

# Program Management Document

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CTIA Certification Program  
1400 16<sup>th</sup> Street, NW, Suite 600  
Washington, DC 20036

e-mail: [certification@ctia.org](mailto:certification@ctia.org)  
Telephone: 1.202.785.0081

[www.ctia.org/certification](http://www.ctia.org/certification)

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## 1. Overview

The purpose of the CTIA Certification Program is to verify conformance of wireless products to defined industry standards. Verification is accomplished by performing an independent evaluation utilizing criteria defined by the wireless industry.

The benefits of CTIA Certification include:

- Providing assurance to carriers that products being purchased meet minimum performance requirements defined by the industry
- Speeding time-to-market for new products by providing manufacturers with industry-wide common baseline performance requirements to which new products can be tested.

The CTIA Certification Program is applicable to CDMA (Code Division Multiple Access) wireless products operating in any of the North America frequency bands:

- 800/850 MHz
- 1900 MHz
- 1700/2100 MHz

Certification of GSM and UMTS products operating in the above frequency bands is governed by the PTCRB ([www.ptcrb.com](http://www.ptcrb.com)).

Products that may be certified include, but are not limited to, portable phones, mobile (vehicle installed) phones, PDAs, wireless data devices, fixed wireless devices, PCMCIA cards, modules and devices with embedded modules.

The CTIA Battery Certification Program is a separate program whose purpose is to verify conformance of batteries to IEEE Std 1725<sup>TM1</sup>-2006 ("IEEE 1725"), Standard for Rechargeable Batteries for Cellular Telephones.

The CTIA *Bluetooth*<sup>®2</sup> Compatibility Certification Program is a separate program whose purpose is to evaluate the implementation, integration, and interaction between two *Bluetooth* devices that support complementary profiles and roles; one of which is a mobile phone.

### 1.1. Document Scope

This Program Management Document (PMD) defines the requirements and processes of the CTIA Certification Program. For product manufacturers, this document describes the requirements for obtaining and maintaining CTIA Certification and the process to apply for certification. For test laboratories, this document describes the requirements to become a

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<sup>1</sup> IEEE Std 1725 is a registered trademark of the Institute of Electrical and Electronics Engineers, Inc.

<sup>2</sup> *Bluetooth* is a registered trademark of the Bluetooth SIG, Inc.

CTIA Authorized Testing Laboratory (CATL) and the procedures to evaluate manufacturers' products.

A separate document, the Battery Program Management Document, defines the requirements and processes of CTIA's Battery Certification Program.

## 1.2. Definition of Terms

"Product(s)", "unit(s)" or "mobile station(s)" represent a wireless device operating in the frequency bands of 800/850 MHz, 1900 MHz or 1700/2100 MHz.

"Modules" are defined as devices requiring integration into a final consumer device. Is it optional, but recommended, that the module obtain certification. The final integrated consumer device will require certification. The advantage of obtaining certification of the module itself is to provide an assurance to the integrator that the module meets CTIA's requirements. Integrated devices incorporating certified modules may then be certified using a reduced testing process (see Section 2.14) and a reduced certification fee.

"Integration" refers to a device containing a certified module.

"Test Plan" refers to the current revision of the applicable CTIA Certification Program Test Plan.

Converged Device refers to a Product with Wi-Fi technology.

## 1.3. Roles and Responsibilities

This section describes the roles and responsibilities of the parties involved with the CTIA Certification Process and mentioned throughout this document.

### 1.3.1. CTIA

As owner of the CTIA Certification Program, CTIA defines the requirements for CTIA Certification, administers the overall program and awards CTIA Certification to the manufacturer.

### 1.3.2. CTIA Authorized Testing Laboratories

Testing laboratories must adhere to the CATL Requirements as described in the *CATL License and Service Agreement*. Interested laboratories may contact the CTIA Certification Program staff to obtain a copy of this agreement. Laboratory authorization requirements are described in Section 6 of this document. CATLs have the authority to perform product certification testing for the CTIA Certification Program and must follow the procedures described in Section 2 of this document.

Each CATL shall appoint a Primary Point of Contact (PoC) to interface with CTIA. The PoC is responsible for approving who within their company shall be given access to the certification database and for informing CTIA when individual user access should be disabled (for example, when a user leaves the company).

### 1.3.3. Manufacturers

Manufacturers desiring CTIA certification of a product must follow the procedures described in Section 2 of this document. Product certification testing may be conducted at any of the available CATLs per the manufacturer's choice.

Each manufacturer shall appoint a Primary Point of Contact (PoC) to interface with CTIA. The PoC is responsible for approving who within their company shall be given access to the certification database and for informing CTIA when individual user access should be disabled (for example, when a user leaves the company).

### 1.4. Award of the CTIA Certification Seal

Award of the CTIA Certification Seal solely constitutes CTIA's judgment that a product has met or exceeded the requirements specified in this document. Award of the CTIA Certification Seal is not an endorsement of a product. Carriers and consumers should procure products best meeting their needs and should make their own determination as to the importance of selecting products that are CTIA Certified.

### 1.5. Is CTIA Certification Mandatory?

The CTIA Certification Program is a voluntary program operating at the request of and for the benefit of CTIA members. CTIA Certification is not a requirement for sale of a product in North America. The Program is developed by CTIA with the assistance of industry advisory groups comprised of representatives from the wireless carriers, product vendors, testing laboratories and test equipment vendors.

### 1.6. Eligible Participants

All manufacturers may participate in the CTIA Certification Program. CTIA membership is not required to be a program participant.

## 2. Program Procedures

### 2.1. General

To encourage the flow of information and expedite the certification process, each manufacturer shall designate a principal contact to work with the CTIA Certification Program staff.

The CTIA Certification Program staff will be the liaison between laboratories, manufacturers, and CTIA. All coordinating issues should be directed to the Program staff.

## 2.2. Test Facilities

Multiple laboratories are authorized to perform certification testing for the CTIA Certification Program. Labs are authorized per CTIA Certification Test Plan.

A current listing of CATLs can be found at [www.ctia.org/certification](http://www.ctia.org/certification).

Manufacturers may utilize CATLs for pre-certification testing as per Section 2.3 of this document.

## 2.3. Use of CTIA Certification Test Plans

As noted in the copyright statement on each of CTIA's certification test plans, only CATLs are permitted to use the test plans for commercial testing purposes. No other test labs are permitted to use these test plans. The test plans may not be altered or reproduced in any way without prior permission from CTIA. No portions of the test plans may be used in other documents without prior permission from CTIA.

