



# MURIDEO®



## **User Manual** **MU-STIX-G** STIX Test Ecosystem Signal Generator

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## Introduction

Murideo's MU-STIX-G is a revolutionary, ultra-compact HDMI 2.1 test pattern generator. Ideal for commercial and residential integrators, this cost-effective and user-friendly tool simplifies the verification of HDMI signal chains and display capabilities.

The STIX-G supports cutting-edge HDMI 2.1 (FRL) signals up to 48 Gbps and legacy HDMI (TMDS) signals, making it versatile for a wide range of displays and signal paths. It can generate video test patterns at resolution timings from 720p/60 Hz up to 8K /30 Hz, including 4K/120 Hz. With 13 built-in test patterns and six preset timing options, the STIX-G is equipped to meet the demands of any HDMI testing environment, ensuring seamless video signal distribution across the chain.

Designed for convenience, the STIX-G features a low power draw and can be powered directly via a USB-A port on an AV receiver, a display, or a USB Type-C port on a mobile device. Compact, reliable, and powerful, the MU-STIX-G is a must-have tool for HDMI signal and display verification.

## Features

- Cost-effective HDMI 2.1b, 8K 48 Gbps (FRL) compliant generator
- Generates 720p, 1080p, 4K and 8K signal timings at 8-, 10-, and 12-bit color depths, in RGB, 4:2:2, and 4:4:4 color spaces
- Configurable HDCP with options for versions 1.4 and 2.3 (1.4 is TDMS only) or Off.
- 13 built-in test patterns and six preset timing options, including pseudo-random binary sequence, a diagnostic tool to identify transmission-related issues such as bit errors, signal attenuation, or timing problems.
- A low power draw allows the device to be powered over USB-A (from an AVR or display) or via USB Type-C from a mobile device
- OLED color screen with an intuitive navigation menu

## In The Box

- MU-STIX-G
- 5-ft. USB Type-C to USB Type-A Cable

## Specifications



Video	
HDMI Version	2.1
HDCP Version	1.4 and 2.3
HDCP On/Off	Yes
Resolution Timings	4K & 8K/30 Hz 720p, 1080p, 4K/60Hz 4K/120 Hz
Video Encoding	RGB (Limited), YCbCr
Video Sampling Models	RGB 4:4:4, YUV 4:4:4, YUV 4:2:2
Color Bit Depth	8-, 10-, 12-bit
Patterns	Black, Checkbox, Stripes, Red, Green, Blue, White, White Ramp, Red Ramp, Green Ramp, Blue Ramp, PRBS, Color Bars
Audio	
Audio Output	Not Supported
Ports	
HDMI	Male Type-A
Firmware/Control	USB Type-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% to 90% RH (No condensation)
Power	
Power	5 VDC, 270 mA
Power Consumption	1.35 W Max
Dimensions	
Dimensions (Height, Depth, Width)	mm: 12 x 21 x 81.1
	in: .47 x .82 x 3.2
Weight	27 g / 1 oz

## Front Overview

- 1 – HDMI IN
- 2 – OLED Screen
- 3 – Function Button
- 4 - USB-C: Power, Control (CTL)  
In-system Programming (ISP)



## Preparing For Use

The Murideo STIX-G is powered through the USB Type-C input using any standard USB power supply.

- Connect the STIX-G to a power supply using the supplied USB cable. Any USB Type-C to Type-C or Type-C to Type-A cable may be connected to the STIX-G.
- Insert the STIX-G into an HDMI input of the sink device to be tested.
  - Murideo does not recommend using female HDMI extension cables or couplers when testing HDMI 2.1 FRL Signals.
  - Sink devices include AVRs, Displays, HDMI Matrixes, or any HDMI device with an HDMI input.
- Signal parameters of the STIX-G are configured manually.
  - The STIX-G does not automatically adjust its configuration to match the preferred timing specified in the Sink device's EDID.

## Home Screen

By default, the STIX-G will power up to the Home Screen shown below:



The user can set the following five parameters:

1. Test Pattern
2. Resolution and Timing
3. Bit Depth
4. Color space
5. HDCP Version

By default, these values are:

1. Color Bars
2. 1080p/60 Hz
3. 8 bit
4. RGB 4:4:4
5. No HDCP

To adjust these parameters, short press the function button (FUNC).

## Main Menu



The main menu allows the user to select from seven options:

1. TIMING
  - a. Resolution and Timing
2. CD
  - a. Color Depth / Bit Depth
3. CSC
  - a. Color space
4. HDCP
  - a. HDCP Version
5. PATTERN
  - a. Test Patterns
6. MACHINE CONFIG
  - a. Resetting and Firmware Version
7. RETURN
  - a. Return to Home Screen

## Navigating the Menu

1. To navigate the menu, short-press the function button to scroll through the available options.  
Menu position is denoted by the Cursor (<<)
2. To select a menu option, press and hold the function button for 3 seconds.
3. Once a menu option is selected, the selected options sub-menu will open.
4. After 10 seconds of inactivity of the function button, the STIX-G will return to the home screen.
  - a. If the STIX-G returns to the home screen due to inactivity, the last menu will be stored and recalled when the function button is pressed.
  - b. Example: The Timing menu is active but did not return to the main menu and has timed out to the Home Screen. After a short press of the function button, the Timing menu will be replaced by the main menu.

