

Application Note: User Gamma LUT
for SVX-4096



Version: 1.00

Date: 18 Feb 2021

Application Note

User Gamma LUT for SVX-4096 P/N 4175500XX-3

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Revision History

Date	Rev No.	Page	Summary
18 Feb 2021	1.00	All	First issued

Application Note: User Gamma LUT for SVX-4096



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(1) Setup :

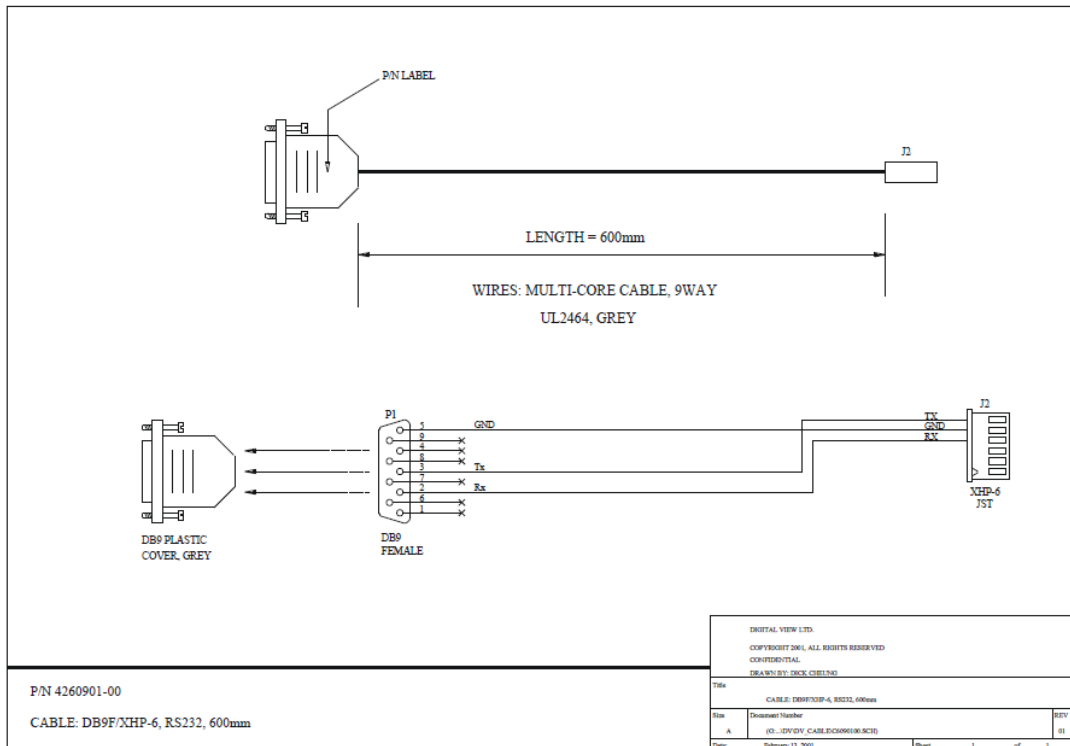
This application note will show how to use the User Gamma LUT on the SVX-4096 controller.

Please make sure you have the following materials before starting the work :

- 1) Target Panel
- 2) The SVX-4096 LCD controller board: Use firmware version E1.07.00.22 or up for SVX-4096.
- 3) TCP/IP Serial Utility program version 1.11 available as a free download on the Digital View website Accessories / Software page: www.digitalview.com/accessories/software.html
- 4) PC with a RS-232 / network port
- 5) PC with Microsoft Windows 7 or later.
- 6) RS-232 programming cable (e.g P/N 426090100-3) or network cable.
If using RS-232, please connect CN8 socket to PC serial port (2400bps, 8N1), if using network, please make sure the internal network is working.

Use RS-232 programming cable (suggest to use P/N 426090100-3). DB9 connector connected to the serial port, and Molex 51021-0600 / JST XHP-6 or compatible connector to CN8 on the controller board.

