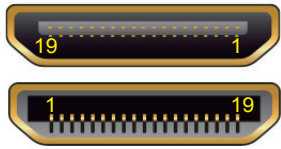


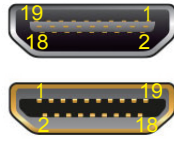
HDMI Cable Tester Manual

1.HDMI Connector Pinout



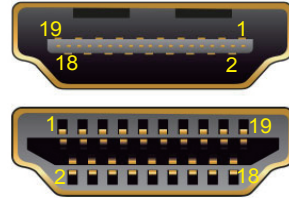
Mini HDMI-C female & male

1. TMDS Date2 shield
2. TMDS Date2 +
3. TMDS Date2 -
4. TMDS Date1 shield
5. TMDS Date1 +
6. TMDS Date1 -
7. TMDS Date0 shield
8. TMDS Date0 +
9. TMDS Date0 -
10. TMDS clock shield
11. TMDS clock +
12. TMDS clock-
13. DDC/CEC Ground
14. CEC
15. SCL
16. SDA
17. Reserved(N.C.)
18. +5 V Power
19. Hot Plug Detect
20. Shell Shield



Micro HDMI-D female & male

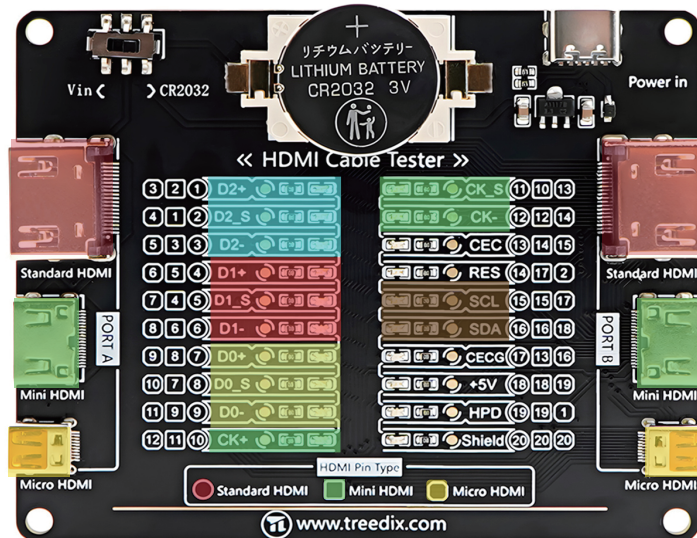
1. Hot Plug Detect
2. Utility(Reserved)
3. TMDS Date2 +
4. TMDS Date2 shield
5. TMDS Date2 -
6. TMDS Date1 +
7. TMDS Date1 shield
8. TMDS Date1 -
9. TMDS Date0 +
10. TMDS Date0 shield
11. TMDS Date0 -
12. TMDS clock +
13. TMDS clock shield
14. TMDS clock -
15. CEC
16. DDC/CEC Ground
17. SCL
18. SDA
19. +5 V Power
20. Shell Shield



Standard HDMI-A female & male

1. TMDS Date2 +
2. TMDS Date2 shield
3. TMDS Date2 -
4. TMDS Date1 +
5. TMDS Date1 shield
6. TMDS Date1 -
7. TMDS Date0 +
8. TMDS Date0 shield
9. TMDS Date0 -
10. TMDS clock +
11. TMDS clock shield
12. TMDS clock-
13. CEC
14. Reserved(N.C.)
15. SCL
16. SDA
17. DDC/CEC Ground
18. +5 V Power
19. Hot Plug Detect
20. Shell Shield

HDMI CableTester Pinout



→ Standard HDMI

→ Mini HDMI

→ Micro HDMI

1) TMDS data channel wires

There are a total of 12 wires, divided into 3 sets of signal lines (D0+, D0-, D1+, D1-, D2+, D2-) with corresponding shield wires, and one set of clock lines (Clock+, Clock-) also with corresponding shield wires.

Signal lines: Used for transmitting audio, video, and auxiliary data.

Clock lines: Used to synchronize the clocks of communicating parties to ensure data transmission accuracy and stability.

Shield wires: Used to reduce crosstalk and enhance EMI radiation resistance.

2) CEC control line (Consumer Electronic Control)

There is 1 wire, designated as CEC.

This line serves as a dedicated control bus, an optional feature in HDMI. It enables devices to automatically control other connected devices. For example, with two display devices connected via HDMI, one device's controller can control the other device using command signals transmitted through the CEC pin.

3) Reserved line

There is 1 wire, marked as Reserved (N.C.) or Utility.

This wire is reserved with no specific purpose.

