Wi-Fi CERTIFIED™ Certification Overview

March 2020

Wi-Fi CERTIFIED™ certification overview

- Wi-Fi Alliance® members may apply for product certifications in the Wi-Fi CERTIFIED™ program
- New product certifications may be obtained in two ways:
  - Testing at an Authorized Test Laboratory (ATL) or,
  - Leveraging an existing Wi-Fi CERTIFIED product to create a derivative certification (see Derivative Certifications Policy)
- All products must demonstrate interoperability for one or more of the current 802.11 MAC/PHY certification programs - Wi-Fi CERTIFIED 6™, Wi-Fi CERTIFIED ac, Wi-Fi CERTIFIED n, Wi-Fi CERTIFIED g, Wi-Fi CERTIFIED b, Wi-Fi CERTIFIED a or Wi-Fi CERTIFIED WiGig™
- All products must also be certified for current Wi-Fi® security programs Wi-Fi CERTIFIED WPA2™ or Wi-Fi CERTIFIED WPA3™ (as of July 1, 2020, all products must support WPA3™)
- Available optional certification programs are listed at https://www.wi-fi.org/certification/programs
- Only devices that have achieved at least a baseline MAC/PHY and security certification may be designated as Wi-Fi CERTIFIED

Wi-Fi Alliance certification testing philosophy

- Devices are certified by testing against Wi-Fi Alliance test plans
- Wi-Fi Alliance certification testing validates that the Device Under Test (DUT) meets interoperability and program requirements
- Wi-Fi Alliance certification testing stresses behavior of a DUT using defined test plans and test beds
  - Test beds consist of specially chosen equipment in specific configurations
  - All Wi-Fi features implemented in a product must be tested
  - DUT must successfully interoperate with all equipment in the required test bed
    - (Limited) performance measurements
    - (Limited) conformance to published specifications
    - Compatibility with test bed devices

Product certification

- Types of certifications
  - Source device: device tested at an ATL
  - Derivative device: based on a source device with no Wi-Fi component modification; no ATL testing required
- ATLs perform testing for:
  - New products
  - Additional certifications for an already certified product
  - Re-certification of an already certified product for change in firmware, driver or operating system
- Current list of ATLs

Derivative certification requirements

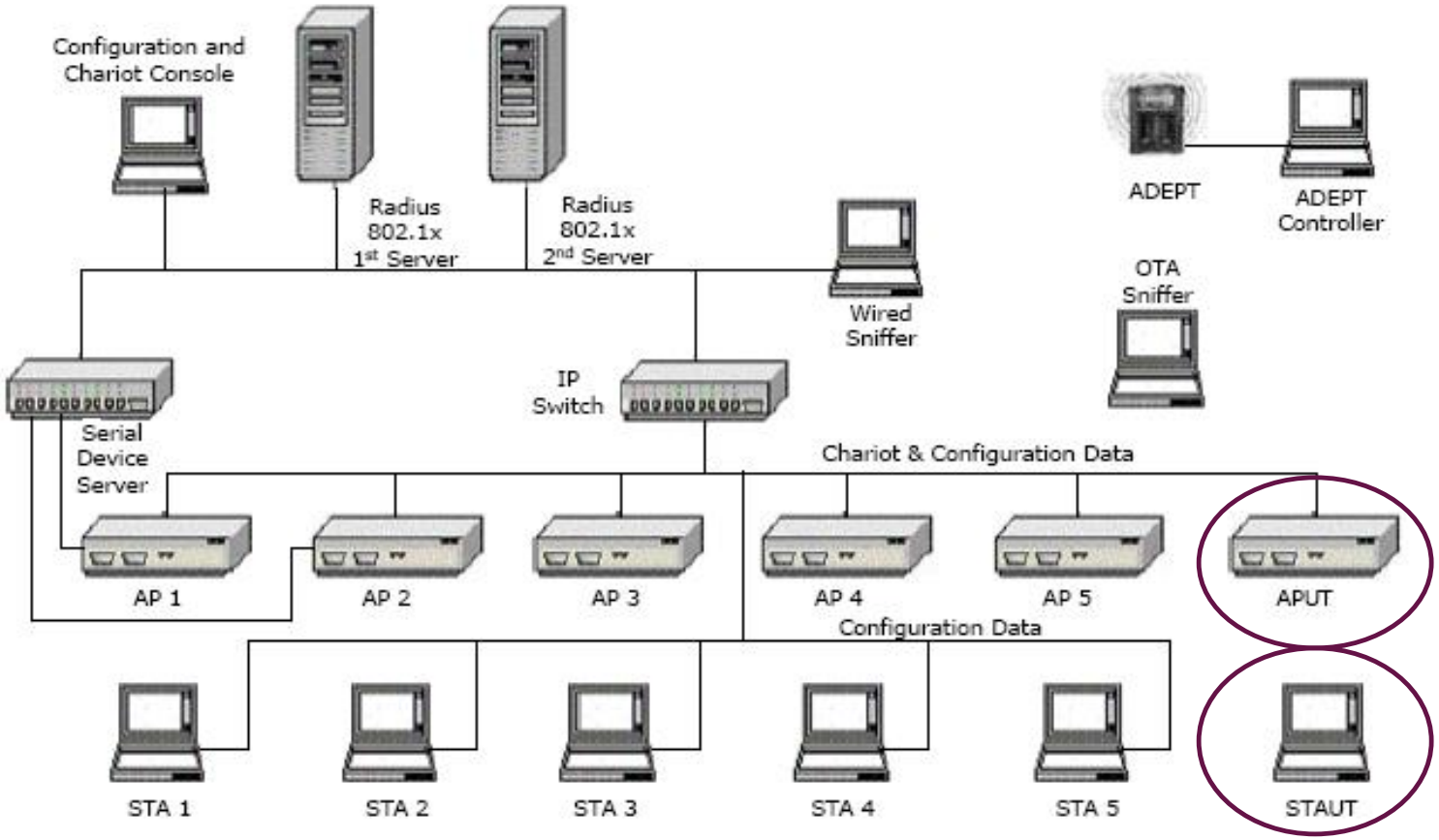
Component	Source device	Derivative device
Applications	Modifiable	Not Modifiable
OS		
Driver		
Physical Interface		
Firmware		
Chip		
RF Architecture		
RF Components		
Antenna		

