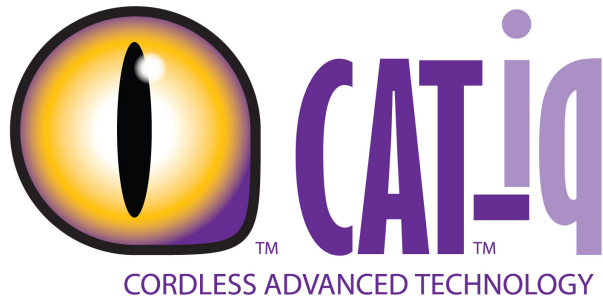


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CAT-iq at a Glance



Global Technology for Broadband Home Connectivity

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Broadband Technology New Services & Devices



CAT-iq A REGISTERED TRADEMARK IN 47 COUNTRIES WORLDWIDE

European Union: 25 countries

Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden

Additional Applications: 22 countries

Australia, Belarus, Bosnia-Herzegovina, Bulgaria, Canada, China, Japan, Croatia, Liechtenstein, Macedonia, Monaco, Montenegro, Norway, Romania, Russia, Serbia, Switzerland, Singapore, South-Korea, Turkey, Ukraine, USA



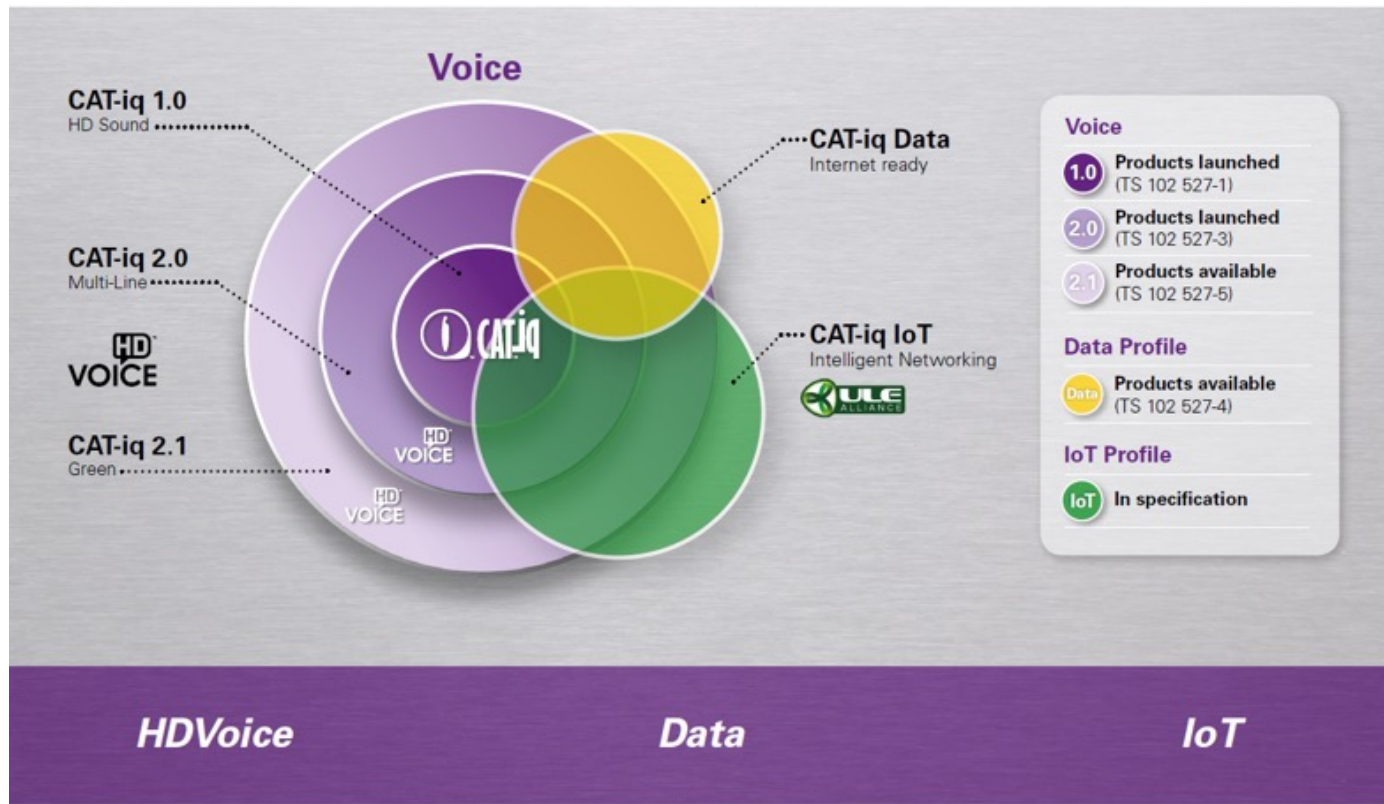
CAT-iq: Profile Update

- Some challenges with existing naming convention
 - CAT-iq evolved with new data oriented profiles as optional upgrades
 - Existing numbering scheme still causes confusion
 - The profile re-naming is intended to clarify the function of the voice and data profiles and their compatibility
- New profile names:
 - CAT-iq Data (formerly CAT-iq 3.0)
 - Including SUOTA (Software Upgrade Over The Air)
 - CAT-iq IoT (formerly CAT-iq 4.0)
 - Introducing the integration of CAT-iq and ULE support

Overview 2019



Profile Overview



CAT-iq Voice Profiles

- CAT-iq 1.0 “HD Voice”
 - Wideband Audio
 - Display of Caller ID, Caller Name
- CAT-iq 2.0 “Multi-Line”