## Timing

Timing consists of two elements: Resolution and Frame Rate. The STIX-G has six combinations to choose from:

1. 720p/60
2. 1080p/60
3. 4K/30
4. 4K/60
5. 4K/120
6. 8K/30

After selecting the menu option, the active selection will become highlighted.





## Color Depth (CD)

Color Depth, sometimes called Bit Depth or Bits Per Component, adjusts the Depth of the defined Timing Resolution and Chroma.

The STIX-G has three selectable Color Depths:

1. 8-bit
2. 10-bit
3. 12-bit

After selecting the menu option, the active selection will become highlighted.

## Color Space (CSC)

Color space refers to the encoding method of the video signal. The STIX-G can output Limited color space (16-235) in RGB and YCbCr (short-formed to YUV) formats.

There are three available color spaces:

1. RGB 4:4:4
2. YUV 4:4:4
3. YUV 4:2:2
  - a. Limited to 8-bit Color Depth selection; transmitted at 12-bit Color Depth.

After selecting the menu option, the active selection will become highlighted.



## HDCP

HDCP (High-Bandwidth Digital Content Protection) is a form of digital rights management within the HDMI video transmission. The STIX-G can be operated with or without HDCP enabled.

Available selections include:

1. No HDCP
  - a. Compatible with all signals.
  
2. HDCP 1.4
  - a. Compatible with TMDS signals below 18 Gbps.
  - b. Incompatible with FRL Signals.
  
3. HDCP 2.3
  - a. Compatible with TMDS signals below 18 Gbps.
  - b. Required for all FRL Signals if HDCP encrypted.

After selecting the menu option, the active selection will become highlighted.



## Pattern

In addition to testing HDMI sink devices, the STIX-G contains 13 patterns, including solid colors, ramps, and more. These patterns allow the STIX-G to be used for basic color checking and white balancing of displays.

Patterns Include:

1. Black
2. CHK\_BOX (Checker Box)
3. STRIP (Stripes)
4. Red
5. Green
6. Blue
7. White
8. RAMP (White Ramp)
9. R\_RAMP (Red Ramp)
10. G\_RAMP (Green Ramp)
11. B\_RAMP (Blue Ramp)
12. PRBS (Pseudorandom Binary Sequence)
13. C-BARS (Color Bars)

[Refer to references here: [Test Pattern Saves](#)]

After selecting the menu option, the active selection will become highlighted.



## Machine Config

Machine Config contains the options for resetting the device to its default state or checking the unit's current firmware. There are two options inside this menu option:

### 1. MACHINE RESET

- a. Resets the STIX-G back to its default state.
- b. By Default, these values are:
  1. Timing
    - a. 1080p/60\
  2. CD
    - a. 8 bit
  3. CSC
    - a. RGB 4:4:4
  4. HDCP
    - a. No HDCP
  5. PATTERN
    - a. Color Bars

### 2. MACHINE VERSION

[Insert Machine Rev Picture]

- a. Version
  - i. The Main Build Version
- b. Revision
  - i. The Firmware Revision of the Main Build
- c. After selecting MACHINE VERSION, press and hold the function button for three seconds to return to the main menu.



## Return

Machine Config contains the options for resetting the device to its default state or checking the unit's current firmware. There are two options inside this menu option:

### 3. MACHINE RESET

- a. Resets the STIX-G back to its default state.
- b. By Default, these values are:

#### 6. Timing

- a. 1080p60

#### 7. CD

- a. 8 bit

#### 8. CSC

- a. RGB444

#### 9. HDCP

- a. No HDCP

#### 10. PATTERN

- a. Color Bars

### 4. MACHINE VERSION

[Insert Machine Rev Picture]

- a. Version
  - i. The Main Build Version
- b. Revision
  - i. The Firmware Revision of the Main Build
- c. After selecting MACHINE VERSION, press and hold the function button for 3 seconds to return to the main menu.

## Screen Saver

The blank (black) screen saver will appear after five minutes of inactivity; the STIX-G is still operational during this state. Users may open the Home Screen anytime by pressing the function button. Additionally, upon receiving serial data, the Home Screen will open.