Wi-Fi CERTIFIED testing basics

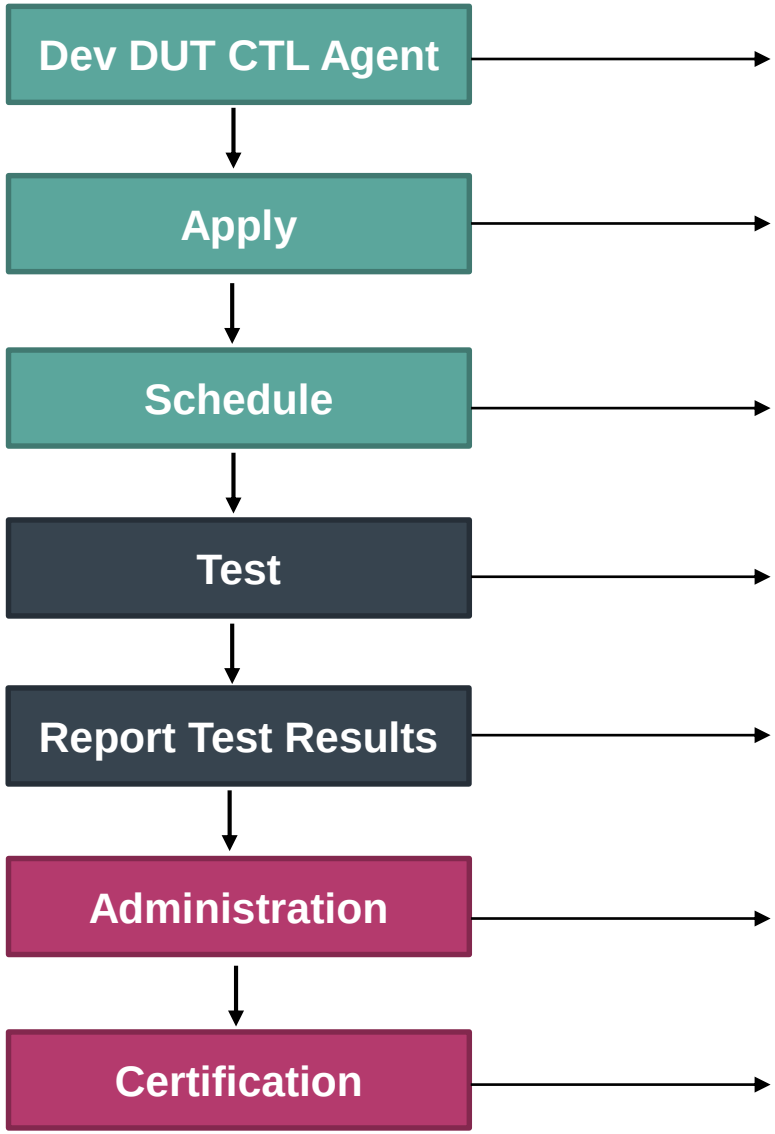
- ATLs require Wi-Fi Test Suite DUT software to be loaded onto devices for testing
  - Wi-Fi Test Suite reduces test time and manual intervention
  - Use of Wi-Fi Test Suite requires DUT to implement Wi-Fi Test Suite commands
  - For DUT software support, members should visit https://www.wi-fi.org/members/certification-testing/wi-fi-test-suite or contact support@wi-fi.org
- Test beds are available for purchase by qualified members for in-house testing prior to ATL testing
  - Qualified members include Sponsor, Contributor, Affiliate and Small Business Introductory Participant levels
  - The same test bed software used by the ATLs is provided to members at no charge