For RS-232 cable drawing P/N 426171800-3 :



Application Note: User Gamma LUT for SVX-4096



Version: 1.00

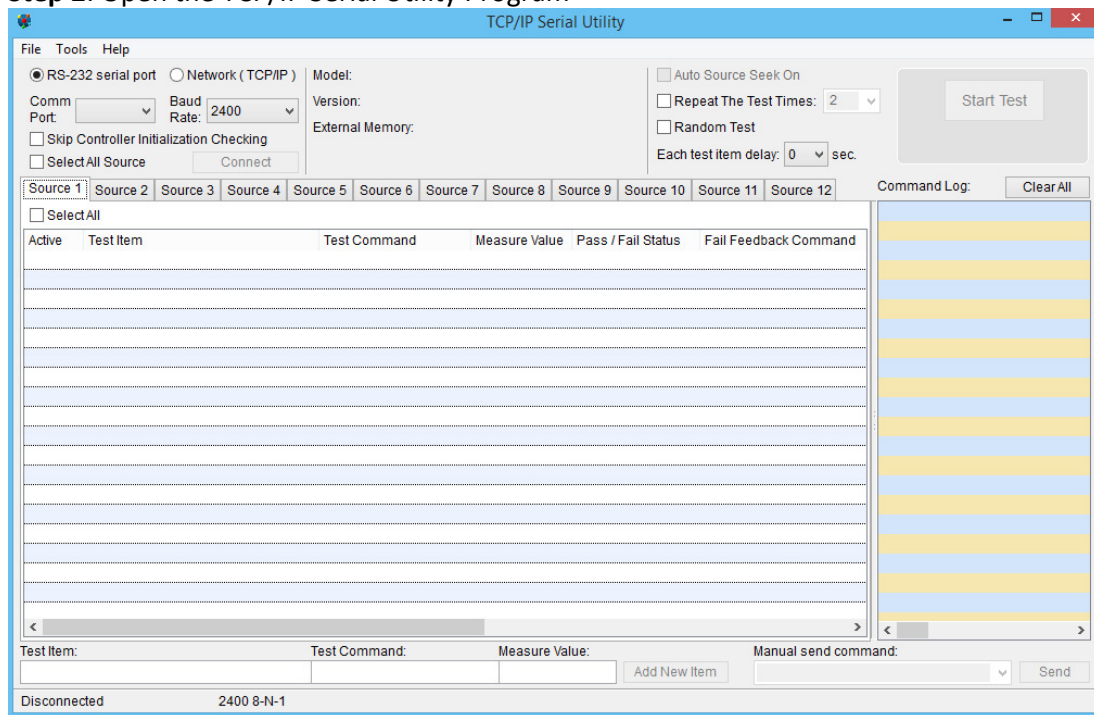
Date: 18 Feb 2021

(2) Install the TCP/IP Serial Utility Program

Step 1: Install the TCP/IP Serial Utility program (Version 1.11 or later). (Please uninstall any earlier versions before installing the latest version)



Step 2: Open the TCP/IP Serial Utility Program



Application Note: User Gamma LUT for SVX-4096



Version: 1.00

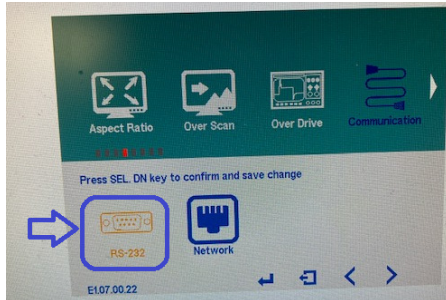
Date: 18 Feb 2021

(3) User Gamma LUT

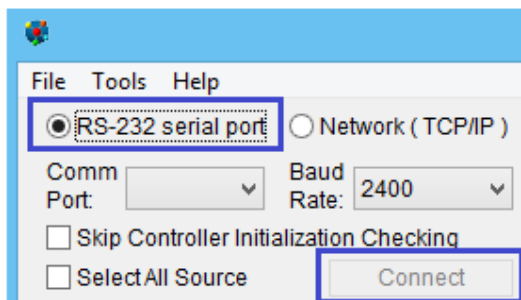
Setup :

> Use RS-232 serial port :

Select 'RS-232' under OSD menu location > Advanced > Communication > RS-232 :



Choose the communication port (RS-232 serial port) in TCP/IP Serial Utility Program and select corresponding “Baud Rate” (2400) matching with the controller. Then Click **Connect**.



OR :

