

CableLabs® **Test Guidelines for Unidirectional Digital Cable Products**

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1 OVERVIEW

Cable Television Laboratories, Inc. (“CableLabs”), provides independent verification testing of digital TVs (DTVs) having a CableCARD interface that are built to conform to the requirements of Unidirectional Digital Cable Products (UDCPs) as defined in the FCC Rules for unidirectional “Plug & Play” products.¹ The testing provided hereunder verifies that a product successfully passes each of the PICS identified in the Joint Test Suite Conformance Checklist: PICS Proforma for UDCPs (“PICS”). Testing is performed in accordance with the currently posted Acceptance Test Plan (“ATP”) and the procedures set forth in this document (the “Guidelines”). The PICS and ATP collectively are known as the Joint Test Suite (“JTS”). The current PICS and ATP are available at <https://www.cablelabs.com/doczone>. Testing hereunder does not certify or indicate that the product is in conformance with the applicable specifications, other standards or specifications, FCC rules, the DFAST Technology License Agreement for Unidirectional Digital Cable Products, or any other legal, regulatory, or contractual requirements applicable to UDCPs.

UDCP test events (known as “Test Waves”) are scheduled throughout the year. The current Certification Wave Schedule can be found at <http://www.cablelabs.com/specifications/certification/> although all OpenCable devices may be submitted at anytime.

These Guidelines are subject to refinement as the testing process matures and is improved. The JTS may be modified from time to time, as jointly agreed by Cable MSOs and Consumer Electronics Manufacturers, and will be posted at <http://www.cablelabs.com/specifications/specification-search/>. The JTS should be publicly available for all interested Manufacturers. Where necessary, the parties will use reasonable efforts to protect trade secrets inherent in specific tests.

2 TYPES OF SUBMISSIONS

2.1 Verification Submission

Products considered for Verification are (1) UDCP DTVs being submitted the first time, or (2) UDCP DTVs that were submitted for Verification in a prior Test Wave, but did not achieve Verified status. As used herein, “Verification” or “Verified” means that the UDCP Verification Panel (defined in Section 6 below) has determined that the model submitted satisfies the JTS.

Once a Manufacturer has successfully completed Verification for one DTV product, subsequent DTV models may be Self-Verified according to the procedure in Section 2.2.

2.1.1 Sample Products

Manufacturer must provide two (2) samples of its first model UDCP to CableLabs for Verification testing prior to commercial deployment as a Digital Cable Ready product. If a catastrophic failure occurs on one device, CableLabs will proceed with verification testing using the second sample.

Products submitted for Verification must either be of production quality, as they would be marketed and sold, or pre-production samples representative of the product to be manufactured and sold, with no subsequent change in any hardware or software that could or does prevent the product from achieving passing test results that satisfy the JTS. Products submitted for Verification must either be labeled as they will be marketed or may be labeled sufficiently to identify the sample with the model to be sold (including hardware and software versions). The model submitted must match the model, and the software and hardware revisions, shown in the online Admission Application form (<http://www.cablelabs.com/specifications/certification/>). Products inaccurately marked or documented risk rejection.

If the product submitted for Verification is a pre-production sample which is not of production quality, as it would be marketed and sold, or if import restrictions prevent the retention of the submitted sample by CableLabs, then Manufacturer shall replace the submitted sample with a production version of the same device that conforms to the requirements of the JTS, which may be tested by CableLabs for Verification in the applicable Test Wave for which the substitute device is submitted. If the substitute device does not achieve passing test results that satisfy the JTS, then the Manufacturer shall be responsible for payment of the Verification testing fees for the applicable Test Wave, without prejudice to any other remedies that may be applicable.

CableLabs will retain one of the two Verified sample products in order to ensure a suitable base of products at CableLabs to enable on-going interoperability tests for new products submitted in future Test Waves. Samples not achieving Verification, and Verified samples that are replaced with Verified production versions will be returned to the Manufacturer, at Manufacturer’s cost, within five business days after the last day of the Test Wave.

