

DOCSIS 4.0 CERTIFICATION

Frequently Asked Questions

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1. What is DOCSIS 4.0 Certification?

The CableLabs Certification Program is for testing devices for compliance with one or more CableLabs specifications to ensure interoperability between devices from different manufacturers. The DOCSIS 4.0 Certification Program tests cable modems to determine whether they're compliant specifically with the DOCSIS 4.0 suite of specifications published by CableLabs.

2. What are the benefits of DOCSIS 4.0 Certification?

By testing for compliance with CableLabs specifications, the CableLabs Certification Program helps ensure interoperability between devices from multiple manufacturers, and that devices will work as expected when deployed. Interoperability has several benefits: It encourages competition, promotes scale and enables larger, faster deployments of cable modems.

3. Which devices can be certified?

The DOCSIS 4.0 Certification Program is specifically for testing cable modems that are designed to be compliant with the DOCSIS 4.0 specifications. Those cable modems could come in the form of standalone devices or embedded cable modem modules (eCMMs) and can be combined with embedded multimedia terminal adapters (eMTAs) and/or embedded routers/gateways.

4. Is CableLabs doing anything different with the DOCSIS 4.0 Certification Program compared to previous programs?

- **Success-Based Testing:** As an introductory offer, devices submitted for DOCSIS 4.0 Certification will be tested using an iterative approach which permits devices to be updated as many times as necessary to achieve CableLabs Certification without additional fees. This allows device manufacturers to submit devices as early as possible without risk, rapidly address issues and therefore demonstrate specification compliance and interoperability as soon as possible.
- **2-for-1 Test Results:** Devices submitted for DOCSIS 4.0 Certification testing will be tested both for compliance with the DOCSIS 4.0 specifications as well as for interoperability with DOCSIS 3.1 networks in order to support some early deployments. Once devices are submitted, initial testing will focus on verifying operation on DOCSIS 3.1 systems. After that testing is completed successfully, devices will be listed on the CableLabs website as Verified for Interoperability for DOCSIS 3.1. Devices will then be tested against DOCSIS 4.0 systems to verify compliance with DOCSIS 4.0-specific requirements to become CableLabs Certified for DOCSIS 4.0 compliance, providing two test results in a single submission.

5. Are there different processes and certifications for FDD versus FDX?

DOCSIS 4.0 cable modems can be submitted with support for Frequency Division Duplexing (FDD), Full Duplex (FDX) or both. The same process will be used in all cases, although the scope will be different: In addition to testing requirements that are common to all DOCSIS 4.0 cable modems, the Certification Program will also test requirements that are specific to the given mode of operation for the submitted device. Once devices successfully achieve CableLabs Certification, they will be listed on the Certified/Qualified (C/Q) list on the CableLabs website, which will indicate the mode(s) that the device was tested for.

6. Is the DOCSIS 4.0 Certification Program available now?

Devices can be submitted starting on June 26, 2023.

7. Do I need to submit devices for testing on specific dates?

Devices can be submitted for Certification Testing at any time. However, we do ask that you provide at least two weeks'

notice of your intent to submit whenever possible so that we can plan for your submission.

8. How does the submission process work?

The device submission process will work very much the same as with DOCSIS 3.1 and is detailed in the Certification Wave Guidelines.

9. Will the DOCSIS 4.0 Certification Program include core and secondary testing as with the DOCSIS 3.1 Program?

Because we're using a success-based approach to testing, there's no need for a formal core and secondary process as with DOCSIS 3.1. However, upon submission, we'll run a small suite of tests to ensure basic functionality of devices, which all submissions will need to be able to pass prior to proceeding with further testing.

10. Who determines when a device achieves DOCSIS 3.1 Verified for Interoperability and DOCSIS 4.0 Certification status?

Those determinations are made by the CableLabs Certification Board, which includes representatives from several of our member companies acting on behalf of the cable industry. The determinations are based on a review of the test results.

11. How long does DOCSIS 4.0 Certification take?

Because we're using a success-based process, the time it takes will be determined by the maturity of the product and its ability to pass the tests successfully. Given that each update will require regression testing before we can proceed, the more often a device needs to be updated the longer it will take. The amount of time it will take to complete testing is inherently unpredictable, although based on DOCSIS 3.1 submissions we expect it could take anywhere from three to nine months.

12. Where do I go/who do I ask if I want to have something certified?

The primary information about CableLabs Certification device submission, including fees, can be found on the [CableLabs Certification](#) page on the Kyrio website. Additionally, you're welcome to reach out to us with any questions at labs@kyrio.com.

13. How does one know if a device has been certified?

Any device that becomes CableLabs Certified for any of our specifications is listed in the [Certified/Qualified \(C/Q\)](#) list found on the [Certification page](#) of the CableLabs website; devices that become Verified for Interoperability are also listed in the [VFI list](#) on the CableLabs website. CableLabs never comments on or reveals which devices have been submitted for testing. Successful completion of a testing program is the only public acknowledgment.

14. What is CableLabs' role versus Kyrio's in the process?

CableLabs develops the specifications and acceptance test plans (ATPs) used for testing devices, provides subject matter expertise and manages the overall Certification Program. Kyrio is responsible for the operation of the Certification Program, including receiving devices, conducting testing, communicating with vendors and compiling reports. Throughout the process, CableLabs and Kyrio staff work together to ensure that testing occurs in a fair and specification-compliant manner.

15. Will participation in an interoperability event be required?

CableLabs stands ready to conduct interoperability events for DOCSIS 4.0 cable modems and/or headend devices when manufacturers are ready to participate. If you feel that an interoperability event would be beneficial to your

product development, please let us know so that we can discuss potential timing. However, while participation in an interop is encouraged as a means of preparing for certification testing, it's never required prior to a certification submission.

16. Will there be dry runs, as with early DOCSIS 3.1 submissions?

No, there won't be any dry runs for DOCSIS 4.0 Certification submissions. Rather, once a device is submitted, we'll run a small suite of tests to ensure basic operation and to determine which devices will need to successfully pass before we continue testing.

17. Can I keep an engineer onsite at CableLabs to support our certification submission?

Absolutely! Any manufacturer engaged in work with CableLabs is welcome to have a Visiting Engineer (VE) work at the CableLabs offices on a temporary basis. Although VEs cannot participate directly in device testing, they can provide support whenever issues arise, greatly accelerating troubleshooting and issue resolution. Note that although we typically look for a one-year commitment for VEs, we're open to shorter terms specifically to support DOCSIS 4.0 Certification submissions. Please contact us for more details if you're interested.

18. Will changes be made to the DOCSIS 3.1 testing process and submission options?

DOCSIS 3.1 testing and certification will continue to operate using the same processes as today, including the option to either utilize FlexTest to conduct your own testing or have Kyrio conduct the testing for you.

19. How long will success-based submissions be available?

Success-based submissions will be available for a limited time only. Once the end criteria are established, they will be communicated to the community.