Application Note: User Gamma LUT for SVX-4096

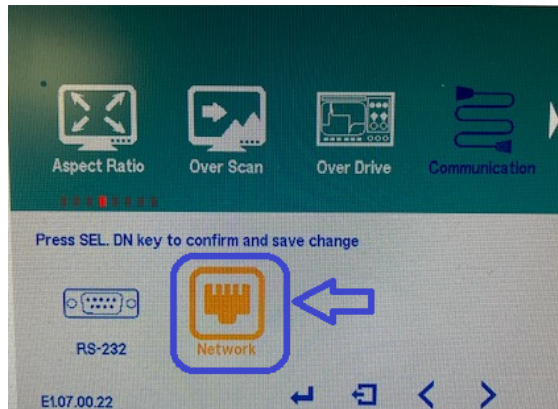


Version: 1.00

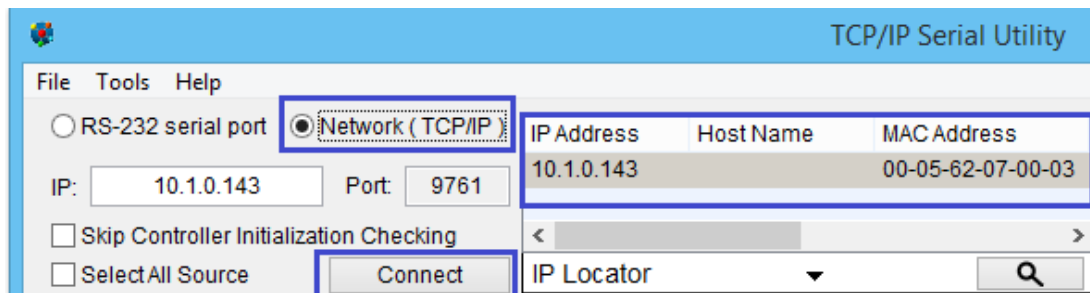
Date: 18 Feb 2021

> Use Network (TCP/IP) :

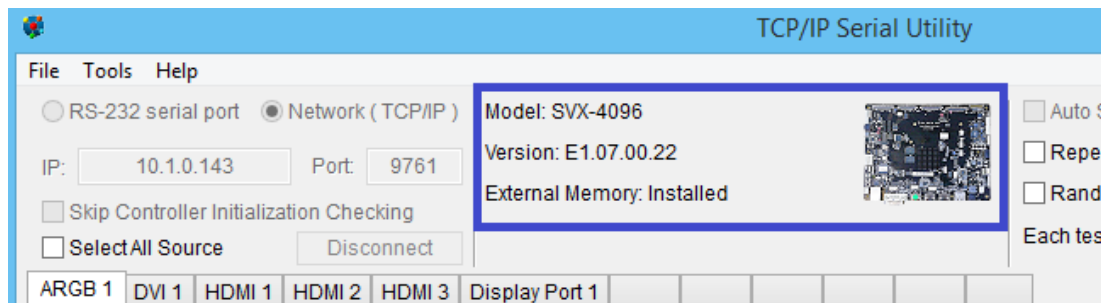
Select 'Network' under OSD menu location > Advanced > Communication > Network :



Choose the communication port (Network (TCP/IP)) in TCP/IP Serial Utility Program and select the corresponding IP address for the controller you want to control. Then Click **Connect**.



If the connection is success, it should show the SVX-4096 version :



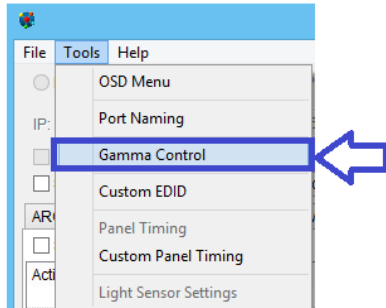
Application Note: User Gamma LUT for SVX-4096

