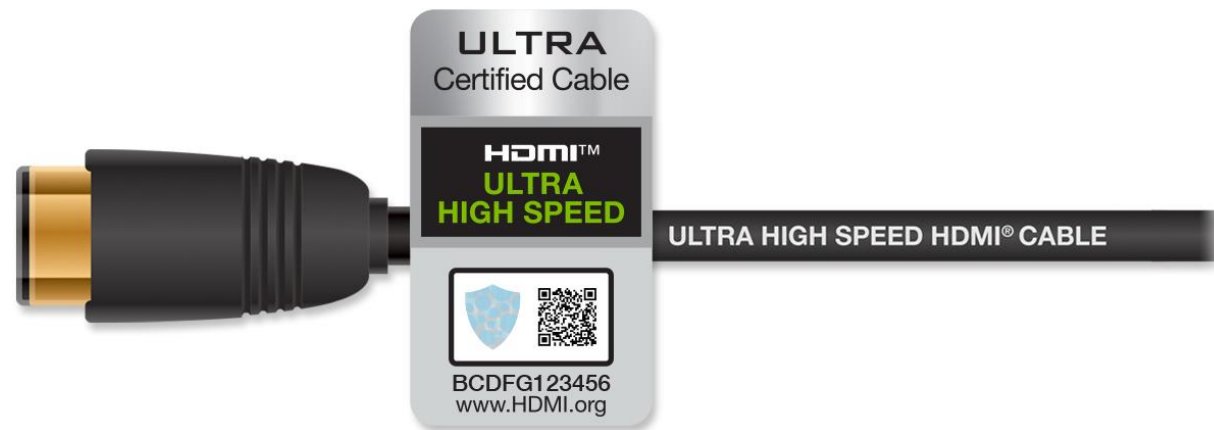# Ultra High Speed HDMI® Cable Certification Program

HDMI Licensing Administrator, Inc.
2022

the
Ultra High Speed HDMI® Cable

HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

The Ultra High Speed HDMI Cable

First HDMI cable defined by the HDMI Forum

Category 3 Cable from the HDMI 2.1a Specification

Ensures support for high resolution video modes
such as 4Kp50/60/100/120 and 8Kp50/60

Low EMI a priority

Ultra High Speed
HDMI Cable
Certification Label

The Ultra High Speed HDMI® Cable Feature Support

And the cable that <u>supports all HDMI 2.1a features</u>:

- Uncompressed and Compressed transmission modes
- Fixed Rate Link (FRL) signaling technology
- Dynamic HDR
- Source-Based Tone Mapping (SBTM)
- 48 Gbps Bandwidth
- Enhanced Audio Return Channel (eARC)
- Auto Low Latency Mode (ALLM)
- Variable Refresh Rate (VRR)
- Quick Frame Transport (QFT)
- Quick Media Switching (QMS)
- HDMI Cable Power

ULTRA
Certified Cable

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The Ultra High Speed HDMI Cable Low EMI Requirement

Low EMI is a priority supported in both
the specification and the CTS

Ultra High Speed HDMI Cables exceed requirements of
the latest international EMI standards