## Firmware and Control



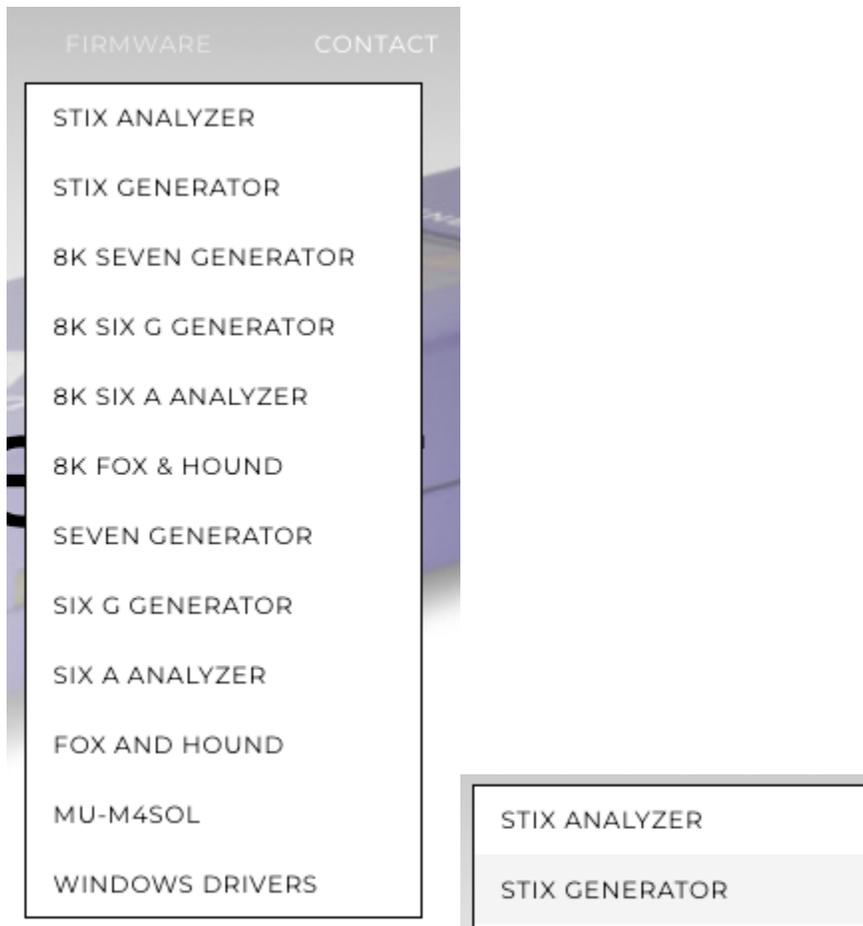
Updating the firmware

Requirements:

- Windows PC
- USB-A or USB-C to USB-C data cable for a direct serial connection
- Firmware FWM file and Uploader
- CH340 USB Serial Driver (available on [murideo.com](http://murideo.com))

Follow the steps below to update the firmware on the STIX-G:

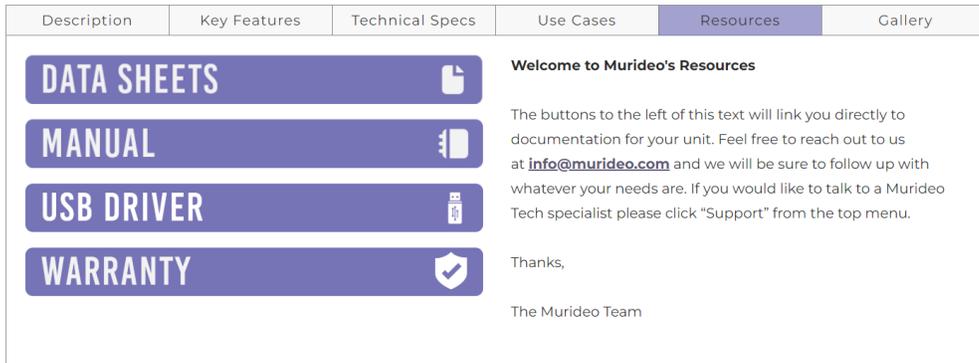
1. Find the firmware file under the firmware dropdown on [murideo.com](http://murideo.com)



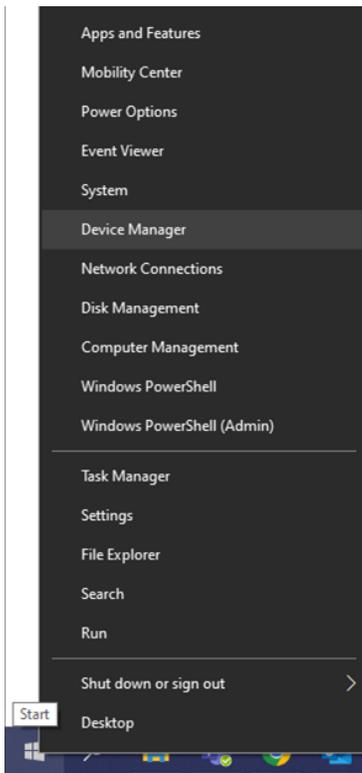
2. Use a USB-C cable to connect a PC directly to the STIX-G's USB-C CTL/USP ports.