CATLs shall refer to the *CATL License and Service Agreement* for the terms and conditions under which the certification test plans may be used.

For CTIA certification, the test plans must be run in their entirety. No tests shall be omitted. The only exception to this rule is in cases where no testing is required (for example, see Section 3.3 of this document), but the manufacturer requests the CATL to run portions of a test plan; in this case, the CATL shall prominently place an explanation on the cover of the test report.

Use of CTIA certification test plans for pre-certification testing is permitted under the following conditions. The CATL shall inform CTIA of the manufacturer name and model number of the device to be tested by sending an e-mail to [certification@ctia.org](mailto:certification@ctia.org). The CATL shall prominently label on the cover of the test report: "Pre-Certification Test Report. For [manufacturer name] internal use only." There is no CTIA certification fee for pre-certification testing. Within a reasonable period of time, the manufacturer is expected to submit a certification request following the procedures in Section 2.5 of this document.

Use of CTIA certification test plans for purposes outside of CTIA Certification must be pre-approved by CTIA. The CATL shall submit a request via CTIA's online certification database at <https://cpo.ctia.org/> by selecting Non-Certification Testing, Submit Request. If approved, the CATL shall prominently label on the cover of the test report: "Test run with permission from CTIA. Product was not submitted for CTIA Certification".

## 2.4. Certification Fees

Manufacturers shall pay a certification fee to CTIA (see **APPENDIX C: CTIA Certification Fees**) and shall inform CTIA if a P.O. number shall be noted on CTIA's invoice to the manufacturer. Manufacturers shall also pay a certification testing fee to each CATL utilized for certification testing. Certification testing fees will be independently determined by each CATL.

## 2.5. Manufacturer Request for Certification

Manufacturers shall submit certification requests via CTIA's online certification database at <https://cpo.ctia.org/>. User login accounts may be requested by selecting "I need a user name and password" on the login page. The request must be approved by the company's Primary PoC (see Section **1.3.3** of this document).

There are three categories of certification requests:

- Initial Certification Request – The first request for a unique product model name/number
- Variant Certification Request – See definition of product variant in Section **2.13**
- ECO Certification Request – A request to certify a hardware or software update of a previously submitted product

The manufacturer shall select from the available CATLs and request a test start date.

CTIA will invoice the manufacturer for the CTIA certification fees as described in **APPENDIX C: CTIA Certification Fees**.

## 2.6. Laboratory Acceptance of Certification Testing Request

Laboratories will receive certification testing requests via CTIA's online certification database at <https://cpo.ctia.org/>. An e-mail notification will be sent to the laboratory's designated point(s) of contact when a request has been submitted. The laboratory will log into the database to review and accept/reject the request.

Database user login accounts may be requested by selecting "I need a user name and password" on the login page. The request must be approved by the company's Primary PoC (see Section **1.3.2** of this document).

Certification testing may begin only after the laboratory has accepted the request via the online database.

## 2.7. Acquisition and Ownership of Test Samples

Manufacturers shall submit to the CATL, free of charge, those items listed in **APPENDIX B: Certification Testing Checklist**. Those items shall be sent only after the certification request has been submitted via the online database as described in Section **2.5**.

After testing is completed, the CATL shall return all products to the manufacturer, following the manufacturer's return procedure.

## 2.8. Laboratory Test Procedures

Certification testing shall be conducted per the CATL's test procedures approved by the CTIA Certification Program. Such test procedures shall provide specific and detailed hardware, software, laboratory techniques, test methodology, and criteria used during the product evaluation.

The test procedures shall include a detailed diagram of the test equipment hardware and software configuration used during product evaluation, and a step-by-step test execution procedure.

The test station shall be calibrated on a routine basis as required.

## 2.9. Test Failures

Failure during the tests may occur as:

- Failure to Meet a Required Parameter/Specification

If this condition is observed, the laboratory shall make a reasonable check of the unit, and/or second unit, to ensure that a true failure has occurred. If a true failure has occurred, the failure shall be reported in the Test Report. If the unit under test remains functional, testing may continue at the lab's discretion. The second test sample may be substituted for the remaining evaluation when reasonable.

- Serious Failure

This shall include failure to meet the recommended minimum performance criteria for digital parameters, function, physical failure, burning, etc. If such failures occur, the evaluation shall be stopped and the second test sample substituted to verify whether a true failure had occurred.

Verified failures of any type will be noted in the Test Report. The CATL shall not make repairs or alterations to the unit unless specific instruction to do so is received from the manufacturer with CTIA approval. Such work is not considered within the scope of certification testing and may incur additional costs.

## 2.10. Laboratory Reporting

Upon completion of the evaluation, the CATL shall log into CTIA's online certification database and upload the final test report.

Test Reports shall include the following information at a minimum. Additional information may be provided at the laboratory's discretion.

Executive Summary stating:

- 1) Manufacturer
- 2) Mobile Model Number
- 3) Mobile ESN or MEID
- 4) Mobile Hardware Version
- 5) Mobile Software Version
- 6) FCC ID Number

- 7) Test execution date(s)
- 8) Test Channels/Frequencies
- 9) Relevant Industry Standard(s) & Version(s)
- 10) Test plan version
- 11) Test Equipment Configuration Version
- 12) Summary of Test Results
- 13) Pass/Fail Recommendation
- 14) Person(s) who conducted tests
- 15) Contact point

Detailed test results for each test conducted including:

- 1) Pass/Fail Recommendation
- 2) Section of Relevant Industry Standard
- 3) Test Execution Date & Time
- 4) Test equipment configuration
- 5) Test Definition
- 6) Test Methodology
- 7) Test Parameters & Criteria
- 8) Test Results (measured values for each parameter, log files, and graphs if applicable)
- 9) Comments
- 10) Signature or initials of person(s) performing the test

The Certification Test Report will not provide any analysis of why the unit might have failed any test and will not suggest any modifications to correct the problem.

The product must pass all tests in order to be eligible for certification. Some tests, as indicated in the Certification Test Plans, may be informational only and therefore there are no pass/fail criteria for these tests.

Test reports and all supporting documentation will be retained by CTIA for a maximum period of 5 years after which all specific test reports and documentation will be destroyed.

Unless authorized (in writing) by the manufacturer, test results will be maintained in confidence by CTIA and the CATL. There will be no public notification of the failure of a product to pass CTIA Certification testing.