Cables are required to be tested and certified to ensure
low EMI to reduce the possibility of interference with
wireless networks, streaming
media players, Bluetooth devices and
mobile phones as well as wireless gaming controllers and
headphones
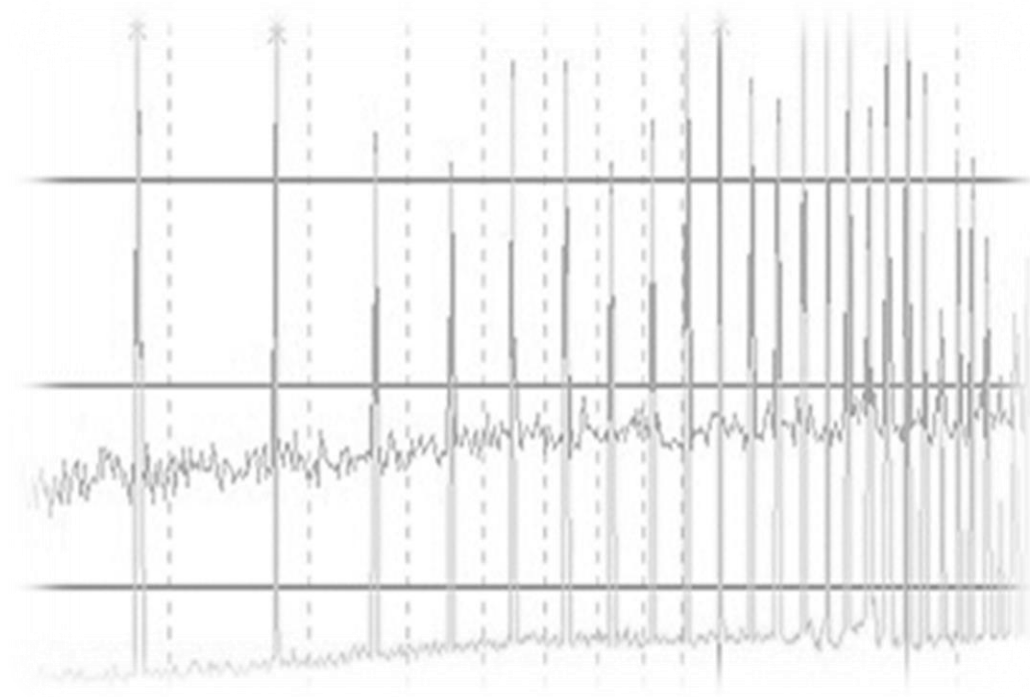
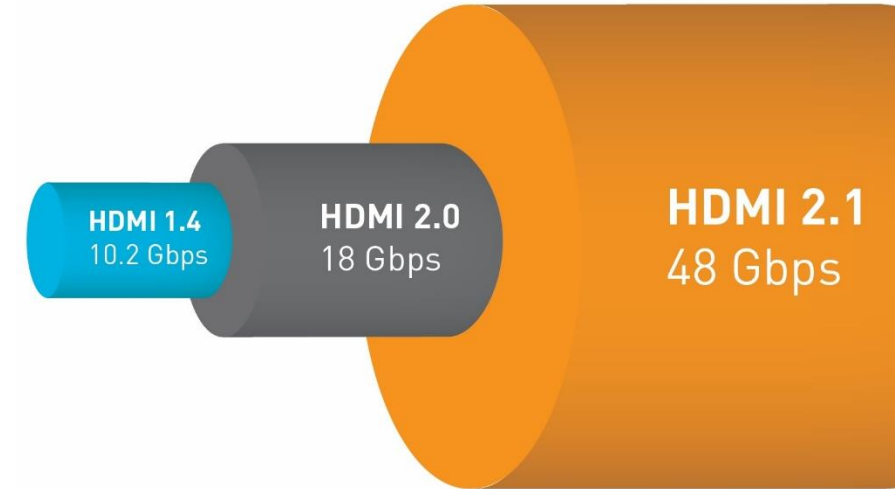# The Ultra High Speed HDMI Cable Detail

Backwards compatible with all previous HDMI-enabled devices

Initial Ultra High Speed HDMI Cable certification is for Type A connectors, but the specification also covers Types C and D

Wire, passive, active and converter cable assemblies are also supported by the HDMI 2.1a Specification

Supports up to 48Gbps bandwidth for uncompressed and compressed feature support

HDMI 1.4 10.2 Gbps

HDMI 2.0 18 Gbps

HDMI 2.1 48 Gbps

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The Ultra High Speed HDMI® Cable Certification Program

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Introduced by the HDMI Forum January 2020

Ultra High Speed HDMI® Cable Certification Program
Assures Support
for All HDMI 2.1a Features Including 4K@120 and 8K@60

New Cable is Mandated to Include
Ultra High Speed HDMI® Certification Label
for Authentication and Verification

Ensuring Ultra High Speed HDMI® Cables are compliant with the
HDMI 2.1a Specification is essential to
the HDMI eco-system

The Ultra High Speed HDMI Cable Certification Program

Requirements:

1 All Ultra High Speed HDMI Cables to be tested and certified in compliance with the HDMI 2.1a Compliance Test Specification (CTS) for Category 3 cables

2 Cables to be tested and certified only at HDMI Forum Authorized Test Centers (Forum ATC)

3 Every length of cable must be tested and certified

4 All certified Ultra High Speed HDMI Cables must be registered with HDMI LA verification and authentication program

5 All Ultra High Speed HDMI Cables to display an Ultra High Speed HDMI® Certification Label on each package

6 Continuing product lifetime verification

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HDMI 2.1a Compliance Test Specification for Cat 3 Cable

1 The HDMI Forum member companies that develop the HDMI 2.1a specification also develop the HDMI 2.1a Compliance Test Specifications (CTS) and are the only ones qualified to develop a test program that ensures compliance to the specification