3. Download and install the CH340 USB Serial Driver.

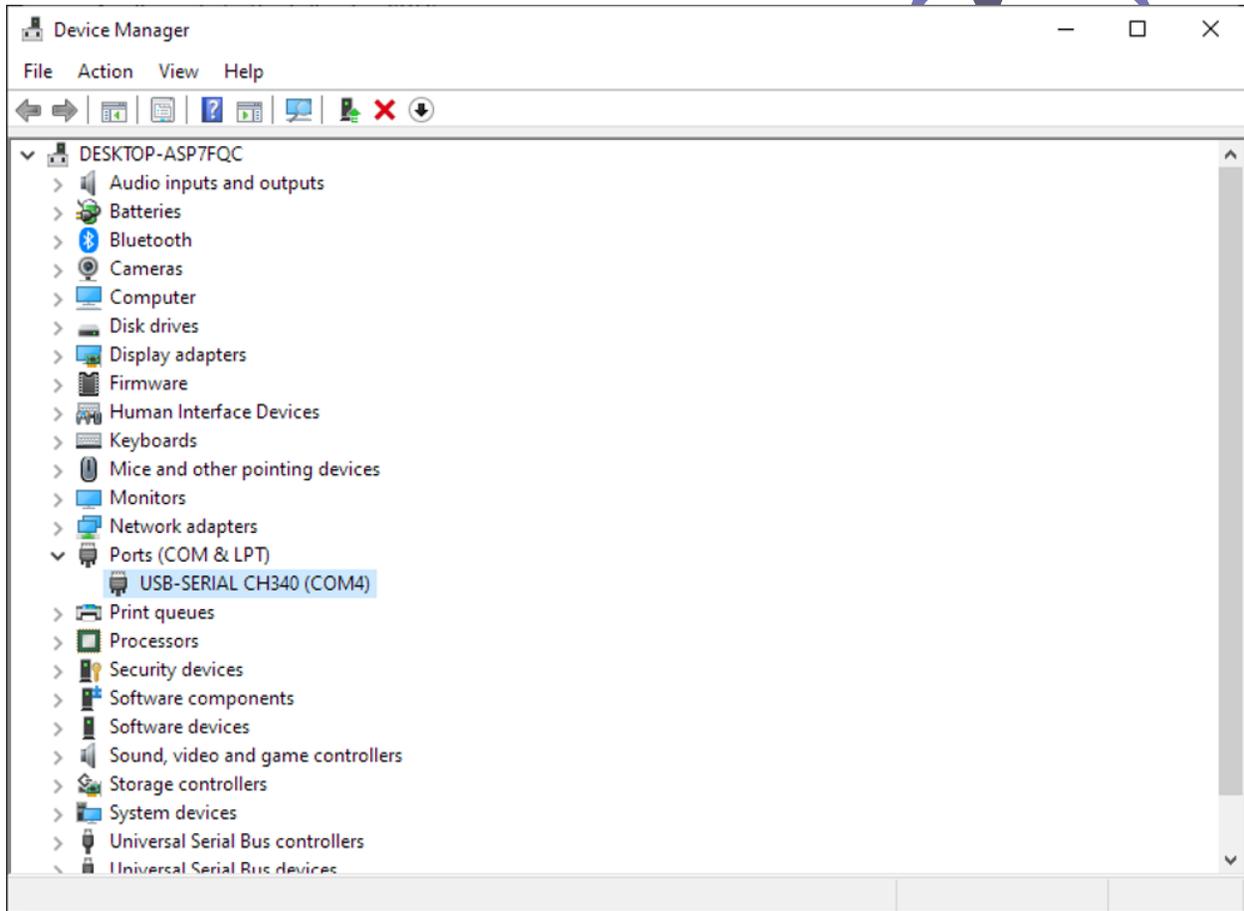
- a) Navigate to [www.murideo/mu-stix-g.html](http://www.murideo/mu-stix-g.html)
- b) Click on the Resources tab.
- c) Click the USB DRIVER link.
- d) Download the CH340 driver to your PC.



4. Right-click on the Windows Start button and select Device Manager.



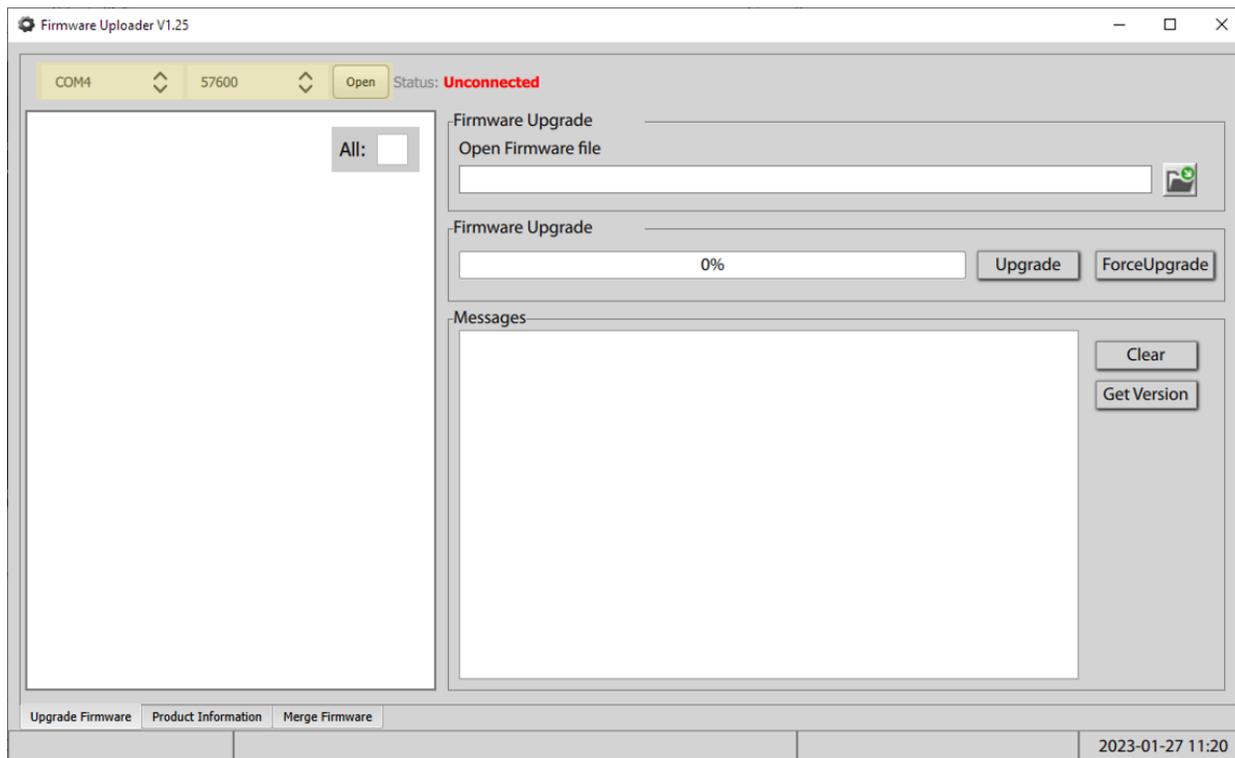
Then select the Ports (COM & LPT) drop-down menu and locate the port labeled USB-SERIAL CH340 (COMX) to confirm that the STIX-G is connected to the PC.