## 2.11. Award of Certification

Upon completion of the following items, the product will be certified:

- Final test results, indicating the product has passed all required tests, from each CATL conducting testing on the product
- All required documents and declarations from the manufacturer
- Certification of the parent product, in the case of Variant Certification Requests and ECO Certification Requests
- Payment of the CTIA certification fees, in the case of Initial Certification Requests and Variant Certification Requests
- Fully executed License Agreement (See [APPENDIX A: License Agreement](#))

Manufacturers are encouraged to provide to CTIA a production unit of the Certified product.

## 2.12. Period of Certification

Provided that all terms defined in this document are met, CTIA Certification is valid the life of the product. In order to retain CTIA Certification, the manufacturer must notify CTIA of each significant hardware or software change made to the certified product. Refer to Section [2.15](#) for further details. Upon review of the changes, the CATL may require the product to be reevaluated (fully or in part) in order to retain CTIA Certification.

CTIA may randomly retest previously certified production units at its expense. If units are found to be no longer in compliance with the certification requirements, CTIA will immediately notify the product manufacturer. Manufacturers may be given a maximum of 30 days to address and resolve the items that are found no longer compliant. However, all terms and conditions are at the discretion of CTIA.

## 2.13. Certification of Product Variants

A product variant is defined as a product that is electrically and mechanically similar to another product ("parent" product) that has been submitted for certification. The variant product has a different model number than the parent product. Manufacturers may request that a product submitted for certification be recognized as a product variant. The CTIA Certification Fee (see [APPENDIX C: CTIA Certification Fees](#)) is discounted for a product variant. The CATL will determine the amount of certification testing required, and the corresponding certification testing fees. If there are certification testing requirements currently in place that were not in place when the parent product was certified, the variant will be tested to those requirements.

Variant status will be granted only if a sub-set of full certification testing is required or if no testing is required. Products that require full certification testing will be recognized as Initial requests (see Section 2.5)

A product variant must possess the same FCC ID as the parent product, except in cases where no tests defined in CTIA Certification Program Test Plans are impacted. The CATL will determine whether any such tests are impacted.

No testing will be required if the variant is a model name/number change only.

The certification award for a product variant will identify the parent device upon which variant status is based. Expiration or revocation of the parent certification also terminates the variant certification.

#### 2.14. Certification of Modules and Integrations

CDMA Modules and Integrations are certified via specific test requirements as described in the CDMA Certification Forum™<sup>3</sup> Certification Test Plan for cdma2000 Mobile Stations – Laboratory (CCF-L Test Plan), which is referenced in the CTIA Test Plan for CDMA Mobile Stations.

The certification fee for modules is the same as for other devices. Modules may be submitted as Initial certification requests or variant certification requests.

The certification fee for integrations is a reduced fee as described in [APPENDIX C: CTIA Certification Fees](#). Integrations may only be submitted as Initial certification requests.

#### 2.15. Notification of Engineering Changes (ECOs)

In order to retain certification, the manufacturer shall notify CTIA of each Engineering Change Order (ECO), identifying a change in the hardware (HW) or software (SW), to the certified product. The notification shall be made via submittal of an ECO Certification Request through CTIA's online certification database, as described in Section 2.5.

The CATL will determine whether any certification testing is required and the corresponding certification testing fees. If there are certification testing requirements currently in place that were not in place when the parent product was certified, those tests will be conducted only if the CATL determines that the modifications may impact the results of those tests.

#### 2.16. Certification of Re-Labeled Products

A re-labeled product is defined as a product that is identical to a currently certified product, but has a different manufacturer name and model number.

The re-labeling manufacturer may certify a re-labeled product by entering the product into CTIA's online certification database as an Initial certification:

- The re-labeled manufacturer name and model number shall be entered

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<sup>3</sup> CDMA Certification Forum is a registered trademark of the CDMA Certification Forum, Inc.

- The CATL used for the originally certified product shall be chosen
- The CATL shall upload the test reports of the originally certified product along with two additional documents:
  - A Product Equality Letter from the re-labeling manufacturer. This letter shall state that the re-labeled product is the same as the originally certified product (referenced by manufacturer name and model number as it appears in CTIA's online certification database) and that no changes have been made other than the manufacturer name and model number. The letter shall be signed and dated.
  - An Authorization of Use Letter from the manufacturer of the originally certified product. This letter shall state that the manufacturer of the originally certified product allows the CATL to use the test reports from this product for certification of the relabeled product. The letter shall be signed and dated.

The certification fee is the same as that of a Variant request.

## 2.17. Request For De-Certification

Manufacturers may at any time request de-certification of a Certified product. CTIA will then terminate the product's certification and remove the product from the list of CTIA Certified products (see Section [7.2](#)).

Manufacturers may wish to de-certify a product in order, for example, to remove a product no longer being manufactured from the list of CTIA Certified products. Consumers and carriers utilize this list to make product-purchasing decisions. It is therefore critical that this list be up-to-date and not reference products no longer available in the marketplace.

The process for requesting de-certification is as follows:

- 1) The manufacturer shall submit to CTIA a written request to decertify the product
- 2) The product shall be referenced by its product name and FCC ID as indicated in the CTIA Certification License Agreement or Certification Award
- 3) The request shall be submitted via company-sponsored e-mail or via letter on company letterhead
- 4) The de-certification shall become effective on the first of the month following the request

CTIA may query the manufacturer as to the purpose of removing or de-listing a product; and shall keep this information in confidence.

CTIA may from time-to-time, during its review of the certification list, query the manufacturer as to the market availability of a Certified product(s).

## 3. Evaluation Criteria

### 3.1. Effective Date

The applicable certification criteria for a given product will be those in effect on the date the certification request is submitted via CTIA's online certification database as described in Section 2.5. Should the criteria change while the product is undergoing certification testing, the manufacturer may choose to utilize the new criteria.

The CTIA Certification Test Plans referenced in this section may be downloaded from CTIA's web site at [www.ctia.org/certification](http://www.ctia.org/certification). The latest revision (found on this web site) will always be used for certification testing. All testing must be performed at a CTIA Authorized Testing Laboratory.

### 3.2. Parametric & Protocol Testing

All products must be tested to CTIA's Test Plan for CDMA Mobile Stations.

### 3.3. Over-the-Air Performance Testing

All products must be tested to CTIA's Certification Test Plan for Mobile Station Over the Air Performance. The applicability of this test is as follows:

#### Testing Required – Both Head-Adjacent and Free-Space

- Devices supporting usage against the head

Note: If a device has multiple configurations in which to make a call, each configuration shall be tested (e.g., a slide phone shall be tested in both slide open and slide closed positions). Also, the manufacturer shall submit to the CATL a declaration of the preferred mode as referenced in the test plan.