4) I2C data lines

There are 2 wires, labeled SCL and SDA.

Used for transmitting various types of signals, including DDC (Display Data Channel), crucial for EDID and HDCP transmission. Initially used for Hotplug, as HDMI master and slave devices need DDC to obtain each other's EDID for information retrieval.

5) DDC / CEC ground wire

There is 1 wire, marked DDC / CEC Ground.

Serves as the reference ground for DDC and CEC.

6) 5V power line

There is 1 wire, labeled +5V.

Provides low-voltage, low-power supply to monitors for reading DDC information, allowing TVs to read information even without being plugged into power.

7) Hot plug detection wire

There is 1 wire, designated HotPlugDetect.

Used to signal the source end of a "hot plug" event (e.g., cable removal), typically triggering a reinitialization of the HDMI link at the source.

8) Outer shield wire

There is 1 wire, labeled as the 20th pin.

2.Measure the Pinout of an HDMI Cable.

1)Insert the Connector:

Insert the HDMI male connector into the B port of the test board.

2)Prepare the Multimeter:

Set the multimeter to the diode (continuity) mode.

3)Test Each Wire:

Touch the positive probe of the multimeter to one of the HDMI cable's copper wires.
Touch the negative probe of the multimeter to the shield of the test board.

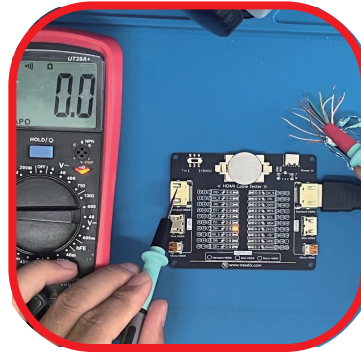
4)Observe the Indicator Light:

When the positive probe of the multimeter touches a particular copper wire and the LED on the test board lights up, the number of the lit LED corresponds to the pin number of that copper wire.

5)Record the Results:

Based on the LED illumination, record the pin number for each copper wire.

This will help you accurately determine the pinout for each copper wire.

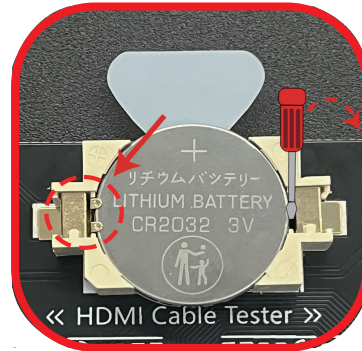


3.Battery Usage instructions

1)Pull out the plastic tab from the battery.

2)If you want to remove the battery, please refer to the picture and use a tool to extract it.

3)Insert the battery into the battery holder at a 45-degree angle, and set the toggle switch to 'CR2032.' Ensure that you do not insert the battery vertically, as this may push the positive terminal of the battery holder (the two yellow metal contacts on the left) below the battery, which could cause the test board to malfunction.



4.Q&A

1) Will every HDMI cable light up all 20 indicators?

No. A standard HDMI cable should light up all 20 indicators, but some manufacturers may omit 4 shielded data lines (TMDS Data0 Shield, TMDS Data1 Shield, TMDS Data2 Shield, TMDS Clock Shield), as well as one DDC/CEC Ground, to reduce costs. Cables without these lines are not standard HDMI cables and are considered non-compliant.

2) Can the tester detect whether a cable supports HDMI 1.4, HDMI 2.0, or HDMI 2.1?

No. Whether HDMI 1.4, 2.0, or 2.1, these are distinctions at the protocol, software, and branding levels. Physically, all these cables have 19 pins, meaning a standard HDMI 1.4, HDMI 2.0, or HDMI 2.1 cable should light up all 20 indicators.

3) Can the tester detect if the cable's wires are correctly connected?

No. This tester can only detect continuity between the ends of the cable and cannot determine if the wire numbers are correct or if adjacent wires have short circuits.

5.Important Notes

1)When you receive the acrylic sheet, you need to tear the yellow film on the top layer



2)This HDMI cable tester supports only Standard HDMI Type A, Mini HDMI Type C, and Micro HDMI Type D. It does not support Type B or Type E interfaces.

⚠WARNING

.INGESTION HAZARD: This product contains a button or coin cell battery.
.DEATH or serious injury can occur if ingested.
.A swallowed button or coin battery can cause **Internal Chemical Burns** in as little as **2 hour**.
.KEEP new and used batteries **OUT OF REACH of CHILDREN**
.Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.



Non replaceable battery

Battery type:CR2032

Nominal voltage:3V

Date:08/2024

Place of Manufacture:Dongguan/China

Website:www.treedix.com

Email:treedixshop@outlook.com