¹ See FCC Second Report and Order in CS Docket No. 97-80 and PP Docket No. 00-67, FCC 03-225 (October 9, 2003).
January 2014

2.1.1.1 Shipping Instructions

Manufacturers are responsible for all shipping costs, both directions, and must supply CableLabs with valid shipping account information for return of the submitted products. Shipping instructions should be provided in the online Admission Application form. Manufacturer agrees that CableLabs shall bear no liability for loss, damage, or injury to Manufacturer's staff, employees or agents, or to the property of the Manufacturer, including but not limited to the product being submitted, or other equipment, tools, supplies, or records, from any cause or causes whatsoever, while in or on the premises of CableLabs or elsewhere, so long as CableLabs provides reasonable care and safekeeping of such products.

Products should be shipped to:

Cable Television Laboratories, Inc.
UDCP Verification
858 Coal Creek Circle
Louisville, Colorado 80027
Phone: 303-661-9100
Fax:303-661-9199

2.1.1.2 Labeling and Product IDs

Each product submitted for Verification must be identified by a Product ID label. CableLabs uses the following Product ID convention to track products submitted for Verification:

Product ID = 9 (for UDCP) or 17 (for M-UDCP) + 4-letter company abbreviation + 2-digit Test Wave number + 1-digit product number.

For example, "ACME Trading" submitting UDCP products in CW80 would be 9ACME801 and 9ACME802; "International Electronics" submitting M-UDCP products in CW81 would be 17INTE801 and 17INTE802. Since some company names may be similar, please contact CableLabs at se-mail@cablelabs.com to determine the correct 4-letter company abbreviation for your products.

This seven-character code will be used as the tracking identifier for the physical products submitted (including ancillary hardware, documents, CDs), and all test data.

2.1.2 Re-Submission of a UDCP Product Not Verified Under a Previous Submission

If a product is not Verified in a particular Test Wave, the Manufacturer is free to make any changes or modifications necessary to correct the product, and re-submit the product for Verification in a future Test Wave. All of the procedures and fees identified herein for Verification shall govern the re-submission of such products.

2.1.3 Re-Branded Products

Where a Verified DTV is identical to a yet un-Verified DTV of a different company, except for branding changes (e.g., label, cosmetic changes) in the un-Verified DTV, the actual Manufacturer of the Verified DTV may use the Self-Verification process identified in Section 2.2 to Self-Verify the re-branded DTV on behalf of the other company. The Manufacturer must note the model and name of the company marketing the re-branded DTV, as it will appear in the marketplace, on the UDCP Self Verification option available in the online Admission Application form. The Manufacturer must use digital certificates with the Manufacturer's name in the "Company Name" field of the digital certificate.

2.1.4 Component Suppliers & Reference Designs

Component suppliers and reference design manufacturers may participate in Practice Runs, and obtain test results. However, except for the nominal clarification noted in 2.1.4 above, only end-user commercial products are Verified under these procedures. The Manufacturer offering the commercially-available DTV must Verify or Self-Verify all models.

2.2 Self-Verification

Once a Manufacturer has successfully completed Verification for one UDCP DTV product, subsequent UDCP DTV models may be Self-Verified according to the procedure in this Section 2.2.

2.2.1 Testing

“Self-Verified” means (1) that the Manufacturer has tested its product against the JTS, and has determined and documented that the product satisfies the JTS, (2) Manufacturer has provided CableLabs the documentation required under Section 2.2.2, and (3) Manufacturer maintains documentation evidencing successful completion of the JTS in accordance with FCC rules.

2.2.2 Documentation

For each Self-Verified model (including all hardware, software, and software upgrades), Manufacturer must complete the Self Verification option in the online Admission Application Form, and submit it to CableLabs prior to commercial deployment as a Digital Cable Ready product. The form must be accurate and complete. Failure to provide accurate and complete information may result in breach of the Manufacturer’s DFAST Technology License Agreement, FCC Rules, or other legal, regulatory, or contractual obligations.