 - Wideband Audio
 - Display of Caller id, Caller Name
 - Shared calls lists
 - Family phonebook
 - Multiple lines handling
 - Parallel Calls(hold, waiting, 2nd call)
 - Call forwarding
 - DTMF and Tones
 - Support for Headset
 - Easy PIN code registration
 - Easy pairing registration
 - Handset location
 - Event Notification
 - Time synchronization
- CAT-iq 2.1 “Green”
 - 3-party conference call
 - Intrusion call
 - CLIR
 - Call transfer
 - Answering Machine control (PP)
 - Enhanced Security
 - ‘Green’ Power Saving Aspects
 - Diagnostics features
 - Recommended Tones (optional)
 - Handset Capability Enquiry
 - Support Personal Phonebook in HS (Opt.)
 - SMS (Optional)





CAT-iq Data Profiles

- Introducing Optional Upgrades: CAT-iq (Data and IoT)
- CAT-iq also provides optional upgrades for handsets or sensors as well as fixed parts.
- CAT-iq Data (formerly 3.0)
 - SW Upgrade over the air(SUOTA) and,
 - Light data support for additional data services such as Http based applications
- CAT-iq IoT (formerly 4.0): Extended data services
 - Bridging Sensor and Voice worlds
 - Integrated CAT-iq and ULE Gateway support
 - Mechanism to send status and control messages from sensor to handset and vice versa



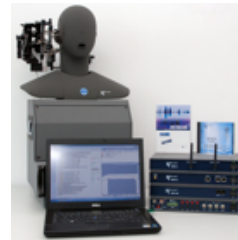
CAT-iq 2.0 Certification Test Equipment

CAT-iq
Certification
Program

Interoperability
Test
(incl. GAP)

RF Test
(incl. long slot)