Sample test bed

Product representation of a test bed



ATL certification process



Member develops control agent for testing at the ATL:
https://www.wi-fi.org/members/certification-testing/wi-fi-test-suite

Member applies for certification testing and selects ATL:
http://certifications.wi-fi.org

Member schedules testing with ATL

ATL receives two samples and begins testing

ATL reports test results on Wi-Fi Alliance certification system

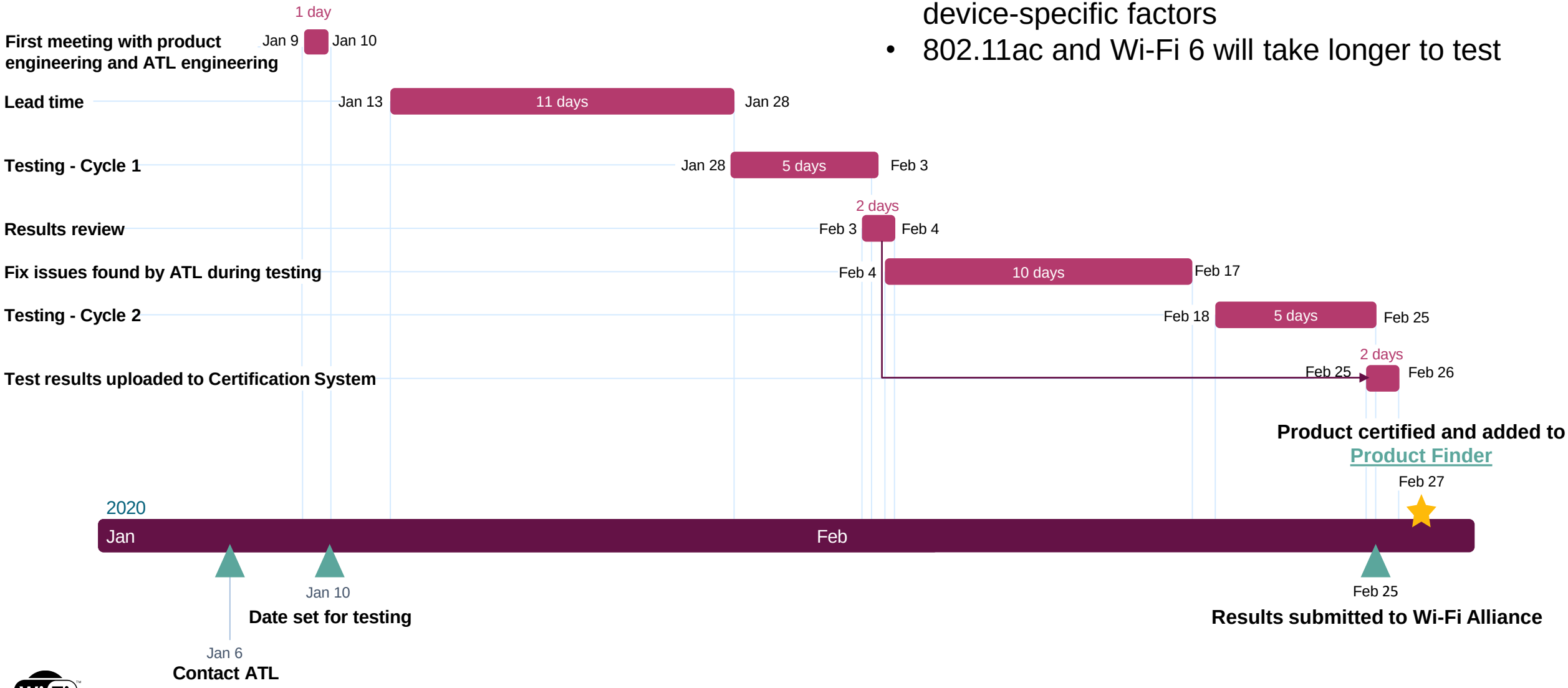