Version: 1.00

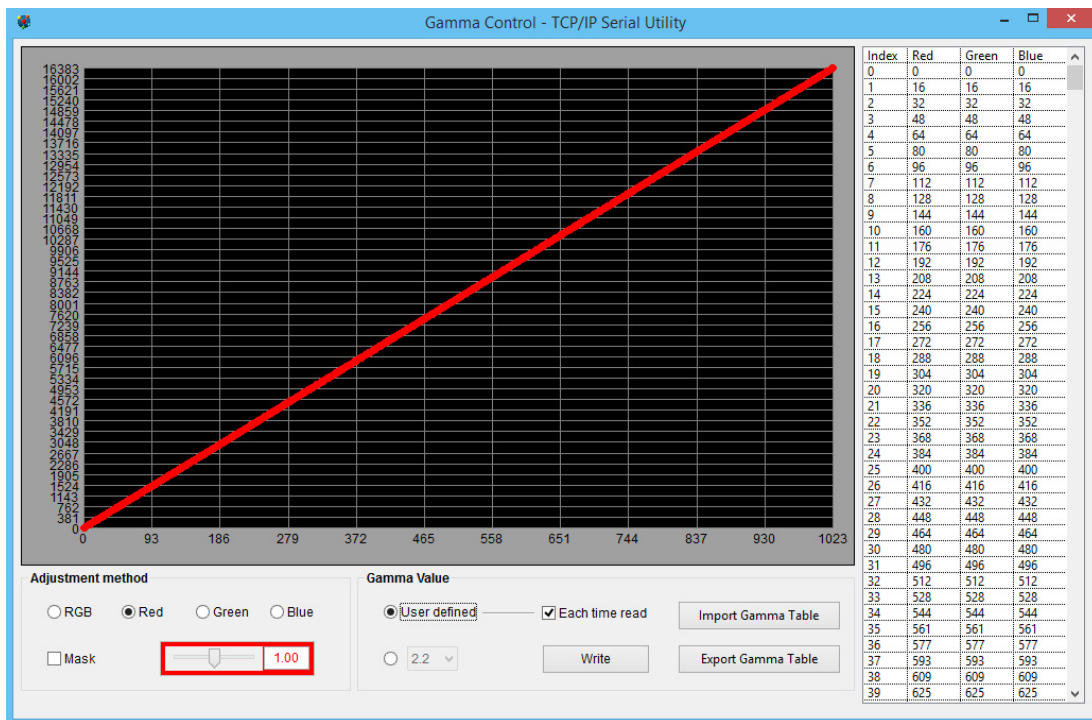
Date: 18 Feb 2021

Configure User Gamma :

Step 1: Choose 'Gamma Control' under 'Tools' in the TCP/IP Serial Utility Program.



The Gamma Control Window will be shown :

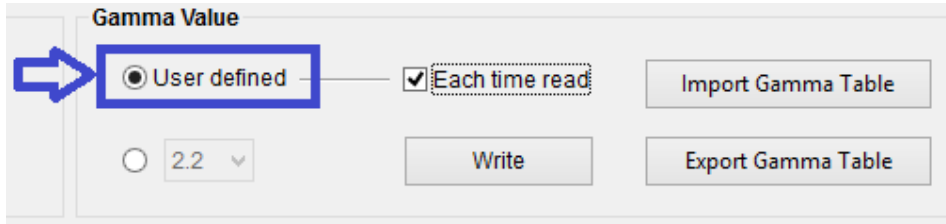


Application Note: User Gamma LUT for SVX-4096

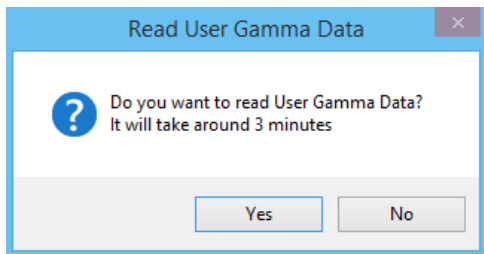
Version: 1.00

Date: 18 Feb 2021

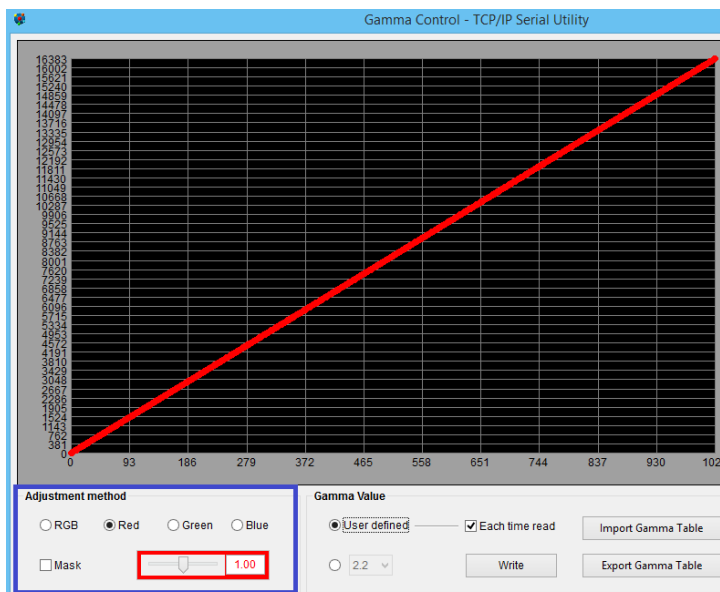
Step 2: Click "User defined" to configure User Gamma.



The "Read User Gamma Data" window message will be shown. If you do not want to read the user gamma data which will take around 3 minutes, Press "No" to bypass it.



Step 3: The "Gamma Control" window enables adjustment of the Gamma curve. Select "Adjustment method" to customize which gamma curve is applied in "User Gamma" in the SVX-4096.