2.3 Practice Run Submission

Practice Runs provide Manufacturers with the opportunity to have their products objectively tested by an independent test facility during a regularly scheduled Test Wave, but not as an “official” product submitted for Verification.

Practice Run submissions are tested in the same manner and at the same time as products submitted for Verification testing. Test results are shared with the Manufacturer; however, the UDCP Verification Panel makes no decisions as to Verification.

Manufacturer may use the Practice Run test results as part of the documentation evidencing Self-Verification.

2.3.1 Sample UDCP

Sample UDCP requirements are the same as those identified in sections 2.1.1 for products submitted for Verification , except the sample product is not retained by CableLabs after testing.

2.3.2 Documentation

Manufacturer must indicate “Practice Run” in the Admission Application Form.

2.4 Development Support Lab Use

Outside of the more defined Verification or Practice Run testing, the CableLabs Test Facilities are available to Manufacturers for ad hoc testing in accordance with the Development Support Lab Use Policy located at <http://www.cablelabs.com/resources/development-lab/>. Manufacturers may wish to use this service for special testing needs. CableLabs’ purpose in offering this service is to facilitate and encourage the development and deployment of CableCARD-enabled devices in the marketplace.

Several important features and limitations of the Development Support Lab Use Policy should be noted:

- CableLabs Verification services are not provided to the Manufacturer during its use of the Test Facilities.
- The Test Facilities include functional CableCARDS, test tools (e.g., HPNX), and headend facilities. All such equipment is configured with the copy control technology (e.g., DFAST and X.509 digital certificates). As such, in order for Manufacturer to obtain effective use of their testing time, all devices should have either evaluation or production DFAST parameters and X.509 digital certificates implemented.
- Development Support Lab Use is provided on an as-available basis in a non-discriminatory manner. For clarification, Manufacturer’s use may not interfere with on-going CableLabs activities, and all use of the Test Facilities by Manufacturer must be compatible with such other CableLabs activities. Regular Certification / Verification testing will take precedence over Development Support Lab Use.
- Fees for Development Support Lab Use can be found at <http://www.cablelabs.com/resources/development-lab/>.

3 FEES

The fees for Verification and Practice Run testing, and Development Support Lab Use are listed in the Testing Fee Schedule located at <http://www.cablelabs.com/specifications/certification/>. Payment is delivered at the time of product delivery, and all fees are non-refundable. Please advise the CableLabs accounting office at j.tahara@cablelabs.com if your company requires an invoice for payment. Please include “UDCP Verification Invoice” in the subject line of your email. Also include the following information in your email:

1. Company name

2. Test Wave number to which you are applying
3. Type of product submitted and Product ID (See Admission Application, product information)
4. Mailing address and fax number to which the invoice should be sent
5. Corporate officer contact information update
6. Type of invoice required (i.e.; Verification or Practice Run)

4 SCHEDULE

The Test Wave Schedule is posted at <http://www.cablelabs.com/specifications/certification/>. CableLabs reserves the right to alter the schedules as necessary.

5 REQUIREMENTS AND PROCESS FLOW FOR PARTICIPATION

Manufacturers of UDCPs must follow the steps below in order to participate in any Test Wave.