This collaborative effort of HDMI Forum member companies includes HDMI semiconductor, product and cable manufacturers, as well as HDMI test equipment companies and HDMI Forum Authorized Test Centers

Cable is tested for signal quality to the full HDMI 2.1a 48Gbps bandwidth, low EMI emissions and the new Fixed Rate Link (FRL) signaling technology

HDMI Forum Authorized Test Center Testing Only

2   This requirement adds a very rigorous level of control over what tests are used and how they are conducted

HDMI Forum ATCs are audited by the HDMI Forum Compliance Program Manager to ensure testing complies with the rigorous HDMI 2.1a CTS requirements

Utilizing the HDMI Forum ATCs is the best way to test and certify cables to ensure compliance to the HDMI 2.1a Specification and the CTS

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Every Length Must Be Tested and Certified

3 Different lengths have different electrical and performance characteristics and a single certification should not represent multiple lengths
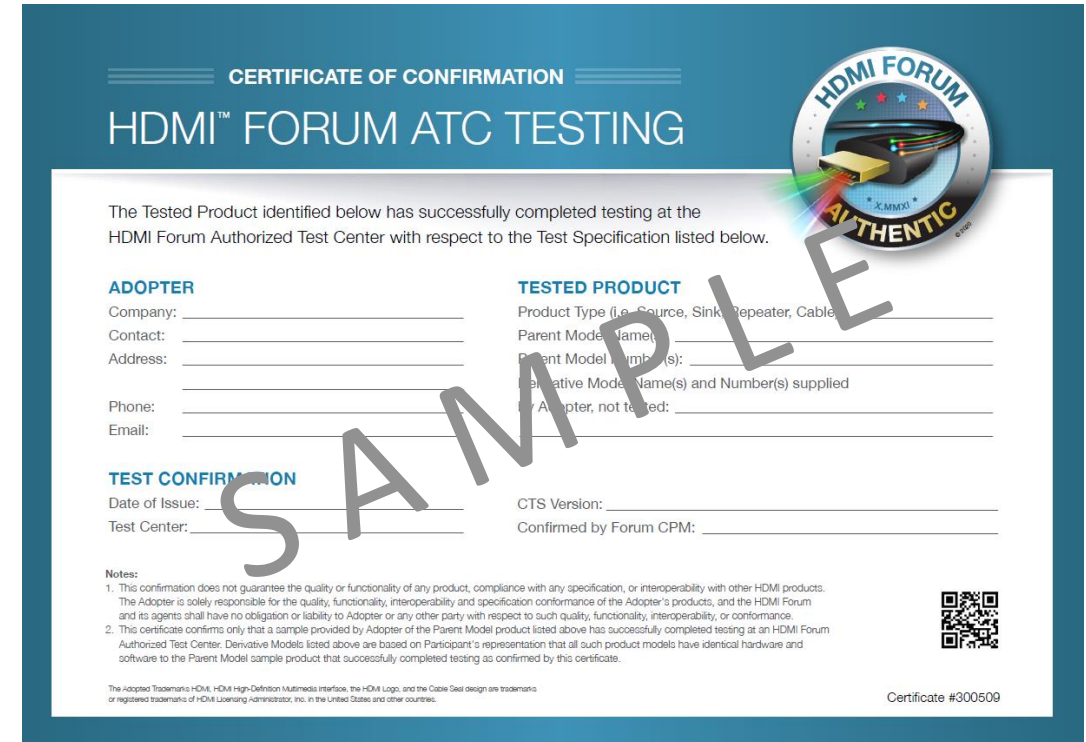
Every length of every cable will be tested and certified individually, and tracked for verification and authentication over the lifetime of that model

ULTRA HIGH SPEED HDMI® CABLE

ULTRA HIGH SPEED HDMI® CABLE

ULTRA HIGH SPEED

Verification and Authentication

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Verification and Authentication System

4 After HDMI Forum ATC testing, test results will be verified by the HDMI Forum Compliance Program Manager

HDMI Forum ATCs will then be issued the official HDMI Forum Certificate of Confirmation to provide HDMI Adopters

HDMI Adopters can then order Ultra High Speed HDMI Certification Labels for their (or their reseller's) cables

HDMI Forum Certificate of Confirmation

Ultra High Speed Certification Label Affixed to Each Package

5

All packages are required to affix and display the official Ultra High Speed HDMI Cable Certification Label