- RGB: represents RGB values are the gamma curve
- Red/Green/Blue: represents each color as a different gamma curve
- Mask: when selected the dedicated color (Red/Green/Blue) which will enable to view each color gamma curve configuration.
- Slider Bar: Render the Gamma curve from 0.01 to 100

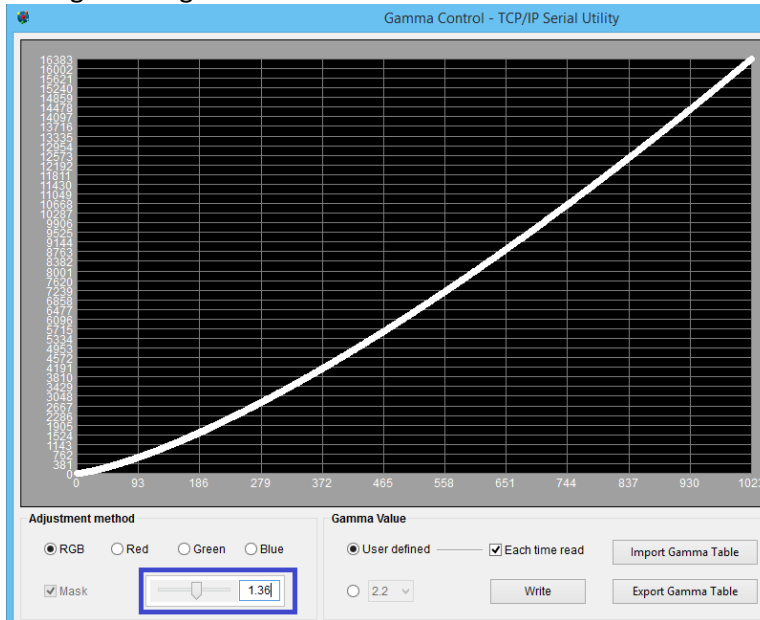
Application Note: User Gamma LUT for SVX-4096

Version: 1.00

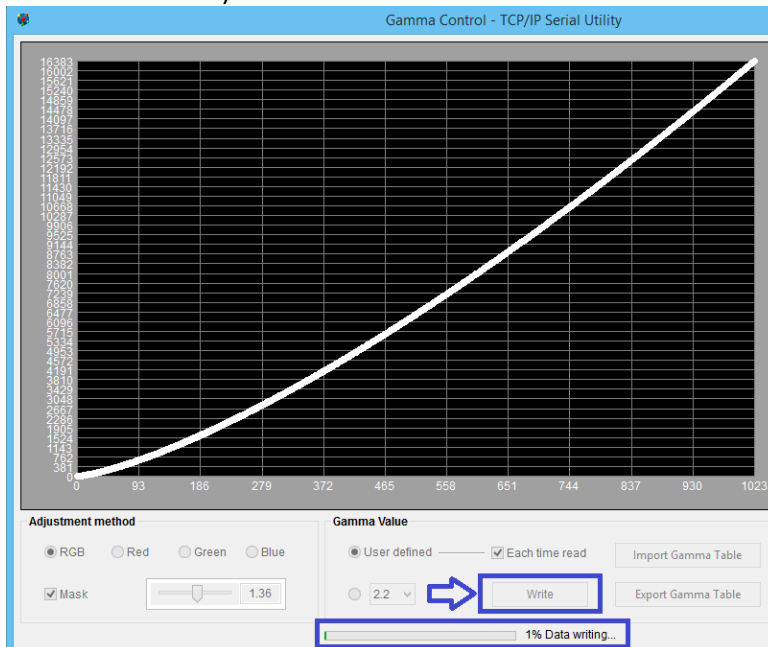
Date: 18 Feb 2021

Write User Gamma data

Configure the gamma curve value.



Press the "Write" button to write the gamma data to the SVX-4096 (it will take around 3 minutes)