1. Manufacturer must sign the DFAST Technology License (for UDCPs) and submit the one-time fee (\$5000) to CableLabs. Manufacturers who previously paid the fee under the PHILA license (for OpenCable products) are not required to submit a second payment under the other license.
2. CableLabs provides *evaluation* DFAST secrets and *evaluation* X.509 certificates to manufacturer for product development purposes. If CableLabs previously provided these deliverables to manufacturer under the PHILA license (for OpenCable products), CableLabs will not make a second shipment of the deliverables under a second license.
3. At least four weeks prior to the start of the Test Wave in which manufacturer intends to submit product(s), Manufacturer must sign the Agreement For Manufacturer Receipt Of Digital Certificates Under DFAST License (“DFAST Certificate Agreement”). Manufacturer must also submit payment for the initial annual maintenance fee to CableLabs (\$20,000) to obtain *production* X.509 digital certificates. Manufacturer’s executed DFAST Certificate Agreement *must* include an accurate and complete “Device Certificate Naming Application” (included as an exhibit in each agreement), as well as accurate and complete contact information for security purposes. Incomplete or inaccurate documentation or information will result in delay and *may cause Manufacturer to miss the Test Wave intended*.
4. Coincident with the DFAST Certificate Agreement (step 3 above), Manufacturer must sign and return the Activation Notice under its license (Exhibit D in the DFAST Technology License), and provide CableLabs with a PGP key to be used for encrypting the production DFAST secrets.
5. CableLabs and the “Certification Authority” validate Manufacturer’s contact information, and the Certification Authority ships the digital certificate “start-up kit” to Manufacturer. The start-up kit will be pre-authorized to create ten *production* X.509 digital certificates, to be used by Manufacturer to submit product(s) to CableLabs for Verification. (CableLabs may, at its option, provide the initial ten production certificates via secure email or CD-ROM rather than via the “start-up kit.”) At Manufacturer’s request, the start-up kit will be adjusted to create twenty *production* X.509 digital certificates.
6. CableLabs will ship *production* DFAST secrets to Manufacturer, encrypted on a CD-ROM using the Manufacturer’s PGP key provided above in step 4.
7. Manufacturer must submit product(s), payment, and a completed Admission Application form to CableLabs for testing. Products submitted for Verification and Practice Run must include *production* X.509 certificates and *production* DFAST secrets
8. Manufacturer may order and pre-pay for production quantities of *production* digital certificates any time after it signs the DFAST Certificate Agreement or DCAA in step 3 above. The minimum order quantity is 10,000 certificates (\$700.00 minimum order). CableLabs will authorize the start-up kit for delivery of production quantities of digital certificates after successful Verification, based on the Manufacturer’s pre-paid order.
9. Subsequent to initial Verification, Manufacturer may request additional digital certificates as needed.
10. Manufacturer must submit digital certificate usage reports pursuant to the DFAST Certificate Agreement or DCAA.

6 GUIDELINES FOR THE UDCP VERIFICATION PANEL

The UDCP Verification Panel is comprised of experts with significant technical and operational knowledge and experience with cable networks (including headends and other widely deployed cable network components and technology), the applicable specifications, the JTS, and UDCPs. Other requirements include:

- Execution and adherence to the CableLabs Confidentiality Agreement, Investment Policy, and Conflict of Interest Policy.
- UDCP Verification Panel members shall be different from personnel that perform the JTS testing.
- UDCP Verification Panel members may not be employed by, or affiliated with, suppliers of products of the type being Verified.

The UDCP Verification Panel will verify that the model submitted satisfies the JTS (“Verification” or “Verified”). The UDCP Verification Panel shall have the ability to recognize situations where interpretations of the PICS, ATP, documentation or other processes may be necessary. Such review will be conducted in a fair, objective, reasonable and nondiscriminatory manner. Verified and Self-Verified UDCP models will be posted at <http://www.cablelabs.com/specifications/certification/> in accordance with Section 8.1.

The full test results for a particular product will be shared with the Manufacturer who submitted that product only at the end of the Test Wave, and only after the UDCP Verification Panel has reviewed the test results. If Verification is not warranted, the UDCP Verification Panel will provide reasonable information to the Manufacturer as to why the product failed Verification. The Manufacturer may remedy the issue(s) and re-submit the product in future Test Waves according to these Guidelines.