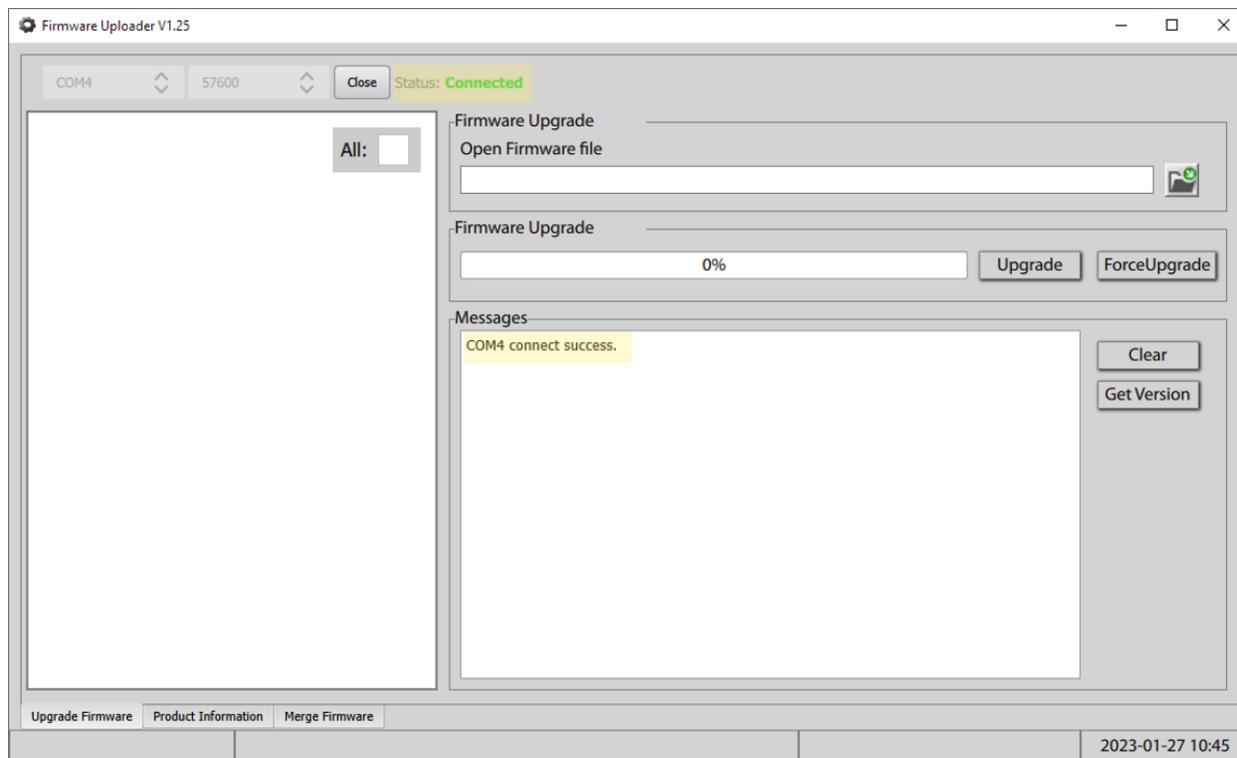
## 5. Open the Firmware Uploader program

Name	Status	Date modified	Type	Size
Firmware Uploader V1.25.exe	✓	6/30/2023 1:31 PM	Application	35,079 KB
MU-STIX-G_Ver1.49.00.01 (A598).fwm	✓	1/1/2025 10:21 AM	FWM File	109 KB

Select the correct COM, Baud: 57600, and select the Open button to open the port.