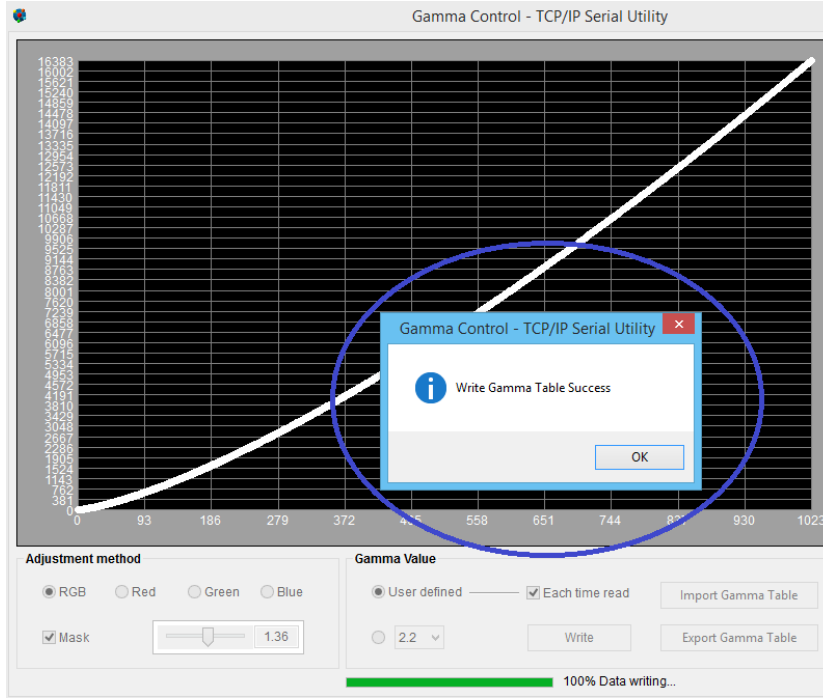
Application Note: User Gamma LUT for SVX-4096



Version: 1.00

Date: 18 Feb 2021

It will show the message 'Write Gamma Table Success' when completed to indicate the SVX-4096 has successfully stored the User Gamma Data



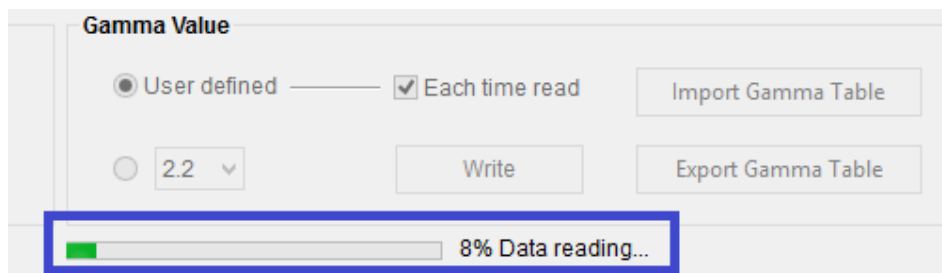
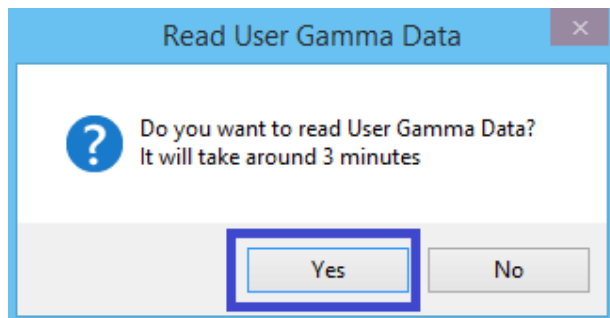
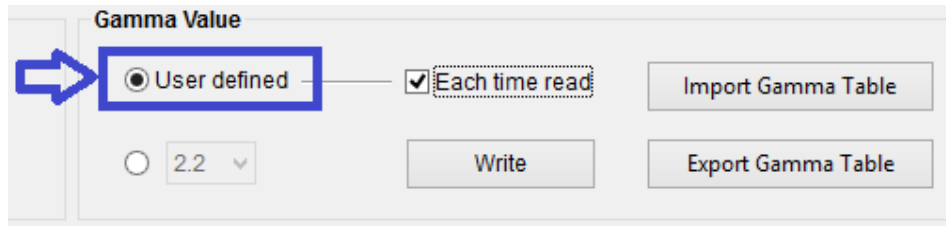
Application Note: User Gamma LUT for SVX-4096

Version: 1.00

Date: 18 Feb 2021

Read User Gamma data

If you want to verify the "User Gamma" data in the SVX-4096, you may click "User defined" to read back the User Gamma data from SVX-4096. Press "Yes" when it displays the "Read User Gamma Gata" window. (It will take around 3 minutes)