Acoustic Test



CAT-iq 2.0 Protocol Tester EU/US photo

Hardware: DA1220(EN/US)
Identno. 1220.2200.20

Release V1.72
Manufacturer: DOSCH&AMAND (Germany)

www.dosch-amand.com

CAT-iq 2.0 RF Tester photo

RTX2012 HS
Firmware: V.9.58 or newer

Software: V.3.1.0 or newer
Manufacturer: RTX (Denmark)

www.rtx.dk

CAT-iq 2.0 Audio Test System photo

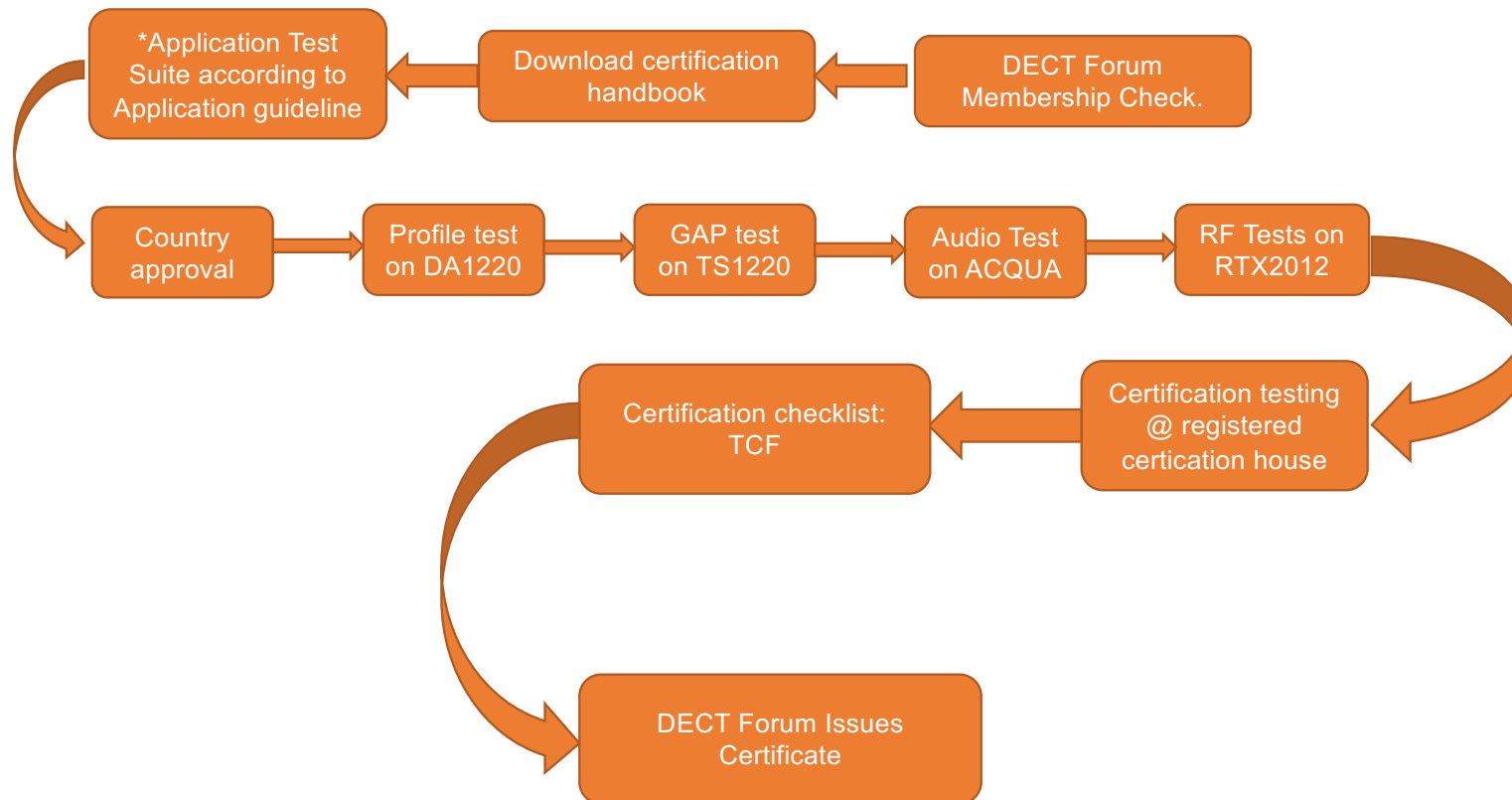
ACQUA Compact CAT-iq 2.0 Test System
Code: 6860.17