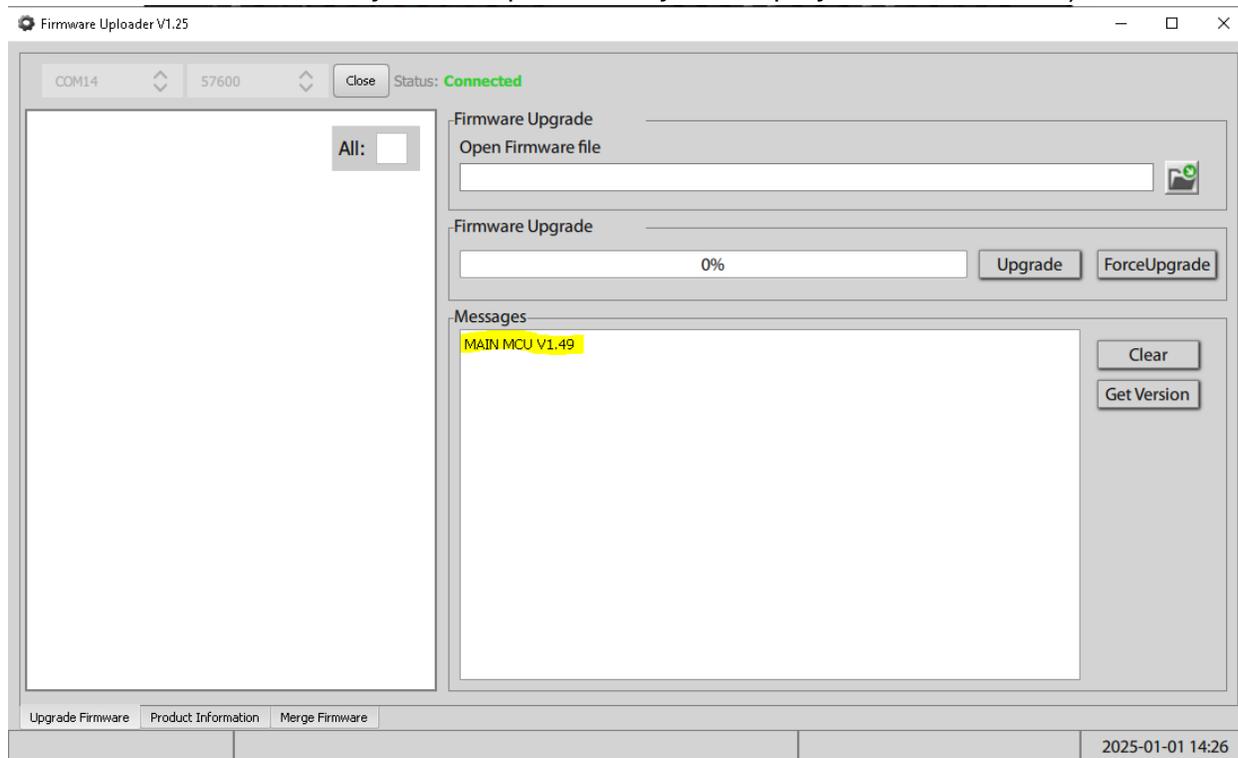


The Status will now show as Connected in green text with COMX connect success under Messages.





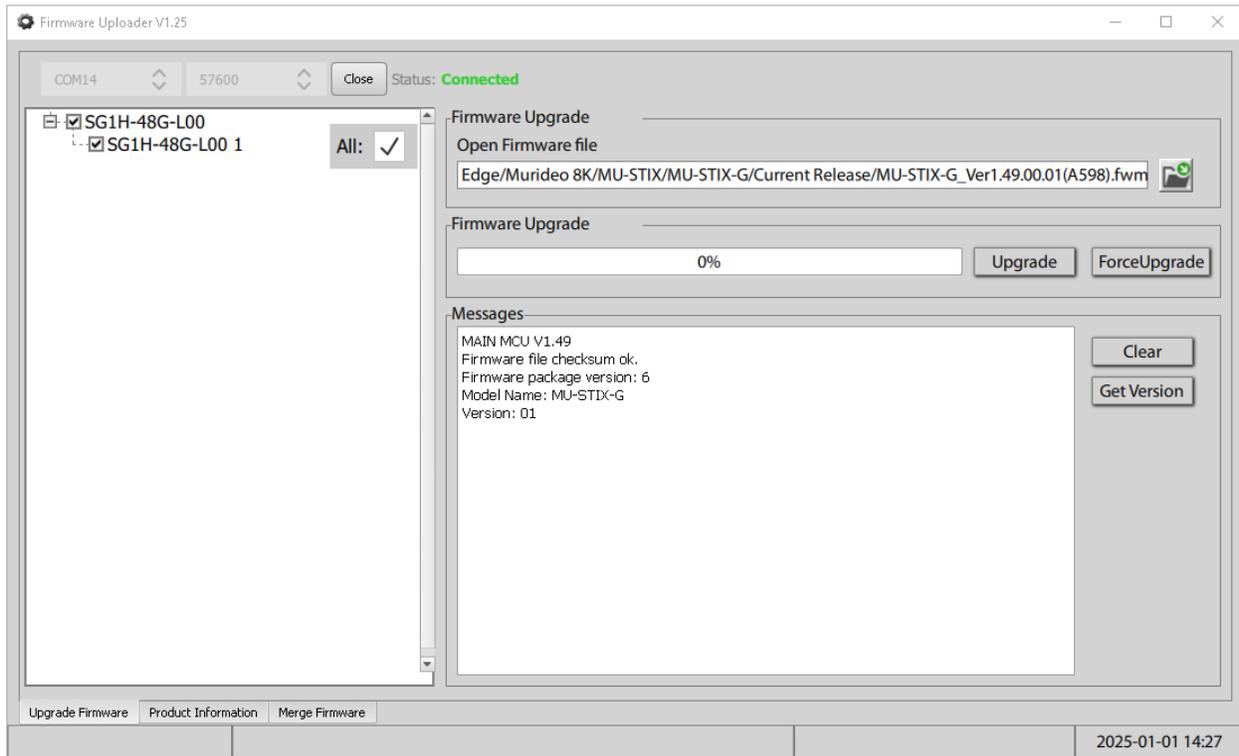
6. Select the Get Version button to see the current firmware version on the STIX-G (note: screenshot below is only an example and may not display the exact version).