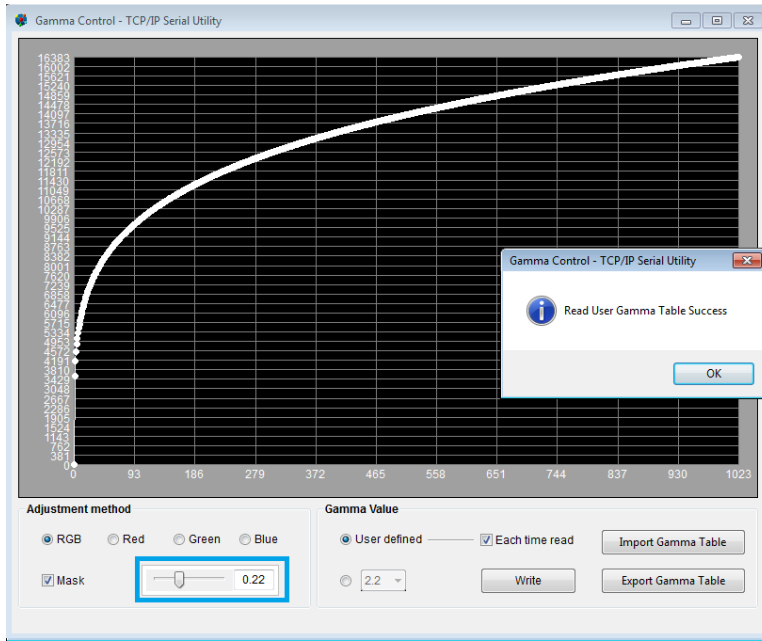


Application Note: User Gamma LUT for SVX-4096

Version: 1.00

Date: 18 Feb 2021

After that, the Red/Blue/Green gamma curves have be drawn. The slider bar (Blue rectangle) value should be ignored since it is for write process to generate the gamma curve.



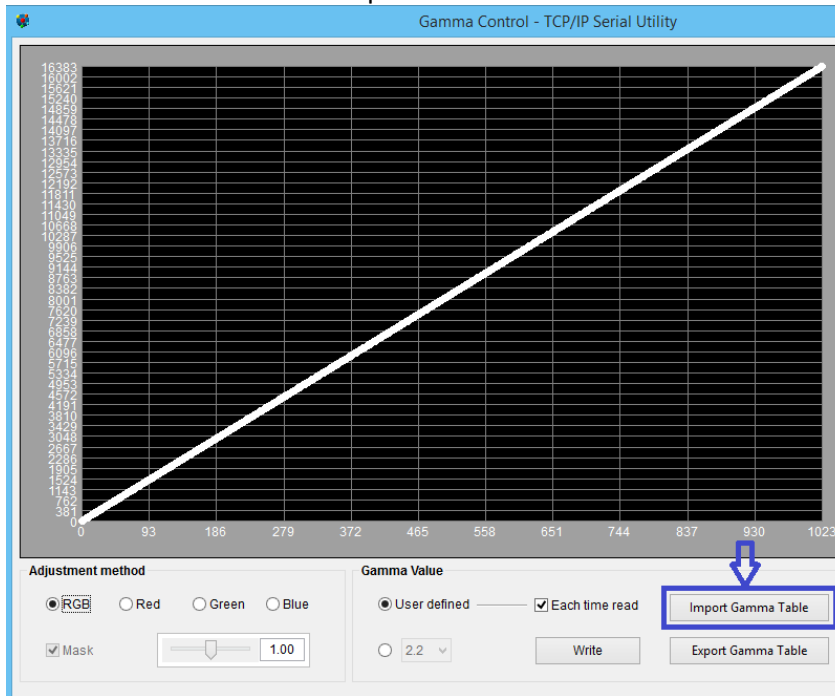
Application Note: User Gamma LUT for SVX-4096

Version: 1.00

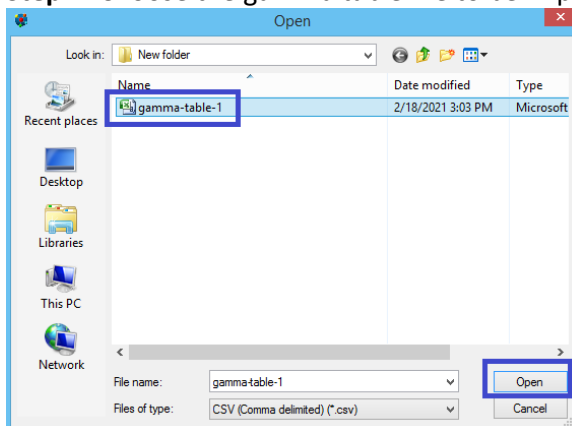
Date: 18 Feb 2021

Import Gamma Table

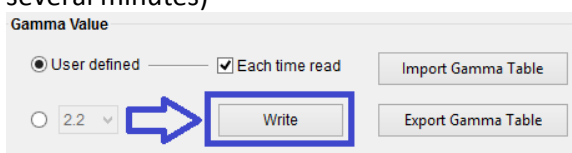
Step 1: If you already have the SVX-4096 Gamma Table, you can use the "Import Gamma Table" function to import the Gamma file



Step 2: Choose the gamma table file to be imported.



