


MURIDEO®

User Manual



MU-STIX-A

STIX Test Ecosystem Signal Analyzer

MU-STIX-G

STIX Test Ecosystem Signal Generator



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Introduction

Murideo's revolutionary compact MU-STIX-G pattern generator and MU-STIX-A analyzer are designed to function as a USB-controlled and monitored pair of signal transmission and data reception verification devices when deployed as part of the Murideo STIX Ecosystem. An asymmetrical individual configuration that mirrors the tested system's component composition is also possible.

Essential standalone test and validation procedures may be executed manually. The MU-STIX-G can send 12 different test patterns via a toggled button press, verifying the integrity of a signal transmission path, endpoint reception by a display device, or as a convenient source substitution when troubleshooting HDMI devices such as a wall plate. The MU-STIX-G and MU-STIX-A can confirm HDMI extension device operation or troubleshoot MXnet TX/RX functionality by acting as substitute source and display/sink devices.

Performing solo or as a duet, Murideo's MU-STIX is an affordable, thumb-drive-sized, extra pair of on-site hands.

Features

- Low-cost, rack-room or on-site test duo
- Ultra-compact form factor
- Transmit and monitor seven standard signal timings
- Asymmetrical use



Specifications

MU-STIX-A

VIDEO	
HDMI Version	HDMI 2.1
HDCP Version	HDCP 2.3 and 1.4
HDCP ON/OFF	Up to 1920x1200 60/ fps
Resolution Timings	720P 60Hz, 1080P 60Hz, 4K 30Hz, 60Hz and 120Hz, 8K 30Hz
Video Encoding	RGB
Video Sampling Models	4:4:4;, 4:2:2, 4:2:0
Color Bit Depth	8-, 10- and 12-bit
Signal Monitor	
Audio (2ch L-PCM), Signal Change, Signal Loss, Connection Time	
Ports	
HDMI	Type A
Power, Control and Firmware	USB-C
Environmental	
Operating Temperature	23 to 125°F (-5 to 51°C)
Storage Temperature	-4 to 140°F (-20 to 60°C)
Humidity Range	5-90% RH (No Condensation)
Power	
Power (Single Unit)	5 VDC, 540 mA @ 48 Gbps
Dimensions	
Dimensions (Single Unit Only - Height/Depth/Width)	mm: 12 X 21 X 81.1
	inch: 0.47 X 0.82 X 3.2
Weight (Single Unit)	27g / 1oz



Specifications

MU-STIX-G

VIDEO	
HDMI Version	HDMI 2.1
HDCP Version	HDCP 2.3 and 1.4
HDCP ON/OFF	Yes
Resolution Timings	720P 60Hz, 1080P 60Hz, 4K 30Hz, 60Hz and 120Hz, 8K 30Hz
Video Encoding	RGB
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HDMI	Type A
Power, Control and Firmware	USB-C
Environmental	
Operating Temperature	23 to 125°F (-5 to 51°C)
Storage Temperature	-4 to 140°F (-20 to 60°C)
Humidity Range	5-90% RH (No Condensation)
Power	
Power (Single Unit)	5 VDC, 270 mA @Gbps
Dimensions	
Dimensions (Single Unit Only - Height/Depth/Width)	mm: 12 X 21 X 81.1
	inch: 47 X .82 X 3.2
Weight (Single Unit)	27g / 1oz

Front Overview



MU-STIX-G

1 - HDMI OUT

2 - OLED Screen

3 - Function Button

4 - USB-C Power Port

MU-STIX-A

1 - HDMI IN

2 - OLED Screen

3 - Function Button

4 - USB-C Power Port

MU-STIX-G



Preparing For Use:

The Murideo STIX-G is powered through the USB Type-C input using a standard USB 2.0 or higher power supply.

- Connect STIX-G to a power supply using the supplied USB power cable or any USB format compatible cable with a Type-C for connection at the STIX-G.
- Insert the STIX-G into the sink* device to be tested (**Murideo does not recommend using female-to-female HDMI adapters when testing with 4K/120 fps or 8K signals as they likely will not pass signals through at those bandwidths**)
 - » STIX-G will not read the EDID from a sink device. The signal parameters of the STIX-G must be configured manually.
 - » *Sink device examples include video displays, video switchers, AV-o-IP endpoints, HDMI extenders, HDMI distribution amplifiers/splitters, and Audio-Video Receivers.

STIX-G Signal Parameters Setting Timing

Timing is also referred to as resolution or pixel structure. The available STIX-G timings are listed in the table shown below on page 9.

- To set timing on the STIX-G, press the FUNC (function) button (some STIX-G versions may have a thumb wheel) adjacent to the USB-C connector.
 - » Short press the FUNC button to scroll through menu options until the Cursor (<<) points to Timing.
 - » Press and hold the FUNC button to select the Timing sub-menu.
 - Repeat short presses to the FUNC button until the cursor (<<) highlights the timing required for testing.
 - Press and continue to hold the FUNC button on the desired timing until the STIX-G OLED display refreshes. Once the screen has refreshed, release the button.