Other units of sale that don't use consumer packages are also required to display the label such as wrapped around the cable or affixed to a commercial polybag

Ultra High Speed Certification Label Details

5

Verification - Cable is verified as certified under the Ultra High Speed HDMI Cable Certification Program

Identification - The official Ultra High Speed HDMI Cable Name Logo appears on the label and is the only way the logo can be displayed on packaging

Authentication – the combination of holographic technology, QR code and label ID number are unique to each individual cable package and enable compliance tracking and anti-counterfeit confirmation

Size:
22mm wide x 38mm high...
Similar to cable over-molding

Continuing Product Lifetime Verification - Tracking

6 Labels enable each model of each cable to be regularly verified and authenticated over its model lifetime including all brand and reseller model numbers

Each individual label is associated with the following information:

- HDMI Adopter cable manufacturer
- HDMI Forum Certificate of Confirmation number ID and supporting test results
- Cable length
- Brand manufacturer/reseller and their specific model numbers
- Compliance audit testing results

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Continuing Product Lifetime Verification – Scan Results

6

Proprietary smart phone app with 2-level commercial scanning technology combines QR + hologram scanning

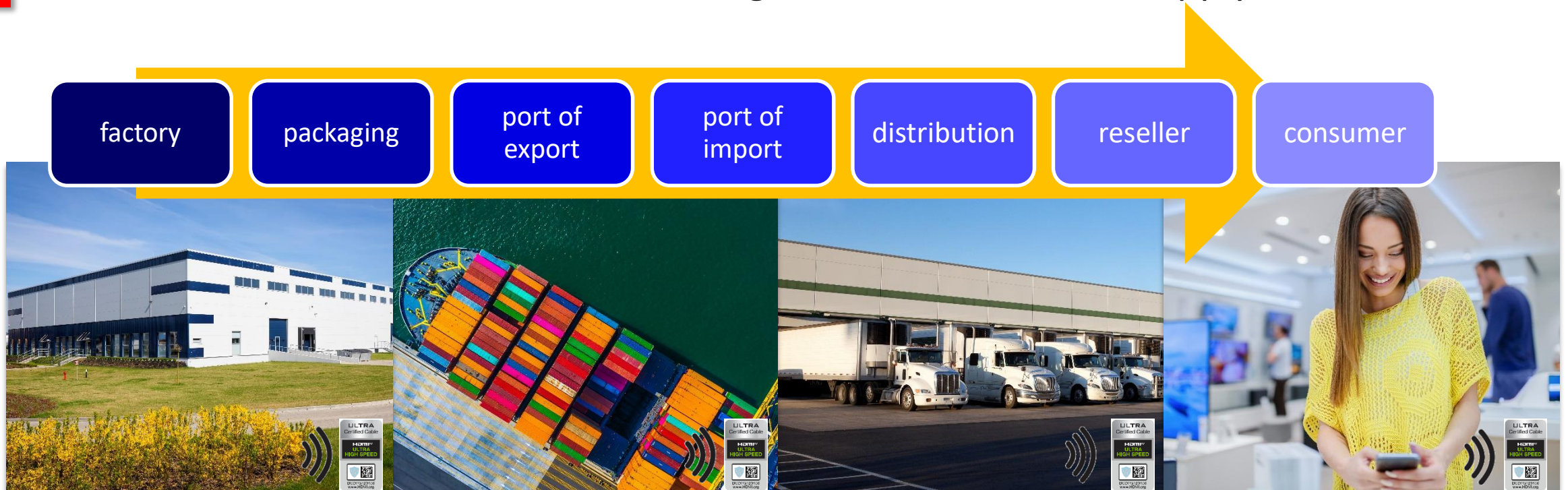Scan results confirm authentication and display cable brand name, model number and length
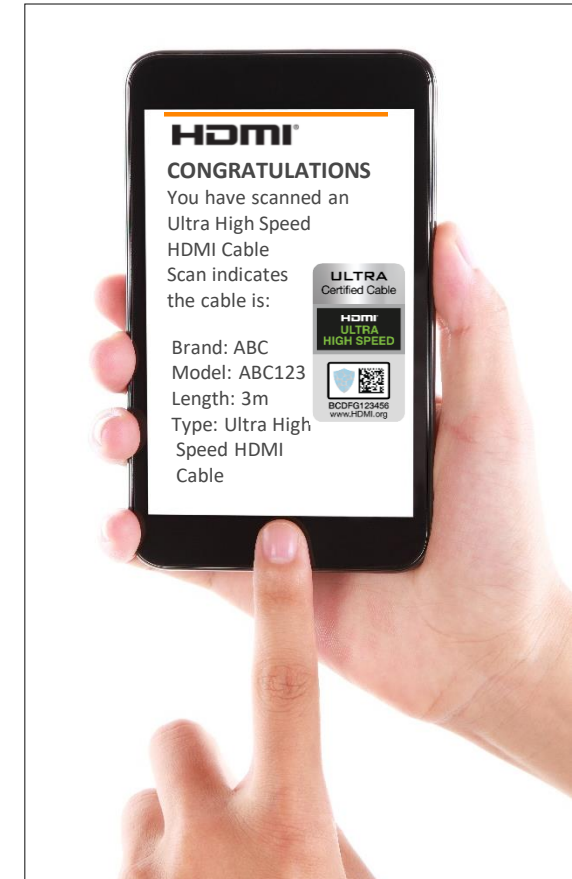
Continuing Product Lifetime Verification – Supply Chain