#### Testing Required – Free-Space Only

- Fixed wireless, telemetry, telematics and data-only devices with an integrated, non-removable antenna attached to the device
- Fixed wireless, telemetry, telematics and data-only devices with a removable antenna physically attached to the device
- Fixed wireless, telemetry, telematics and data-only devices with a removable antenna connected directly to the device via an RF transmission line (such as a coaxial cable) less than 20 cm in length
- Large Devices – These would include devices such as parking meters, vending machines etc.

Physically large or heavy devices that cannot be placed in an OTA chamber, might be tested in a configuration that represents the actual usage (e.g. antenna mounted on a ground plane 2' X 2' or other material used on the actual device)

#### Testing Not Required

Note: The lab shall upload a document into the CTIA certification database test results file stating that the product falls into one of these categories. The manufacturer shall consult with the carrier(s) to which they intend to sell the product to determine whether carrier-specific testing may be required.

- Fixed wireless, telemetry, telematics and data-only devices without a defined antenna
- Fixed wireless, telemetry, telematics and data-only devices with a removable antenna that is connected to the device through an RF transmission line (such as a coaxial cable) greater than 20 cm in length and not physically attached to the host device
- Modules
- PCMCIA cards and ExpressCards
- USB modems
- Variants or re-branded devices having no altered RF performance from their parent device
- Laptop/notebook computers with cellular capability

For ECOs, testing must be conducted if the changes impact any of the following areas:

- Hardware design
- Calibration data/procedure
- Maximum output (radiated) power

If the changes do not impact these areas AND the conducted RF measurement has not changed +/- 1 db, then Over the Air Performance Testing on the ECO is not necessary.

#### 3.4. Wi-Fi Testing

Products that incorporate Wi-Fi technology (“Converged Devices”) shall be tested to the CTIA/Wi-Fi Alliance Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices. The manufacturer shall check the Wi-Fi feature when submitting the certification request via CTIA’s online certification database and select a CATL for such testing.

#### 3.5. Hearing Aid Compatibility (HAC) Testing

CDMA handsets that are hearing aid compatible may optionally be tested to CTIA’s Certification Test Plan for Hearing Aid Compatibility. This is not a requirement for certification. Should a manufacturer choose to have the handset tested to CTIA’s

Certification Test Plan for Hearing Aid Compatibility, the manufacturer shall check the HAC feature when submitting the certification request via CTIA's online certification database and select a CATL for such testing.

### 3.6. FCC Compliance & RF Exposure

Manufacturers shall comply with the relevant Rules and Regulations of the FCC, and the FCC guidelines for RF exposure to obtain CTIA Certification.

Manufacturers shall obtain an FCC Grant of Equipment Authorization and provide to CTIA the FCCID on that grant.

### 3.7. Air Interface Compliance (Declaration)

Manufacturers shall provide a manufacturer declaration stating that the product submitted for certification fully complies with industry standard IS-2000.

### 3.8. ESN or MEID Security (Declaration)

Either an ESN (Electronic Serial Number) or MEID (Mobile Station Equipment Identifier) Security Declaration shall be provided.

#### 3.8.1. ESN

The ESN requirement is derived from industry standard *TIA/EIA-553-A*, Section 2.3.2, and FCC Rules and Regulations Part 22.919.

The ESN shall be factory set and shall not be alterable, capable of duplication or removable outside of a manufacturer owned facility.<sup>4</sup> Any attempt to remove, tamper with, or change the ESN host component or operating system as originally programmed by the manufacturer shall render the unit inoperative.

Where a dedicated ESN device is utilized it shall be permanently<sup>5</sup> attached to the device that reads the ESN and the path to the device shall be secured. The device shall not be removable and its pins shall not be accessible.

Where the ESN resides with other memory, the encoding technique shall include multiplication or division by a polynomial, cyclic coding, or the spreading of ESN bits over non-sequential memory locations.

Unauthorized alteration of the product's operating software shall render the product inoperable.

Manufacturers shall provide a manufacturer declaration detailing the steps taken to comply with IS-2000 (Serial Number). Please describe the methods employed to ensure physical ESN security and firmware methods used to ensure ESN security.

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<sup>4</sup>The manufacturer shall be responsible for the security of its facilities.

<sup>5</sup>Permanently is defined as potted, epoxied, or soldered.

### 3.8.2. MEID

The MEID requirement is derived from industry standard 3GPP2 C.S0072, Section 2.1.1.

The MEID shall be factory set and shall not be alterable, capable of duplication or removable outside of a manufacturer owned facility.<sup>4</sup> Any attempt to remove, tamper with, or change the MEID host component or operating system as originally programmed by the manufacturer shall render the unit inoperative.

Where a dedicated MEID device is utilized it shall be permanently<sup>5</sup> attached to the device that reads the MEID and the path to the device shall be secured. The device shall not be removable and its pins shall not be accessible.

Where the MEID resides with other memory, the encoding technique shall include multiplication or division by a polynomial, cyclic coding, or the spreading of MEID bits over non-sequential memory locations.

Unauthorized alteration of the product's operating software shall render the product inoperable.

Manufacturers shall provide a manufacturer declaration detailing the steps taken to comply with 3GPP2 C.S0072. Please describe the methods employed to ensure physical MEID security and firmware methods used to ensure MEID security.

### 3.9. A-Key Security (Declaration)

The A-Key security requirement is derived from the TIA Ad Hoc Authentication Group (AHAG) and the CTIA Fraud Technical Advisory Group (FTAG). Security procedures are also derived from the TIA/EIA-553-A, Section 2.3.2, and FCC Rules and Regulations Part 22.919.

An A-Key value shall not be visible/readable through a mobile's display, or electronically removable through a mobile's data port.

An A-Key shall adhere to the same tampering guidelines as defined for ESN security.

A secure method of transferring a mobile's manufacturer assigned A-Key to the mobile's Home Location Register/Authentication Center (HLR/AC) shall be observed.

A product's Shared Secret Data (SSD) value shall not be accessible to an external device; visible through a mobile's display; or electronically removable or programmable through a mobile's data port.

Manufacturers shall provide a manufacturer declaration detailing the methods employed to ensure physical A-Key security and firmware methods used to ensure A-Key security.