Manufacturer: Head Acoustics (Germany)

www.head-acoustics.de



Steps to CAT-iq 2.1 Certification



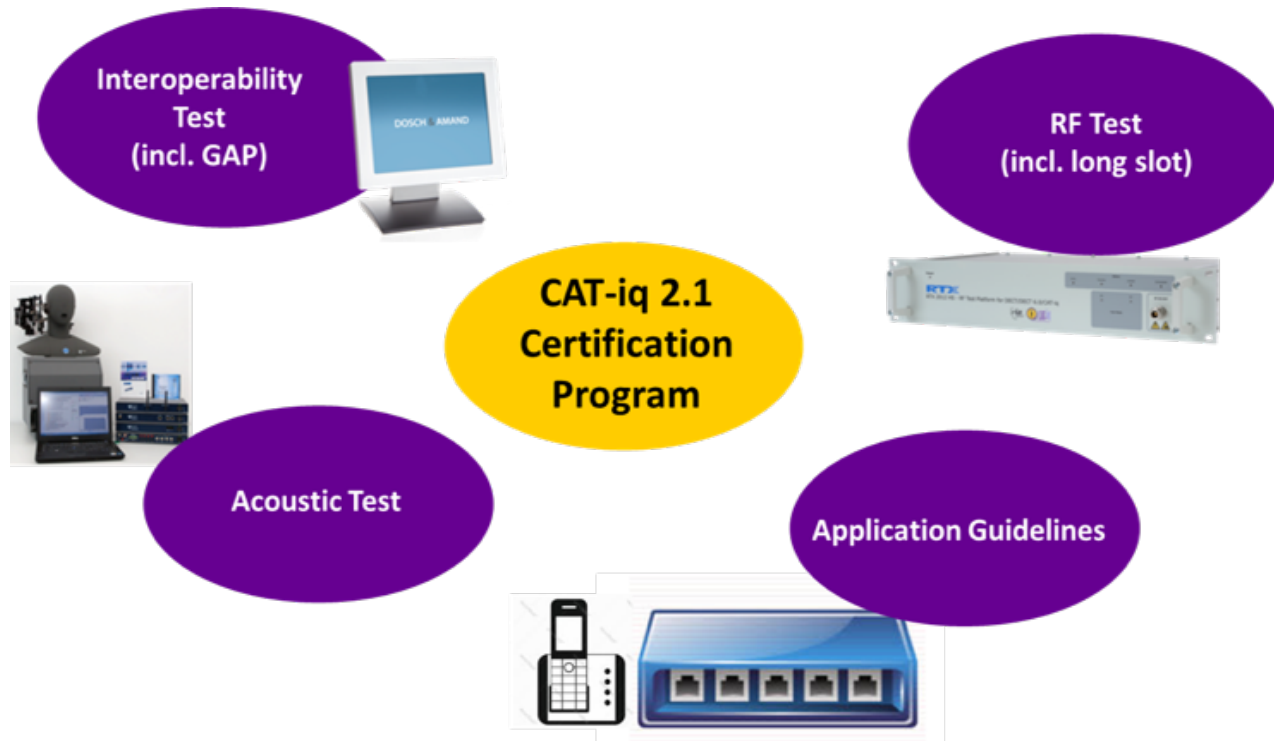
**** It is recommended to perform Application tests before other certification tests***



CAT-iq Application Guidelines

- Application Guideline has been generated from a series of tests between certified CAT-iq 2.0 devices
- For vendors and end customers alike this represents real value-add in the form of improved usability in a retail handset market
- Manufacturers will receive implementation guidelines that ensure an optimal CAT-iq user experience
- An Application Test Suite has been derived from the guideline and will become an additional part of the CAT-iq certification program
- CAT-iq 2.1 certification will include the application test suite as part of its process
- Test Laboratory will issue certification report as previously for the Protocol/RF and Audio
- Application tests will be run on a test bed basis, An additional test report will be issued for Application Testing
- Both test reports will be required to confirm CAT-2.1 certification listing