Press "Write" button to write the gamma data to the SVX-4096 (It will take around several minutes)



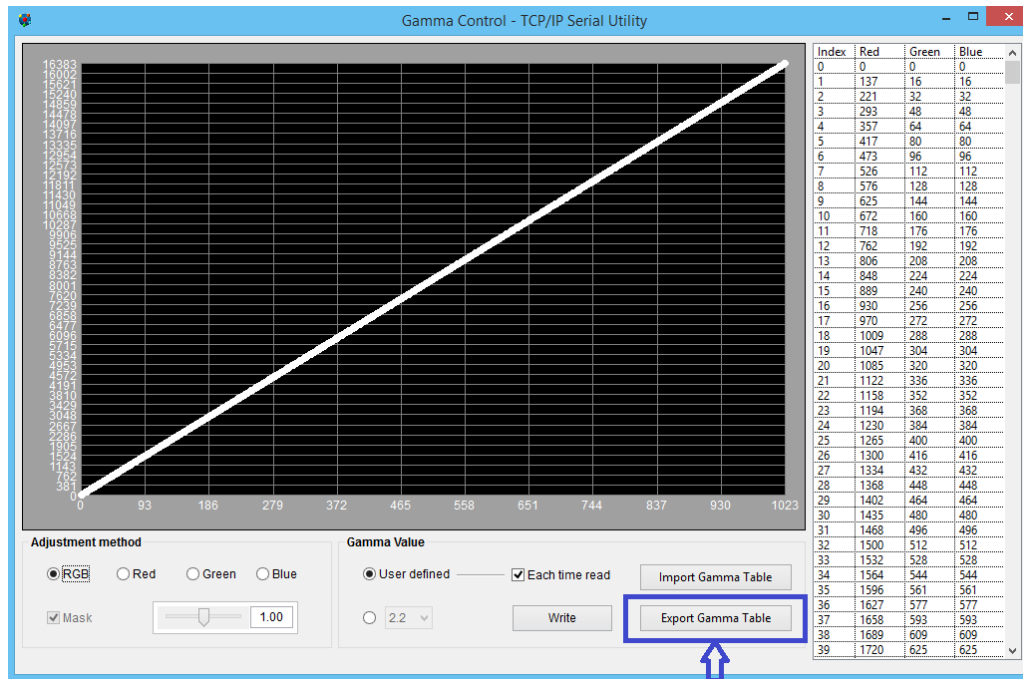
Application Note: User Gamma LUT for SVX-4096

Version: 1.00

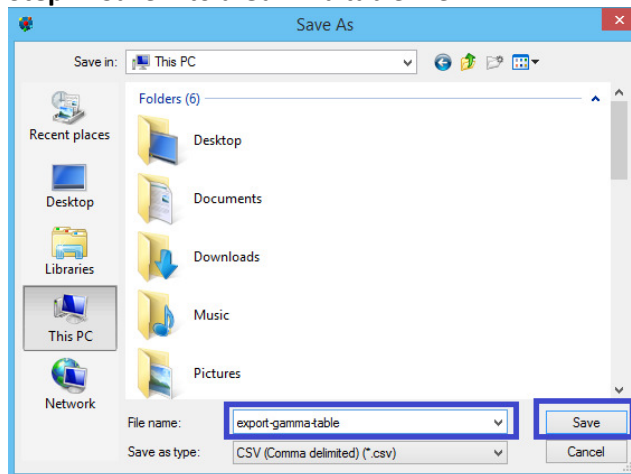
Date: 18 Feb 2021

Export Gamma Table

Step 1: If you want to read the details of gamma data, you can use the "Export Gamma Table" function to export the Gamma data.



Step 2: Save into a Gamma table file.



(4) Gamma Table format description

Requirement	
Each Color depth	14 bit (0 - 16383 / 0x0000 - 0x3FFF)
Color level (steps)	10 bit (0 - 1023)
Format	Must follow the below table format

```
//R Table
0x00, 0x00, <-- Line 1, 14 bit Red color data in hex data format
0x00, 0xC7,
0x01, 0x35,
.
.
.
0x3F, 0xF4,
0x3F, 0xFF, <-- Line 1024, 14 bit Red color data in hex data format
0x3F, 0xFF, <-- Line 1025, Dummy data which is same as Line 1024 data
0x00, 0x00, <-- Line 1026, Dummy data which should be 0x00,0x00 data
//G Table
(Same format of R Table)

//B Table
(Same format of R Table)
```


Application Note: User Gamma LUT for SVX-4096



Version: 1.00

Date: 18 Feb 2021

(5) CONTACT DETAILS

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Specifications subject to change without notice

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