### 3.10. Protection Against False Transmission (Declaration)

Manufacturers shall provide a manufacturer declaration describing the method used to comply with IS-2000 (Protection Against False Transmission).

### 3.11. User's Manual

A user's manual/guide for the product shall be supplied. A draft version is acceptable.

## 4. Supplier Best Practices

The wireless industry has developed a set of "Best Practices" for suppliers of wireless products, which can be found at [www.ctia.org/certification](http://www.ctia.org/certification). While manufacturers are encouraged to utilize these best practices, they are not required for a product to be certified.

## 5. CTIA Certification Seal

When CTIA Certification is awarded to a specific product, the manufacturer is entitled (in accordance with the License Agreement – refer to **APPENDIX A: License Agreement**) to display on that product the CTIA Certification Seal:



Digital files for reproduction of the seal will be supplied to manufacturers upon request.

### 5.1. Use of the CTIA Certification Seal

For certified products, use of the seal is optional. However, when used, the seal must be displayed as a physical Seal affixed to a certified product and/or its packaging.

Before displaying the Seal, manufacturers must sign and return a copy of the CTIA License Agreement.

The Seal may be used in the manufacturer's advertising and product promotion material.

Manufacturers must discontinue use of the Seal upon expiration of the certification period.

The Seal is not transferable.

The CTIA Certification Program staff will monitor the use of the CTIA Certification Seal by manufacturers.

### 5.2. Labeling of Certified Products

Manufacturers are encouraged to display the CTIA Certification Seal on products in one of the following ways:

- 1) Directly to the product or handset by painting masking or impressing into the product's case or housing.
- 2) By means of imprinting on the product's data plate (FCC Label).
- 3) Directly on the product's packaging and on the product's owner's manual.

The Seal may be located anywhere on the product, including the battery compartment, but cannot be affixed to the battery or to the battery charger.

For transportable (bag-phone) and vehicle-installed units, the Seal may be part of the handset or control head data plate or may be affixed anywhere on the handset or control head. However, the Seal may not be affixed to a transportable's battery or battery charger.

Manufacturers are encouraged to display the CTIA Certification Seal, in color, on the product's packaging.

The Seal shall be acquired or developed by the manufacturer. Certification Seals will not be supplied by CTIA. Artwork for the CTIA Certification Seal is available from the CTIA Certification Program staff.

There are no specific size requirements or restrictions for labeling. The Seal shall be large enough that the text is legible and the size shall be appropriate for the product or packaging on which it is displayed.

Upon expiration or revocation of certification, the manufacturer shall discontinue display of the CTIA Certification Seal from all products and their packaging.

## 6. Laboratory Authorization Requirements

### 6.1. Overview

All CTIA Authorized Testing Laboratories (CATLs) must be accredited under ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories", with the scopes of accreditation matching the scopes of certification testing the CATL is authorized to conduct. The ISO/IEC 17025 accreditation must be granted by an ILAC (International Laboratory Accreditation Cooperation) member accreditation body. The purpose of this accreditation is: (1) to ensure labs have a quality system and are technically competent to perform wireless testing, and (2) to ensure ongoing lab compliance with Certification Program requirements and industry standards.

CATLs must also complete an on-site audit by a CTIA-appointed Subject Matter Expert (SME).

## 6.2. ISO/IEC 17025 Accreditation Scopes

The ISO/IEC 17025 accreditation program scopes parallel the CTIA Certification Program test plans and will be identified on the accreditation certificate as:

- CTIA CDMA Mobile Station Test Plan
- CTIA Test Plan for Mobile Station Over the Air Performance
- CTIA Test Plan for Hearing Aid Compatibility
- CTIA/Wi-Fi Alliance Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices

These scopes will not reference the revisions or published dates of the test plans. CTIA will depend on ISO/IEC-17025 §5.4.2 to ensure labs always use the latest revision of the test plans.

The lab must be able to perform all tests in each test plan for the scopes to which it is accredited. Any tests the lab is unable to perform itself must be sub-contracted, per ISO/IEC 17025 §4.5 guidelines. Proof of such subcontracting agreement must be provided to CTIA.

## 6.3. Assessment Process

Following is the process for a lab to become recognized as a CATL:

- 1) The lab shall submit an application package to CTIA consisting of:
  - a) Identification of the accreditation body to be used for ISO/IEC 17025 accreditation
    - If the lab is already accredited by this accreditation body (for other testing scopes), the lab shall inform CTIA of that accreditation body's procedure for expanding the lab's accreditation scope to include CTIA test plans. CTIA may need to work with accreditation body to add the SME to their list of technical assessors.
    - If the lab is not already accredited by this accreditation body, the lab shall inform CTIA of the scheduled date of the ISO/IEC 17025 assessment
  - b) Detailed written test procedures for each certification testing scope for which the laboratory is applying for accreditation. Refer to Section 2.8 of this document for detailed requirements. These procedures will be reviewed by the SME for:
    - Completeness - all required testing for the certification testing scope is covered in detail
    - Adequacy – the procedures appear to be correct for carrying out the testing required in the certification testing scope

- c) A full test report on a mobile station of the laboratory's choice for each certification testing scope. The test report will be reviewed for completeness per Section 2.10 of this document.
  - d) Measurement uncertainty calculations and ripple test procedures/results if conducting Over-the-Air Performance certification testing.
- 2) CTIA will assign a SME to review the above documentation and to conduct the on-site SME audit.
  - 3) CTIA will work with the lab to schedule an on-site SME audit after the documentation review is complete.
  - 4) The SME and the CTIA Certification Program Compliance Manager will conduct the on-site SME audit.
    - The lab shall pay the travel expenses for these two individuals, including airfare (business class for international travel) and hotel accommodations
    - CTIA will invoice the lab for the estimated travel expenses and the lab shall pay these expenses prior to the on-site SME audit
    - CTIA will reimburse the lab for any unused travel expenses after completion of the audit
  - 5) At the end of the audit, the SME will document any deficiencies identified during the audit that were not resolved during the audit. This document will also identify what the lab must do to resolve each deficiency. The lab shall sign the document, indicating its agreement.
  - 6) The lab shall resolve any deficiencies identified during the SME audit.

#### 6.4. CATL Authorization Decision

The CTIA Certification Program Compliance Manager, along with the SME, will review the findings of the audit and the lab's response (i.e., the corrective actions) to the deficiencies found. CATL authorization will be granted after all deficiencies have been addressed and the lab has received accreditation to CTIA's test plans by the accreditation body.