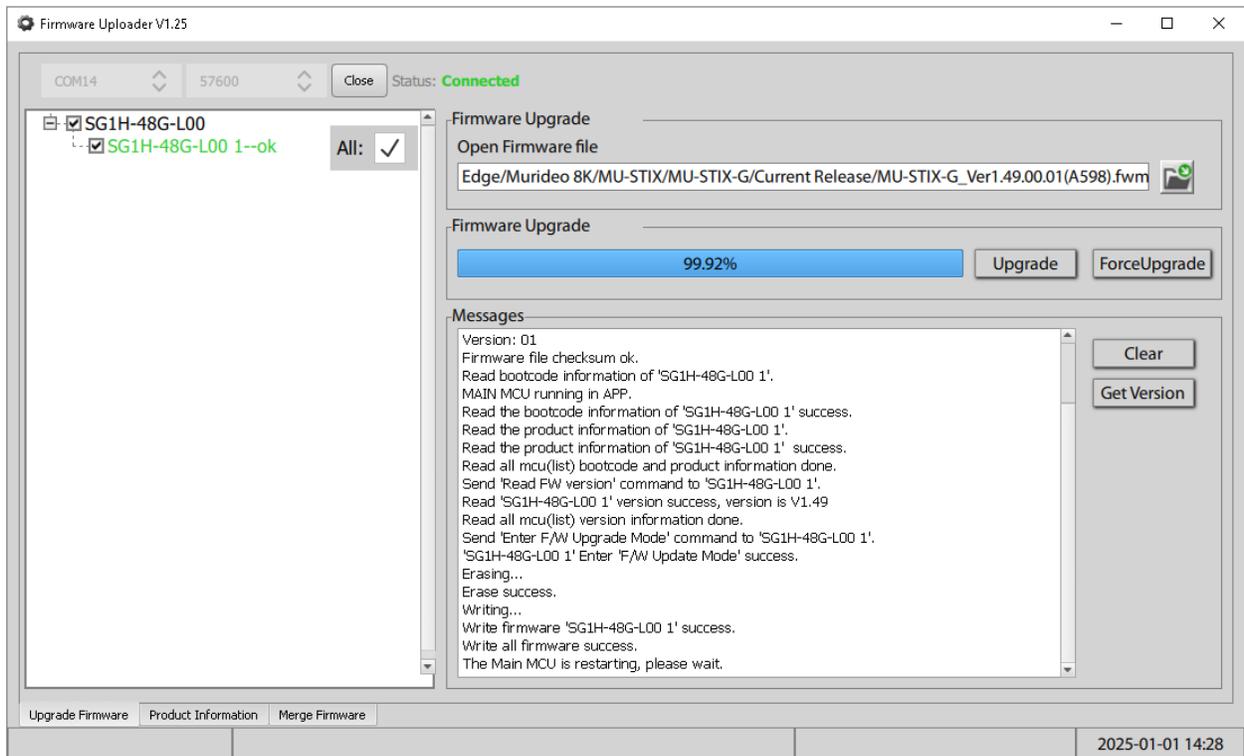
7. Select the file button  to load the firmware file. Make sure to select the correct firmware file for the device you are currently updating.

Name	Status	Date modified	Type	Size
Firmware Uploader V1.25.exe	✓	6/30/2023 1:31 PM	Application	35,079 KB
MU-STIX-G_Ver1.49.00.01(A598).fwm	✓	1/1/2025 10:21 AM	FWM File	109 KB

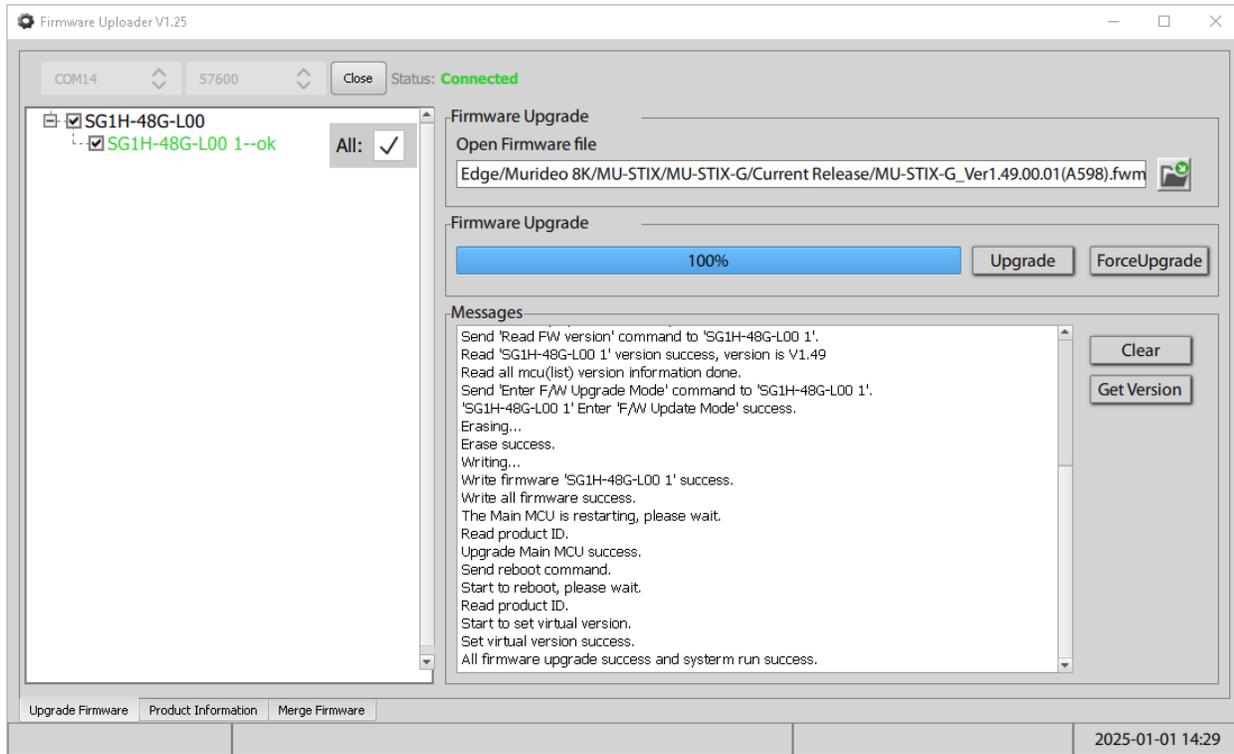
The firmware file will be loaded into the Open Firmware file field with the following information under Messages:



8. Select the Upgrade button to start the firmware update. The loading bar will pause at 99% for a few seconds before automatically rebooting the unit. Do not use the Force Upgrade button. If the Uploader is not updating firmware for any reason, please contact Murideo Support to assist in troubleshooting your STIX-G.



9. Once the loading bar reaches 100%, use the Get Version button again to ensure the new firmware version is correct (note: screenshot below is only an example and may not display the exact version).



10. Select the button to close the port, then select the X at the top-right to exit the Uploader. The STIX-G is now up to date on its firmware and is safe to disconnect from your PC and power.



## Control

The STIX-G can be controlled through serial communication from a USB port with serial capabilities (COM) using the internal USB to UART adaptor. Before connecting the device, ensure the CH340 Driver has been installed.

### STIX-A Serial Port Properties

Baud Rate	57600
Data Bits	8
Stop Bits	1
Parity	None
Flow Control	None

The STIX-G features an ASCII API; the carriage return control character should follow commands sent to the unit. In the following example, we will use <cr>:

USER SENT:	SET OUT1 STREAM OFF<cr>
ECHO RECEIVED:	OUT1 STREAM OFF<cr>

## Command-List



Azz	All Commands start with Prefix System Address zz, {zz=[01-99]}(zz=00,broadcast address)}
H	Help
STA	Show Global System Status
SET RST	Reset to Factory Defaults
SET RBT	System Reboot
SET ADDR xx	Set System Address to xx{xx=[01~99]}
SET OUT x STREAM ON/OFF	SET Outputx STREAM ON/OFF{x=0~1}
SET OUTx SGMTy	Set Output Signal Generator Timing {x=0-1,y=1-6}
SET OUTx CDy	Set Output x Video Color Depth y {x=0-1, y=[1-3]}(1=8 Bit,2=10Bit,3=12Bit)}
SET OUTx CSCy	Set Output x Video Color Space y {x=0-1, y=1-3}
SET OUTx HDCPy	Set Output x Video HDCP Format {x=0-1, y=1-3}
SET OUTx VPFy	Set Output x Video Pattern Format {x=0-1, y=1-13}
GET ADDR	Get System Address
GET TMDS CHECK	Check TMDS Voltage Level Is Functioning Properly
GET OUTx STREAM	Get Outputx Stream ON/OFF Status {x=0~1}
GET OUTx SGMT	Get Output x Video Timing Format Status
GET OUTx CD	Get Output x Video Color Depth Format Status
GET OUTx CSC	Get Output x Video Color Space Format Status
GET OUTx HDCP	Get Output x Video HDCP Format Status
GET OUTx VPF	Get Output x Video Pattern Format Status
GET OUTx EDID DATA	Get Output x EDID DATA



## 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 use. 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 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 MURIDEO'S discretion. 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 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 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 Murideo's property.



## 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. The process will be the same for notifications to MURIDEO or products outside the warranty period, but charges may apply. Contact details may be obtained on the MURIDEO website: <https://www.murideo.com/>

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

- Owner must notify MURIDEO, during the warranty period, in writing of the alleged defect and allow MURIDEO a reasonable opportunity to inspect the allegedly defective product;

- 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;

- 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;

- If MURIDEO determines that any returned Product is not defective, or if MURIDEO determines that the warranty does not cover the defect, MURIDEO will return the Product to the Owner at the Owner's expense, freight collect, and Owner agrees to pay MURIDEO reasonable cost of handling and testing;

- Upon determining that a returned product is defective, the Owner must present the invoice showing the original purchase transaction to receive warranty service. If shipping the product, the 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.

For important tips on operating and troubleshooting the product, refer to the user manual, which can be downloaded from our website, <http://www.murideo.com/>.



## Disclaimer of Warranty

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This Limited Warranty gives you specific legal rights. You may also have other rights that vary from state to state or country to country. You must consult applicable state or country laws to determine your rights thoroughly. 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.

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## Support

For service and support, contact your local dealer.  
To find your dealer or to contact MURIDEO support,  
go to:

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



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support

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

- Damage caused by acts 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, insufficient 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 abuse, misuse, mishandling, or misapplication.
- Damage caused by third-party peripherals (including but not limited to visible damages on the 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 product's serial number (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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support: 877.886.5112

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