB Speechcodex & Ciphering	<input type="checkbox"/> <u>3G / 4G / VoLTE:</u> SMS 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB
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35 1 Legacy / 4G / 5G – Smart Test

<input type="checkbox"/> <u>2G / 4G / 5G:</u> GSM and Basic Operations SMS GPRS-EDGE Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB Speechcodex & Ciphering	<input type="checkbox"/> <u>3G / 4G / 5G:</u> SMS 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB
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36 1 Legacy / 4G / 5G / VoLTE – Smart Test

<input type="checkbox"/> <u>2G / 4G / 5G / VoLTE:</u> GSM and Basic Operations SMS GPRS-EDGE Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB Speechcodex & Ciphering Speechcodex EVS VoLTE	<input type="checkbox"/> <u>3G / 4G / 5G / VoLTE:</u> SMS 3G Datacard 3G Handset Steering of Roaming based on SIM OTA Steering of Roaming based on SS7 USIM-ME IoT eUICC LTE Data LTE Advanced LTE Voice via CSFB Speechcodex EVS VoLTE
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37 **4G / 5G – Smart Test**

Steering of Roaming based on SIM OTA	LTE Voice via CSFB
USIM-ME	5G Bearer
IoT eUICC	PAP/CHAP
LTE Data	SMS
LTE Advanced	

38 **4G / 5G / VoLTE – Smart Test**

Steering of Roaming based on SIM OTA	5G Bearer
USIM-ME	PAP/CHAP
IoT eUICC	SMS
LTE Data	VoLTE
LTE Advanced	Speechcodecs EVS
LTE Voice via CSFB	

39 **Automotive incl. VoLTE and eCall – Smart Test**

GSM and Basic Operations	LTE Data
SMS	LTE Advanced
GPRS-EDGE	LTE Voice via CSFB
3G Datacard	PAP CHAP
3G Handset	Speechcodecs & Ciphering
Steering of Roaming based on SIM OTA	Speechcodecs EVS
Steering of Roaming based on SS7	VoLTE
USIM-ME	IoT eCall
IoT eUICC	Customised test

40 **Router 2G / 3G / 4G / UI / WLAN – Smart Test**

GPRS-EDGE	LTE Advanced
3G Datacard	LTE Voice via CSFB
GSM and Basic Operations	USIM-ME
Steering of Roaming based on SIM OTA	IoT eUICC
Steering of Roaming based on SS7	SMS
USIM-ME	Router
IoT eUICC	WLAN
LTE Data	Customised test



Product Description – Add-ons and More

41 **VoLTE – Add-on**
VoLTE

42 **VoLTE Roaming – Add-on**
VoLTE customised to IoT

43 **eCall – Add-on**
IoT eCall

44 **From Cat 9 to xx – Add-on**
LTE Advanced

45 **eUICC-IoT Device – Add-on**
eUICC