#### 6.5. CATL License and Service Agreement

CTIA will grant CTIA Authorized Testing Laboratory status to the laboratory after the accreditation is granted and all requirements in the *CATL License and Service Agreement* are satisfied.

#### 6.6. CATL Logo

The CTIA Authorized Testing Laboratory logo identifies a laboratory as authorized by CTIA to conduct certification testing:

## CTIA Authorized Test Lab

Laboratories licensed by CTIA as CTIA Authorized Testing Laboratories (CATLs) are issued a CATL logo with a unique laboratory identifier number. Digital files for reproduction of the logo will be supplied to CATLs shortly after their authorization.

### 7. Awareness

#### 7.1. Education

CTIA will inform and educate CTIA members on the values and benefits of the CTIA Certification Program.

#### 7.2. Publishing/Promotion of Certified Products

CTIA will not publish test results but will make public the list of CTIA certified products. This list is available on CTIA's web site at [www.ctia.org/certification](http://www.ctia.org/certification) for the benefit of both consumers and carriers.

Manufacturers are encouraged to publicize certification of their products, adding to public education and awareness of the Certification Seal.

## APPENDIX A: License Agreement

### LICENSE AGREEMENT

THIS AGREEMENT is made at Washington, D.C.,

this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_  
(month) (year)

by and between

**CTIA - The Wireless Association®**  
**("CTIA")**

and

\_\_\_\_\_  
("SUBMITTER")

### RECITALS

Submitter has entered into a voluntary relationship with CTIA for the testing of certain wireless radio devices or equipment manufactured by or for the Submitter, and Submitter has demonstrated to CTIA's satisfaction that the

Model Name & Number: \_\_\_\_\_  
FCC ID: \_\_\_\_\_

meets CTIA's requirements for Certification.

For these reasons, and for other good and lawful reasons and in consideration of the covenants set forth below, the parties agree as follows:

### SECTION ONE CERTIFICATION

1.1 The Recitals are hereby incorporated in the same manner as if the same were repeated herein. Submitter is hereby granted a nonexclusive license to represent the specified product as meeting CTIA's requirements for certification based on the guidelines set forth in exhibits A and the CTIA Certification Program Management Document, and to use the CTIA Certification Seal in reference to the specified product in accordance with the terms of this Agreement. CTIA warrants that it has full power and authority to grant the rights herein granted.

1.2 CTIA will permit the use of appropriate references to CTIA and its Certification Seal solely in connection with the specified product. The CTIA Certification Seal or other registered CTIA marks, or any other reference, which may be interpreted to mean CTIA, may appear in advertising, promotional material or other literature to indicate the specified product meets CTIA's requirements for certification.

1.3 Submitter agrees to amend or discontinue the use of the CTIA Certification Seal upon the written request of CTIA.

1.4 References to CTIA and the CTIA Certification Seal shall not be misleading as to the extent of certification.

1.5 Submitter shall be entitled to utilize CTIA's Certification Seal for as long as the specified product meets CTIA's requirements for certification. Submitter will discontinue use of the CTIA Certification Seal upon receipt of CTIA's formal written notice (as set forth in exhibit A) to do so.

## **SECTION TWO COMPLIANCE**

2.1 The specified product shall comply with all of CTIA's requirements for certification.

2.2 Submitter assumes full and complete responsibility for its use of the CTIA Certification Seal, and agrees that its use of the CTIA Certification Seal constitutes its declaration that the specified product has been made in compliance with CTIA's requirements for certification.

2.3 Submitter agrees that any tests or sampling of the specified product conducted by CTIA is only a check as to whether the specified product complies with CTIA's requirements for certification and in no way relieves the Submitter of his responsibility for the product.

## **SECTION THREE CORRECTIVE ACTION**

3.1 Should CTIA conduct any tests or examinations of the specified product that disclose that units of the specified product do not comply with the requirements for certification, the Submitter shall, at its own expense, remove the CTIA Certification Seal from all units that in CTIA's opinion do not comply with CTIA's requirements for certification in Submitter's possession, or if the Submitter wishes to maintain the specified product's compliance with the CTIA Certification Seal program, Submitter shall, at its own expense either, rework, recall, or destroy all units of the specified product that in CTIA's opinion does not comply with CTIA's certification requirements at the time the units left Submitter's control. CTIA agrees to provide Submitter in a timely manner with the results of any tests or examinations that disclose that units of the specified product do not comply with the requirements for certification.

3.2 Submitter agrees that it will cooperate with and assist CTIA in ascertaining the facts needed to determine that the specified product complies with CTIA's certification requirements.

3.3 Submitter agrees that with prior written notice to Submitter, CTIA may notify vendors, authorities, potential users, and others of an improper or unauthorized use of the CTIA Certification Seal, or any improper or unauthorized reference to CTIA, when in CTIA's opinion such notification is necessary in the interest of public or for CTIA's own protection.

## **SECTION FOUR TERMINATION**

4.1 This Agreement shall continue so long as the specified product meets the requirements as set forth in Exhibit A, unless termination rights provided for in this Agreement are exercised.

4.2 If Submitter fails to comply with any of the terms and conditions of this Agreement, CTIA may immediately terminate or suspend this Agreement upon written notice to Submitter.

4.3 Upon termination of this Agreement, the license granted by Section 1.1 shall be canceled, and Submitter shall forthwith cease its use of the CTIA Certification Seal in connection with the specified product.

4.4 Termination of this Agreement by whatever means shall not affect any liability of the parties existing as of the date of such termination, and shall not relieve Submitter of its obligation to indemnify CTIA hereunder.

## **SECTION FIVE INDEMNIFICATION**

5.1 Submitter indemnifies and holds harmless CTIA, its officers, directors, employees, members, and agents, against any and all liability, loss, cost, damage, claims, suits or expenses (including reasonable attorneys' fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission or breach of this Agreement by Submitter or its agents or employees, or from Submitter's use, marketing, or sale of the specified product, including but not limited to third party claims for injury or damage allegedly caused by the performance or failure to perform of the specified product or false or misleading advertising or marketing in connection with the specified product, during the period of this Agreement or thereafter. Conversely, CTIA indemnifies and holds harmless Submitter, its officers, directors, employees, members, and agents, against any and all liability, loss, cost, damage, claims, suits or expenses (including reasonable attorneys' fees and costs) of any kind whatsoever, arising in any way from any negligent or willful acts or omission of breach of this Agreement by CTIA or its agents or employees.