6 Authentication and verification scanning is utilized across the supply chain

factory · packaging · port of export · port of import · distribution · reseller · consumer

Continuing Product Lifetime Verification – Compliance Audits

6

Production cables may change in manufacture or materials over time which may affect performance characteristics

Regular compliance audit testing helps ensure cables stay in compliance to the specification over the lifetime of the product

Testing is initiated by HDMI LA and performed by the HDMI Forum ATCs to the HDMI 2.1a CTS for Cat 3 cables

Adopters whose cables have failed are given an opportunity to fix the problem and certify a new cable

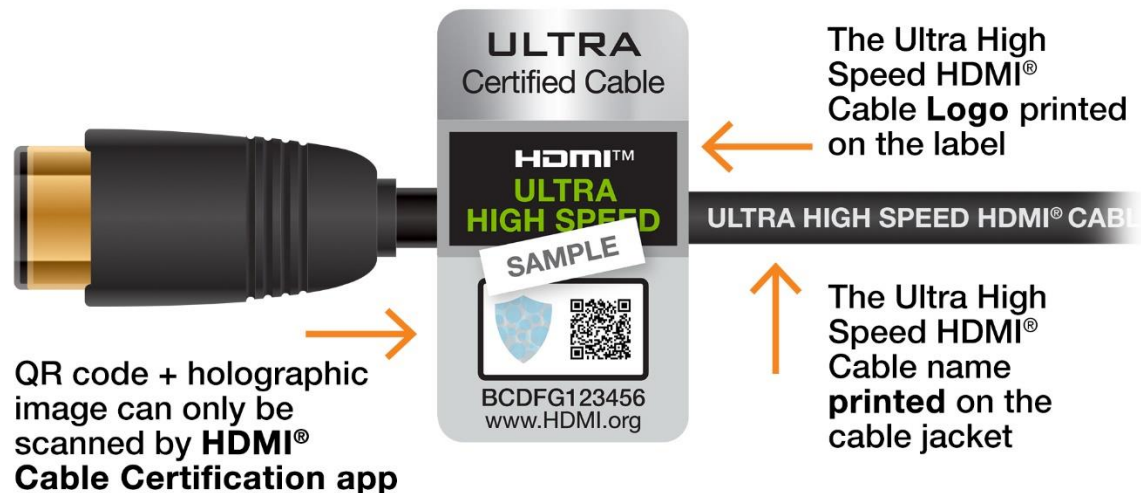Failed cables are removed from the label ordering system

ULTRA HIGH SPEED HDMI® CABLE

How to Identify an Ultra High Speed HDMI® Cable

Graphic available for download and use at https://hdmi.org/press/pressresources

Ultra High Speed HDMI® Cable

2m/6.5ft

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8K@60   4K@120   48Gbps

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SAMPLE

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← The Ultra High Speed HDMI® Cable **Name** on package

← The Ultra High Speed HDMI® Cable Certification **Label** on all packages

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ULTRA HIGH SPEED HDMI® CABLE

The Ultra High Speed HDMI® Cable **Logo** printed on the label →

The Ultra High Speed HDMI® Cable name **printed** on the cable jacket →

QR code + holographic image can only be scanned by **HDMI® Cable Certification app**

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Graphic available for download and use at https://hdmi.org/press/pressresources

Verify Authenticity with Scan from HDMI® Cable Certification Scanning App

Thank You

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