In the event that the model submitted satisfies the JTS except that necessary compliance with Underwriters’ Laboratories or the Federal Communication Commission is not available at the time of the applicable Test Wave, the Verification Panel may grant conditional Verification. The product may not be treated as Verified until CableLabs acknowledges receipt from the Manufacturer of the necessary compliance with Underwriters’ Laboratories and the Federal Communication Commission. Manufacturers who receive conditional Verification may obtain *production X.509* digital certificates under the procedures set forth in Section 5; however, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship, or distribute for the purpose of selling or offering for sale or lease, any conditionally Verified product until CableLabs acknowledges receipt from the Manufacturer of the necessary compliance with Underwriters’ Laboratories and the Federal Communication Commission.

The UDCP Verification Panel activities are limited to determination that the model submitted satisfies the JTS. UDCP Verification Panel activities and Verification hereunder does not indicate that a product is in conformance with the applicable specifications, other standards or specifications, FCC rules, the DFAST Technology License Agreement for Unidirectional Digital Cable Products, or any other legal, regulatory, or contractual requirements applicable to UDCPs.

The UDCP Verification Panel activities do not extend to any aspects of product pricing, deployment, or business and marketing strategies.

Neither the UDCP Verification Panel nor CableLabs staff may solicit or accept anything of value from a Manufacturer participating under these Guidelines. All Manufacturer communication should be directed to the CableLabs Director of UDCP Testing, unless specified otherwise by the Director.

7 RULES OF ENGAGEMENT

CableLabs desires to treat all Manufacturers fairly and in a non-discriminatory manner. This section contains rules for Manufacturer conduct with respect to CableLabs and the testing activities hereunder. In order to maintain the integrity of the testing process, CableLabs reserves the right to take any and all appropriate action in the event these rules are violated, including, but not limited to, expulsion of the Manufacturer from the Verification process.

CableLabs’ goal for the UDCP Verification program is to provide an environment for testing such products in an efficient, high-quality, objective and non-discriminatory manner. The program is intended to be pro-competitive and Manufacturer-neutral. Because of constant interactions between and among Manufacturers and CableLabs, clear rules for conduct are necessary. These rules of engagement (the “Rules of Engagement”) contain strict guidelines for Manufacturer behavior regarding access to data and testing facilities, and must be followed by every Manufacturer participating in the testing process. The Rules of Engagement consist of three sections: general requirements, conduct during the Test Wave, and conduct after Verification has been awarded.

7.1 General Requirements

Manufacturers must not:

- Claim any Verification prior to receiving CableLabs’ written notification.
- Offer anything of value to the UDCP Verification Panel, CableLabs staff, or contractors involved in the testing process.
- Use any CableLabs trademarks.
- Mention CableLabs in a press release or other marketing materials without prior written permission from CableLabs.

7.2 During Verification

During a Test Wave:

- Manufacturers must not contact any of the CableLabs technical staff (all communications must be through the CableLabs Director of UDCP Testing).
- In order to preserve the confidentiality of other Manufacturers' products under test, as well as the objectivity of the test activity itself, Manufacturer shall not enter any CableLabs testing facilities during Verification testing. (Access to the lab is available at other times in accordance with the Development Support Lab Use Policy. See Section 2.4.)
- Manufacturers must not modify or attempt to modify in any way, shape, or form any product submitted for testing, including its own products.
- Manufacturers must not interfere with any test tools, test equipment, test set up and/or remove any product from any of the labs without written permission from the CableLabs Director of UDCP Testing.

7.3 After Verification

Once a Manufacturer has successfully completed the Verification process for its first UDCP DTV model, subsequent DTV models from that Manufacturer may be Self Verified in accordance with Section 2.2. Manufacturer shall abide by all FCC labeling requirements. As UDCP products are often Self-Verified, no trademark rights are granted to use any CableLabs trademark, including, but not limited to the "CableLabs Certified" mark. The "CableLabs Certified" trademark is only available under the terms of the PHILA Agreement or a separate agreement.

7.4 IPR Indemnity

The use of Manufacturer's products submitted for CableLabs testing is subject to an indemnity set forth on the Submission Form.

In the event that the Products, or any part thereof, are held to infringe, or Manufacturer desires to terminate the CableLabs testing in order to avoid actual or potential liability for infringement, Manufacturer may withdraw the Products from CableLabs testing. No refund of fees will be given to Manufacturer; and, any re-submission of the same or similar Products will be subject to the applicable fees.