5.2 Submitter shall defend CTIA against any claim to which this indemnity relates, provided that:

- (i) CTIA provides Submitter with notice of the claim promptly after CTIA becomes aware of such claim, and the notice shall state the facts giving rise to such claim;
- (ii) Submitter controls the defense or settlement of such claim, and Submitter does not settle or otherwise dispose of such claim without CTIA's prior written consent;
- (iii) CTIA cooperates with Submitter in every reasonable way to facilitate the defense or settlement of such claim; and
- (iv) CTIA does not settle or otherwise dispose of such claim without Submitter's prior written consent.

## **SECTION SIX LIMITATION OF LIABILITY**

6.1 Submitter acknowledges and agrees that CTIA shall not be responsible for the loss, damage, or claim in connection with the use or marketing of the specified product, whether liability is asserted in contract or tort (including negligence or strict liability). In no event will either party be liable to the other party, or to any third party, for the loss of profits, loss of use, loss of production, loss of goodwill, or incidental, indirect, or consequential damages of any kind.

6.2 In no event will Submitter be liable to CTIA, or to any third party, for special, incidental or consequential damages (including, without limitation, loss or use, time or data, inconvenience, commercial loss, lost profits or savings) to the full extent such may be disclaimed by law, even if Submitter has been advised of the possibility of such damages.

**SECTION SEVEN  
NO APPROVAL**

7.1 This Agreement does not constitute CTIA's guarantee or warranty of the specified product and no representation of any kind by Submitter in connection with its use of the specified product or otherwise will directly or indirectly, explicitly or implicitly convey or suggest any such guarantee or warranty. CTIA may require that a statement disclaiming directly or indirectly CTIA's guarantee or warranty must be included in the marketing and informational materials accompanying the specified product.

**SECTION EIGHT  
INSURANCE**

8.1 Submitter will maintain during the period of this Agreement liability insurance of at least two million dollars in policy limits covering claims or suits arising from the specified product, and will include CTIA as an additional insured on the policy as to matters covered by this Agreement, and Submitter will furnish to CTIA evidence of that insurance.

**SECTION NINE  
COUNTERPARTS**

9.1 This Agreement may be signed in two counterparts and either party hereto may sign any such counterpart, each of which when signed and delivered shall be deemed to be an original and both of which counterparts taken together shall constitute but one and the same instrument. This Agreement shall become binding when the counterparts shall have been signed and delivered by both parties. Each party intends to sign and deliver this Agreement by uploading an electronic image of their signed signature page into CTIA's Certification Database ("Database"). Each party agrees that the delivery of this Agreement by uploading it into the Database shall have the same force and effect as delivery of original signatures, and that each party may use such electronic images of such signatures received in the Database as evidence of the execution and delivery of this Agreement by both parties to the same extent that an original signature could be used.

IN WITNESS WHEREOF, CTIA and Submitter have executed this Agreement as of the dates set forth below.

**CTIA - The Wireless Association®**

**SUBMITTER**

**By:** \_\_\_\_\_  
**Name:** Mark Sargent  
**Title:** Assistant Vice President, Certification Programs

**By:** \_\_\_\_\_  
**Name:** \_\_\_\_\_  
**Title:** \_\_\_\_\_

**Date:**

**Date:**

**EXHIBIT A**  
**GUIDELINES FOR MAINTAINING CTIA CERTIFICATION**

The license granted in the AGREEMENT shall endure for the term of the AGREEMENT provided that all terms and conditions defined in this AGREEMENT, and the CTIA Certification Program Management Document (PMD) are met. To retain certification throughout the duration of this AGREEMENT, the procedures defined in the PMD must be followed and the requested documentation must be received. The guidelines for submitting documentation and reevaluation are as follows:

1. Notification of any significant hardware or software changes which might affect the performance of products against criteria used for certification must be submitted to a CTIA Authorized Testing Laboratory (CATL) and to CTIA.
2. Failure to submit this notification will prompt the removal of the product(s) under question from the list of CTIA Certified products.
3. The CATL will evaluate the changes and determine if regressive testing is necessary. Submitter may appeal the lab's decision to CTIA if regressive testing is felt to be excessive.
4. Submitter shall directly compensate the CATL for testing performed.
5. If the product fails to comply with CTIA's criteria upon a reevaluation, and Submitter elects not to comply with CTIA's criteria within a timely manner, this AGREEMENT and CTIA Certification shall be immediately terminated.

## APPENDIX B: Certification Testing Checklist

This checklist indicates the hardware and documentation to be provided to the CATL.

### 1) Hardware:

- a) Five production or pre-production samples of the product to be tested
- b) Five dummy batteries capable of supplying dc voltage to the product with clearly labeled leads
- c) Five RF cables or connectors with loss as specified above. Must have a snug, stable fit for the vibration test.
- d) Five test interface units capable of routing audio from the product along with any extra codes necessary to extract the audio
- e) Five mobile batteries
- f) Two battery chargers
- g) Newest version of Diagnostic Monitor Software on Diskette or CD-ROM
- h) Two Diagnostic Monitor Interface Cables, two Data Services Interface Cables and two dual port or integrated adapters on product for simultaneous data services and monitor monitoring.
- i) Diagnostic Monitor Key ("Dongle")
- j) PRL pre programmed with CTIA test PRL (CDMA only)
- k) Product Support Tool (PST)

### 2) Documentation:

- a) Product Characteristics
  - RF Connector Type:  SMA  BNC  N-Type  Male  Female  Other: \_\_\_\_\_
  - RF Cable Loss:  PCS Band \_\_\_\_\_  800 MHz Band \_\_\_\_\_
  - Nominal Voltage for Operation \_\_\_\_\_ Low Voltage Cutoff \_\_\_\_\_
  - High Voltage Cutoff \_\_\_\_\_
  - Receiver Information:
    - 1st Mixer - High side or low side Injection \_\_\_\_\_
    - 1st (High) IF Frequency \_\_\_\_\_
    - 2nd Mixer - High or low side injection \_\_\_\_\_
    - 2nd Oscillator Frequency \_\_\_\_\_
    - 2nd (Low) IF Frequency \_\_\_\_\_
  - Temperature Designator (per section 5.1.1 of TIA/EIA-98-E, section 10.1.1 of TIA-866 and section 4.1.1 of TIA/EIA-690): \_\_\_\_\_
- b) Manual Test Commands – manual test codes/commands and an explanation of how to access and use this mode for manual testing including any characteristics peculiar to the system; also include any special hardware or firmware necessary to allow entry of manual test commands for manual testing.
- c) Programming Instructions in English for Mobile, A-Key, Diagnostic Monitor Key and any special test programming. Also include any special equipment or aid needed to program a subscriber number, etc. into the product to be tested.