CAT-iq 2.1 Certification Test Equipment



<p>CAT-iq 2.1 Protocol Tester EU/US Hardware: DA1220(EN/US)</p> <p>Identno. 1220.2200.20 Release V1.8</p> <p>Manufacturer: Dosch&Amand (Germany) www.dosch-amand.com</p>	<p>CAT-iq 2.0 RF Tester Hardware: RTX2012 HS</p> <p>Firmware: V.9.58 or newer Software V3.1.0 or newer</p> <p>Manufacturer: RTX Denmark www.rtx.dk</p>	<p>CAT-iq 2.0 Audio Test System Hardware: ACQUA Compact CAT-iq 2.0 Test System</p> <p>Code 6860.17</p> <p>Manufacturer: Head Acoustics (Germany) www.head-acoustics.de</p>
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Certification Checklist

Recommended Certification checklist:

- ✓ Pre-condition of DF full membership (supplier and chain)
- ✓ Product has achieved Country approval? CE passed?
- ✓ GAP test: (optional In house) Has product ensured GAP-compliance on official tester?
- ✓ protocol test: (Optional in house) Has product been tested on official CAT-iq tester? (all mandatory features supported?)
- ✓ Audio test: Have all audio tests been carried out?
- ✓ Have all required RF tests been carried out?
- ✓ Application Test Suite (incl. Report)

Certification tests:

- ✓ Arrange certification test with official certification house (suggest 1 week for testing and min. 1 week for certification. Cost estimate @ test houses)

Certification:

- ✓ After successful test result, cert body will validate TCF/test reports and ensure all pre-conditions met
- ✓ Assuming all conditions are met, certification house applies to DECT Forum for certification.
- ✓ DECT Forum issues Certificate upon license fee payment
- ✓ Product listing added to DF website



Regional Variants

- Acoustic & protocol testing will use the same test setup as for CAT-iq 2.0
- Acoustic Requirements
 - including TBR 10 – using HATs methodology
- Protocol Requirements
 - PC-based tester environment will be provided (incl. TBR 22 tests)
 - Scripting mechanism, with the ability to select appropriate tests
- The RF requirement will change
 - testing for long slot operation, and regional variant (different RF tester option)
- New products which have not previously been certified will have to run for certification process with appropriate certification fee
- Products which have already been certified for European DECT will be able to apply for a re-testing license. In this case, will be required to re-run only the RF test component
- Regional variant available for DECT 6.0 for US/Canada
- Future anticipated variants for J-DECT



HD Voice Logo License

- HD voice is a logo, licensed by GSMA, with the intention of supporting one HD Voice logo, that can become a universally recognised symbol which easily identifies HD Voice enabled services and devices, across both mobile and fixed networks.
- The DECT Forum has entered into a cooperation agreement with the GSM Association (GSMA), where CAT-iq 2.0 certified devices will be able to benefit from the use of the GSMA HD Voice logo.
- The GSMA license program, through its technical annex, will refer to CAT-iq 2.0 specifications as minimum requirements for fixed HD devices
- FULL DECT Forum members, who have CAT-iq 2.0 certified products can apply to the GSMA for use of the logo via the license agreement. There is no additional fee applied. Relevant documents can be found [here](#):
 - The Minimum Requirements document
 - The Licence Agreement
 - The HD Voice Logo Usage Guidelines and FAQ





CAT-iq More Information

- Other useful documents:
 - Certification Overview
 - Certification Q & A
 - Enhanced Voice Services
 - CAT-iq: Creating Value with Certification. 2019

- For direct enquires:

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- Please visit the DECT Forum website: www.dect.org
- Follow DECT Forum on: *@DECT_Forum (Twitter) and LinkedIn*