8 PUBLICITY

CableLabs understands Manufacturers' needs to market products. Unfortunately, when Manufacturers' product announcements are combined with announcements about receiving UDCP Verification there can be confusion about what product claims have and have not been evaluated by CableLabs in the Verification process. The following publicity guidelines are intended to clarify CableLabs' policy regarding public announcements, and reduce the opportunities for confusing or misleading claims in the market.

8.1 CableLabs Publicity after the Test Wave

Unless CableLabs is notified otherwise by the Manufacturer, in writing, within five (5) business days after the End Date noted in the Schedule, CableLabs will post the names of Manufacturers and product models that have achieved Verification or Self-Verification at <http://www.cablelabs.com/specifications/certification/>. (CableLabs will, in any event, post the total numbers of manufacturers and number of models on its website; will post the names of Manufacturers and product models that have achieved Verification or Self-Verification when they appear in the market; and may provide the names of Manufacturers and product models that have achieved Verification or Self-Verification in response to government requests or pursuant to the order or requirements of a court or governmental administrative agency or other governmental body of competent jurisdiction.) With permission from the Manufacturer, CableLabs will also issue a press release of Verified or Self-Verified Manufacturers and product models. CableLabs will not issue press releases for products that failed Verification, or products that were submitted under the Practice Run process.

8.2 Manufacturers Publicity after Verification

- Manufacturers who mention CableLabs name must obtain prior written approval from CableLabs. Any such news release regarding the Verification process must be submitted to CableLabs public relations' office, via Wayne Surdam at w.surdam@cablelabs.com for review and approval. This process can take up to seven business days for completion. If Manufacturer desires to issue a press release after achieving Verification, it is encouraged to submit a draft press release to CableLabs for review at any time during the CableLabs testing process, on the basis that such draft will only be released when the product achieves Verification.
- The Manufacturer news release may include information about model number, the CableLabs test event, and when it was Verified as factual items. No other mention of CableLabs should be made in product announcements.

“Verified” is reserved for those products that have been Verified by the UDCP Verification Panel under these Guidelines. This term, therefore, may not be used in relation to a Manufacturer’s product without having Verified Manufacturer’s first UDCP DTV model. Similarly, “Self-Verified” is reserved for those products that have been Self-Verified in accordance with these Guidelines. For clarification, the term “CableLabs Certified” may NOT be used for UDCP products submitted and Verified under these UDCP Test Wave Guidelines, or Self-Verified by the Manufacturer. “CableLabs Certified” is reserved for products that are submitted under the OpenCable Certification Wave Guidelines in accordance with the PHILA agreement, and the appurtenant trademark license therein.

- CableLabs may provide quotes for Manufacturer press releases related to the participation in a Test Wave or other participation at CableLabs, if requested in advance. CableLabs does not provide quotes for product announcements. Contact Wayne Surdam at w.surdam@cablelabs.com to arrange for quotes from CableLabs’ personnel.
- Under no circumstances should Manufacturers post a press release that mentions CableLabs name or refers to Verification without review by CableLabs, and/or prior to the official release of the CableLabs press release for the particular Verified product. Thereafter, Manufacturers may use the non-trademark statement of “Verified by CableLabs as compliant with the JTS,” or similar factual statement in association with the Verified product.
- As to products submitted for Practice Run testing, Manufacturer may make factual statements about the test results, but is advised to include factual statements that such test results do not constitute either Verification or Self-Verification.
- Manufacturers will be held responsible for bypassing CableLabs policy with possible penalties, including, but not limited to:
 - No CableLabs quote in Manufacturer’s or Manufacturer’s customers’ press release for 6 months.
 - Notifying the Manufacturer’s in house counsel about misleading statements.
 - Notifying the Federal Trade Commission, FCC, SEC and/or other governmental agencies about the same.