Begin testing. The menu screen times out and then returns to the pattern display screen.

- To exit to the main menu, navigate the cursor (<<) to Return, then press FUNC button until the main menu is displayed.



Setting Color Depth (CD)

To set color depth on the STIX-G, press the FUNC button.

- Short press the FUNC button to scroll through menu options until the cursor (<<) points to CD.
- Press and hold the FUNC button to select the CD sub-menu.
 - » Repeat short presses to the FUNC button until the cursor (<<) highlights the color depth required for testing.
- Press and continue to hold the FUNC button on the desired color depth until the STIX-G OLED display refreshes. Once the screen has refreshed, release the button.

Begin testing. The menu screen times out and then returns to the pattern display screen.

- To exit to the main menu, navigate the cursor (<<) to Return, then press FUNC button until the main menu is displayed.

Setting Color Space (CSC)

To set color space on the STIX-G, press the FUNC button.

- Short press the FUNC button to scroll through the menu options until the cursor (<<) points to CSC.
- Press and hold the FUNC button to select the CSC sub-menu.
 - » Repeat short presses to the FUNC button until the cursor (<<) highlights the color space required for testing.
- Press and continue to hold the FUNC button on the desired color space until the STIX-G OLED display refreshes. Once the screen has refreshed, release the button.

Begin testing. The menu screen times out and then returns to the pattern display screen.

- To exit to the main menu, navigate the cursor (<<) to Return, then press FUNC button until the main menu is displayed.

Setting HDCP

To set HDCP on the STIX-G, press the FUNC button.

- Short press the FUNC button to scroll through the menu options until the cursor (<<) points to HDCP.
- Press and hold the FUNC button to select the HDCP sub-menu.
 - » Repeat short presses to the FUNC button until the cursor (<<) highlights the HDCP version required for testing.
- Press and continue to hold the FUNC button on the desired HDCP until the STIX-G OLED display refreshes. Once the screen has refreshed, release the button.

Begin testing. The menu screen times out and then returns to the pattern display screen.

- To exit to the main menu, navigate the cursor (<<) to Return, then press FUNC button until the main menu is displayed.



Setting Test Patterns

To set test patterns on the STIX-G, press the FUNC button.

- Short press the FUNC button to scroll through menu options until the cursor (<<) points to Pattern.
- Press and hold the FUNC button to select the Pattern sub-menu.
 - » Repeat short presses to the FUNC button until the cursor (<<) highlights the pattern you wish to use for testing.
- Press and continue to hold the FUNC button on the desired pattern until the STIX-G OLED display refreshes. Once the screen has refreshed, release the button.

Begin testing. The menu screen times out, then returns to the pattern display screen.

- To exit to the main menu, navigate the cursor (<<) to Return, then press FUNC button until the main menu is displayed.

1 – Timing	2 - Color Depth(CD)	3 – Color Space(CSC)	4 – HDCP	5 – Pattern
720P 60Hz	0 - 8 bit	0 - RGB	0 - No HDCP	0 - Black
1080P 60Hz	1 - 10 bit	1 - Y422	1 - H14	1 - Checkerboard
4K 30Hz	2 - 12 bit	2 - Y444	2 - H23	2 - Strip (vertical)
4K 60Hz		3 - Y420		3 - Red
4K 120Hz			Note: HDCP 1.4	4 - Green
is TMDS only				5 - Blue
8K 30Hz				6 - White
8K 60Hz				7 - Ramp
				8 - Red Ramp
				9 - Green Ramp
				10 - Blue Ramp
				11 - PRBS
				12 - Color Bars

MU-STIX-A



Preparing For Use:

The Murideo STIX-SG is powered through the USB Type-C input using a standard USB-2.0 or higher power supply.

- Connect STIX-A to a power supply using the supplied USB power cable or any USB format compatible cable with a Type-C for connection at the STIX-A
- Insert the STIX-A into the source* device to be tested (**Murideo does not recommend using female-to-female HDMI adapters when testing with 4K/120 fps or 8K signals as they likely will not pass signals through at those bandwidths**)
 - *Source device examples include Computers, streamers, video switchers, AV-o-IP endpoints, HDMI extenders, HDMI distribution amplifiers/splitters, or Audio Video Receivers.

- STIX-A OLED will display:
 - A Video image of the source
 - Timing information of the source
 - Whether the signal is TDMS or FRL
 - Color Space
 - Color Depth

Displaying additional signal information:

- Press the FUNC (function) button to scroll through:
 - » OTHER INFO
 - HDCP
 - Audio Freq
 - Audio Size (bit rate)
 - Audio Type
- Press the FUNC button a second time to scroll through:
 - » SIGNAL MONITOR
 - Signal Change
 - Sync Loss (number of times sync was lost wit source)
 - Time (how long signal has been active without sync. Loss)
- Pressing the FUNC button a third time returns to the main display screen.