Wi-Fi Alliance reviews test results

Wi-Fi Alliance issues Wi-Fi CERTIFIED Interoperability Certificate

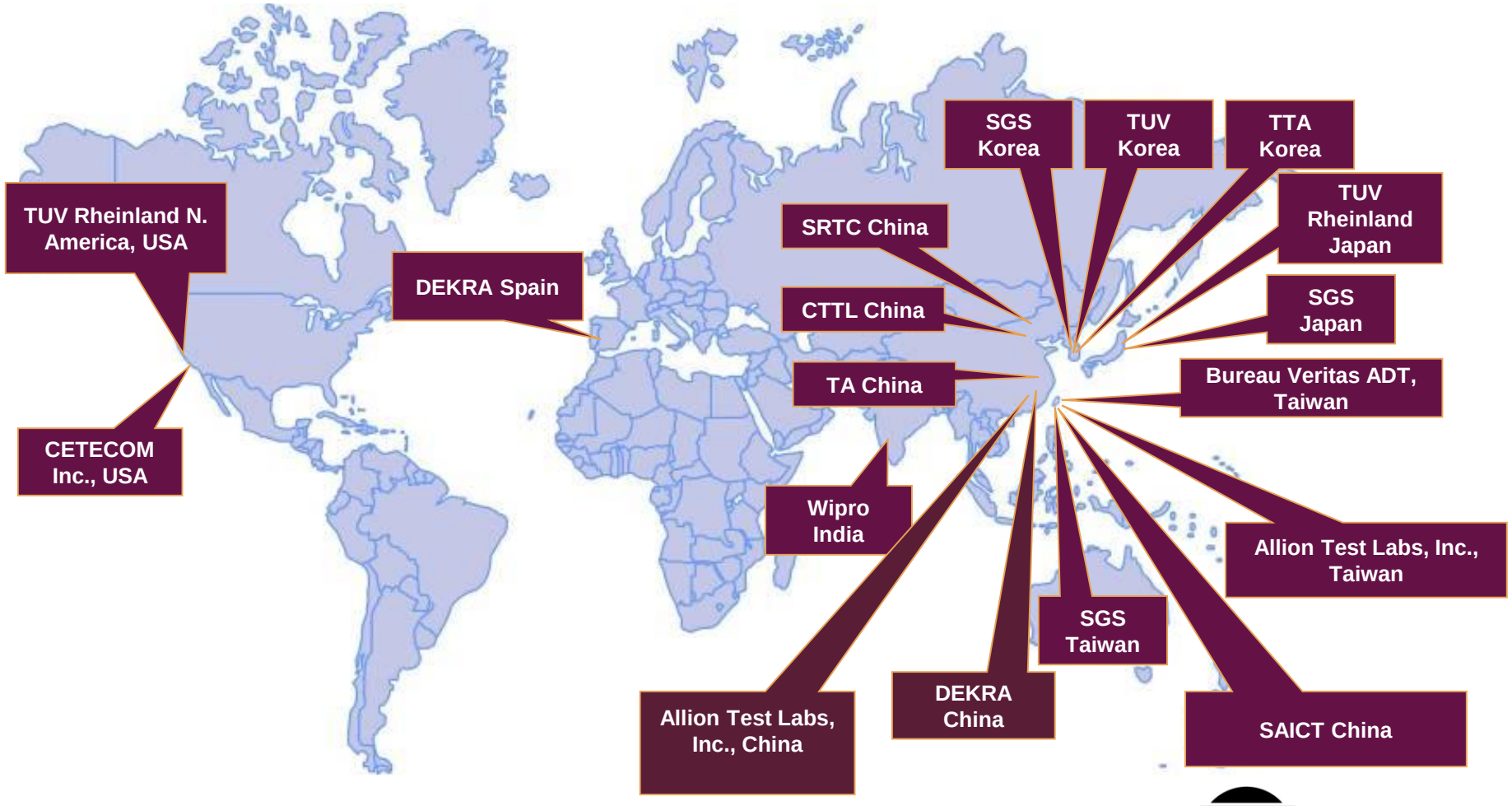
ATL sample timeline

Notes:

- 50% of products require a second testing cycle
- Times are estimates – will vary based on device-specific factors
- 802.11ac and Wi-Fi 6 will take longer to test



Worldwide network of independent test labs delivers accessibility and quality



AUTHORIZED TEST LABORATORY