- d) A copy of the User's Manual
- e) Installation Guide/Explanation of component interconnection and identification of power lead colors and functions.

## APPENDIX C: CTIA Certification Fees

The following fees are the fees manufacturers pay to CTIA for certification of a product. Certification testing fees are separate from these fees and are determined independently by each CATL.

All fees will be invoiced to the manufacturer per the guidelines explained in Section 2.4 of this document.

Certification Request Type	Fee (U.S. \$) for Non-Converged Device	Fee (U.S. \$) for Converged Device
Initial	\$12,500	\$15,000
Variant	\$3,125	\$3,750
ECO	0	0

Certification fees are per product. A single fee applies whether the product is single-mode, dual-mode or multi-mode.

Fees for Integrations are the same as those of Variants.

## APPENDIX D: Change History

Revision	Date	Description of Changes
Rev 1.0	October 2001	<ul style="list-style-type: none"> <li>Replaces CTIA Terminal Unit Certification Program Management Document, Issue 4.6, November 2000; and CTIA GSM1900 Terminal Unit Certification Program Management Document, Issue 2.5, November 2000</li> </ul>
Rev 2.0	April 2002	<ul style="list-style-type: none"> <li>Changed period of certification to lifetime of product</li> <li>Modified procedures for product Variant submissions</li> <li>Modified ECO procedures</li> <li>Added Request for De-Certification section</li> <li>Added Laboratory Requirements section</li> <li>Modified License Agreement</li> <li>Modified forms and added Variant/ECO form</li> <li>Removed section on Re-Certification Requirements</li> </ul>
Rev 2.1	September 2002	<ul style="list-style-type: none"> <li>Editorial revisions</li> <li>Removed references to NAMPS</li> <li>Added Lab Test Procedures section</li> <li>Added Test Failures section</li> <li>Modified number of test samples required</li> <li>Clarified certification award process</li> <li>Added Request for Withdrawal During Certification Application section</li> <li>Added detail to Laboratory Authorization Requirements section</li> <li>Added detail to the following forms: Application for Certification Testing, Notification of Laboratory Completion, Product Variant Request/Notification of ECO</li> </ul>
Rev 2.2	January 2003	<ul style="list-style-type: none"> <li>Added references to PCMCIA cards and modules</li> <li>Added Protection Against Accidental 911 Dialing</li> <li>Restructured Certification fees</li> </ul>
Rev 3.0	August 2003	<ul style="list-style-type: none"> <li>Modified procedures to incorporate new online certification database</li> <li>Certification fee increase effective June 1, 2003</li> <li>Mobile Station Antenna Test Plan renamed to Test Plan for Mobile Station Over the Air Performance</li> <li>Updated FDA Consumer Update requirements</li> <li>Certification Seal updated as a registered trademark</li> </ul>
Rev 3.1	February 2004	<ul style="list-style-type: none"> <li>Added Consumer Recycling Information</li> <li>CATL logo updated as a registered trademark</li> <li>Clarified Variant and ECO test requirements</li> <li>Removed the requirement to enclose a circuit board diagram with the ESN Security and A-Key Security declarations</li> </ul>
Rev 4.0	June 2004	<ul style="list-style-type: none"> <li>Consumer educational requirements moved to Best Practices</li> <li>Certification fees reduced</li> <li>Certification Seal and CATL logo updated</li> <li>Use of Certification Seal now optional</li> <li>Added applicability requirements for OTA Performance testing</li> </ul>
Rev 4.1	March 2005	<ul style="list-style-type: none"> <li>Added additional detail to Laboratory Authorization Requirements section</li> </ul>

		<ul style="list-style-type: none"> <li>• Updated OTA Performance testing requirements</li> <li>• Added definition of “Integration”</li> <li>• Updated CATL logo</li> </ul>
Rev 4.2	April 2005	<ul style="list-style-type: none"> <li>• Clarified evaluation criteria for CDMA, TDMA and AMPS products</li> <li>• Identified sections of the test plan for OTA Performance Testing that are not required</li> </ul>
Rev 4.3	August 2006	<ul style="list-style-type: none"> <li>• Added Use of CTIA Certification Test Plans section</li> <li>• Added UMTS certification requirements</li> <li>• Updated OTA Performance testing requirements</li> <li>• Updated Certification Testing Checklist</li> <li>• Added process for relabeled products</li> <li>• Added Hearing Aid Compatibility (HAC) testing requirement</li> </ul>
Rev 4.4	November 2006	<ul style="list-style-type: none"> <li>• Added reference to Battery Certification Program</li> <li>• Added Converged Device testing requirements</li> <li>• Updated OTA Performance testing requirements</li> <li>• Updated Laboratory Authorization Requirements</li> </ul>
Rev 4.5	May 2007	<ul style="list-style-type: none"> <li>• Added requirement for Manufacturer and CATL Primary PoC</li> <li>• Added MEID requirement</li> <li>• Updated certification award process</li> </ul>
Rev 4.6	June 2007	<ul style="list-style-type: none"> <li>• Added procedure for CATLs to submit non-certification test requests via online certification database</li> <li>• Added USB modems to Testing Not Required category under Over-the-Air Performance Testing</li> </ul>
Rev 5.0	October 2007	<ul style="list-style-type: none"> <li>• Removed GSM and UMTS technologies from the CTIA Certification Program</li> <li>• Corrected numbering in Section One of License Agreement</li> </ul>
Rev 5.1	April 2008	<ul style="list-style-type: none"> <li>• Updated definition of Modules</li> <li>• Added Certification of Modules and Integrations section</li> <li>• Added Section Nine (Counterparts) to Appendix A (License Agreement)</li> <li>• Updated certification fees to include Integrations</li> </ul>
Rev 6.0	April 2009	<ul style="list-style-type: none"> <li>• Removed Analog and TDMA technologies from the CTIA Certification Program</li> <li>• Added reference to CTIA <i>Bluetooth</i> Compatibility Certification Program</li> <li>• Added 1700/2100 MHz bands</li> <li>• Added instruction for manufacturer to notify CTIA if a P.O. number is required on CTIA’s invoice</li> <li>• Updated process for requesting certification database login accounts</li> <li>• Updated OTA Performance testing requirements</li> </ul>