Warranty

AVPro Global Holdings (DBA MURIDEO) offers a 2 year international limited warranty for its Murideo products. Any product first sold to you is guaranteed to be free from defects in both components and workmanship under regular uses. The warranty period commences on the date the item ships.

Attention:

Your invoice with the date of purchase, model number and serial number of the product is your proof of the date of purchase. The International Limited Warranty is applicable and shall be honored in every country where MURIDEO or its Authorized Service Providers offer warranty service subject to the terms and conditions provided in this International Limited Warranty Statement. Products included in this warranty:

- Murideo SEVEN Series Generators
- Murideo SIX Series Generators
- Murideo SIX Series Analyzers
- Murideo Fox & Hound Series
- Murideo HDMI Test Monitor Series
- Murideo GAX Series
- Murideo STIX Series

During the warranty period, the defective hardware of Murideo products will be either repaired or replaced, with new or like new products, at the discretion of Murideo. This International Limited Warranty covers the costs of service parts and labor required to restore your product to fully functional condition. MURIDEO will, at its discretion, repair or replace any defective products or parts thereof covered by this International Limited warranty with refurbished parts of the product that are equivalent to new or like new products in both functionality and performance. A product or part that is repaired or replaced under this International Limited Warranty shall be covered for the remainder of the original warranty period applying to the product or part, or for 90-days, whichever expires last. All exchanged parts and products under this International Limited Warranty will become the property of MURIDEO.



Obtaining the Warranty Service

Warranty service or Returned Merchandise Authorization (RMA) under this International Limited Warranty will be honored only if claims are made within the warranty period. For notifications to MURIDEO or products outside the warranty period, the process will be the same, but charges may apply. Contact details may be obtained on MURIDEO website <https://www.murideo.com/>

Customers are requested to perform the following actions before claiming MURIDEO product as defective:

- A. Owner must notify MURIDEO, during the warranty period, in writing of alleged defect, and allow MURIDEO a reasonable opportunity to inspect the allegedly defective product;
- B. No Product may be returned without MURIDEO's consent, The MURIDEO RMA# must accompany all returns, and all returns must be delivered to MURIDEO within the warranty period;
- C. Owner may, then at its own expense, return the allegedly defective Product, freight pre-paid and in the original packaging, accompanied by a brief statement explaining the alleged defect to MURIDEO;
- D. If MURIDEO determines that any returned Product is not defective, or if MURIDEO determines that the defect is not covered by the warranty, MURIDEO will return the Product to the Owner at Owner's expense, freight collect, and Owner agrees to pay MURIDEO's reasonable cost of handling and testing;
- E. Upon determining that a returned product is defective, to receive warranty service Owner will need to present the invoice showing the original purchase transaction. If shipping the product, Owner will need to package it carefully and send it, transportation prepaid by a traceable, insured method, to the MURIDEO Service Center. Package the product using adequate padding material to prevent damage in transit. The original container is ideal for this purpose. Include the RMA #, your name, return shipping address, email address and telephone number where you may be reached during business hours, inside the shipping package with the unit. Any replacement unit will be warranted under these Terms and Conditions for the remainder of the original warranty period or ninety (90) days whichever is longer.

Refer to user manual available for download on our website <http://www.murideo.com/> for important tips on how to operate and troubleshoot the product.



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This Limited Warranty gives you specific legal rights. You may also have other rights that may vary from state to state or from country to country. You are advised to consult applicable state or country laws for full determination of your rights. Some jurisdictions do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long a warranty lasts, so the above exclusion and limitations may not apply to everyone.



Support

For service and support, contact your local dealer.

To find your dealer or to contact MURIDEO support, go to:

<https://support.murideo.com/>

Or call

+1-605-330-8491

for worldwide technical support

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Limitation of Liability

MURIDEO reserves the right to refuse warranty service of products under disputable conditions. MURIDEO also holds the rights to declare final decision whether products are within warranty conditions. The following actions and damages will result in voiding the limited warranty:

- Damage caused by act of nature, such as fire, flood, wind, earthquake, lightning, etc.
- Damage or incompatibility caused by failure to perform a proper installation or to provide an appropriate operational environment for the product, including but not limited to unstable wired/wireless network connection and phone lines, bad grounding, external electro-magnetic fields, direct sunlight, high humidity and vibration.
- Damage caused by impact with other objects, dropping, falls, spilled liquids, or submersion in liquids.
- Damage caused by unauthorized repair or disassembling of the product.
- Damage caused by any other abuse, misuse, mishandling, or misapplication.
- Damage caused by third party peripherals (including but not limited to visible damages on motherboard or other electronic parts of the product such as burn spots after electric discharge, melting, fusing, splitting, etc.)
- Any unauthorized software or modification of built-in software not approved by MURIDEO.
- The serial number of the product (or serial number stickers of its parts) has been modified, removed, blurred or damaged.
- Defects caused by transportation, handling or customer abuse.



Thank you for choosing Murideo!
Please contact us with any questions, we are
happily at your service!



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