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MCCI Cricket UI User Guide

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Document Release History

Rev A	2020-06-30	Initial Release
Rev B	2020-07-10	Improve GUI Panel Name
Rev C	2020-09-23	Mac app menu implementation
Rev D	2021-01-05	Add support for 2101 USB Connection Exerciser and improvement in UI design.
Rev E	2021-02-23	Python implemented to Pep8 coding standard. Package release for Raspberry Pi OS ubuntu18.04
Rev F	2021-05-03	Add support for 2301 USB Connection Exerciser.
Rev G	2021-07-14	Add new feature for Three Computer System, Two Computer System.
Rev H	2021-11-01	Feature added – Plotting of VBUS VI, USB Tree view removed and merged with Logwindow.

Rev I	2022-12-07	Supporting Thunderbolt device tree view in Mac. DUT (Device Under Test) feature added. Batch mode feature added. USB4 support for windows. Multi USB switch support.
Rev J	2023-05-24	Add Support for MCCI USB Switch 3142 Add support for Firmware update through Switch 3141 and Switch 3142 Add VI chart support for Switch 3142

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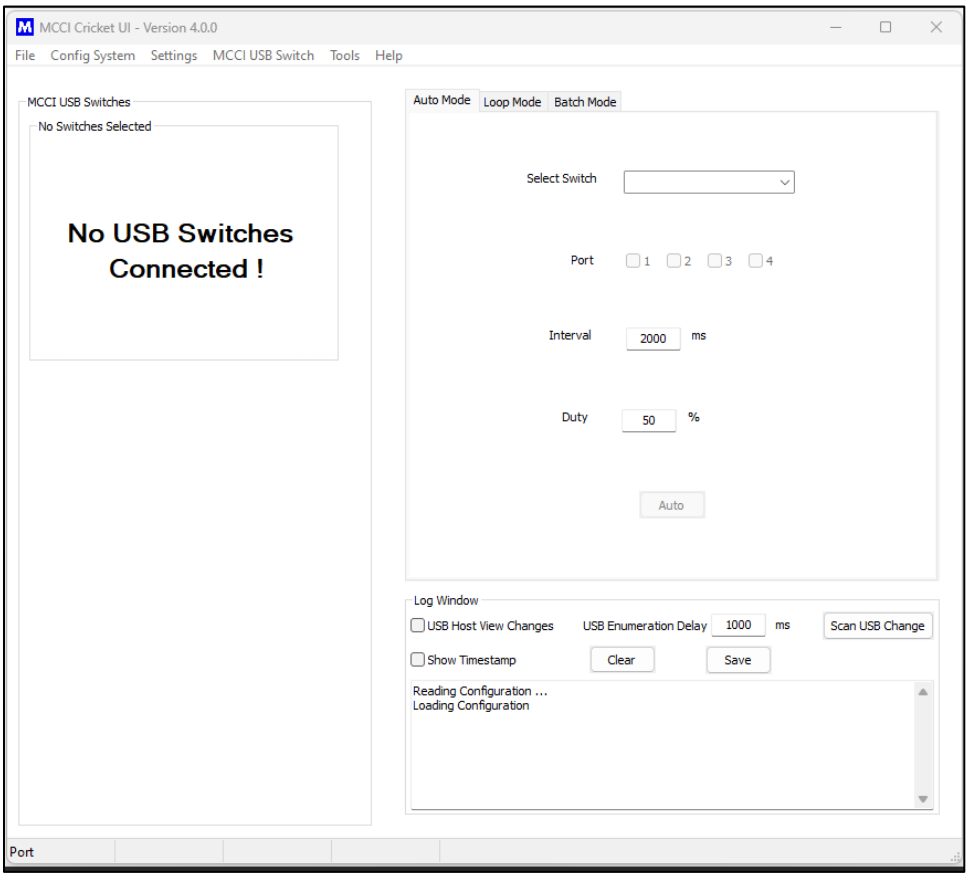
1 Introduction

MCCI developed a common UI "**MCCI® Cricket UI**" to control the "MCCI USB Switch 3141 " and "MCCI USB Switch 3201 Enhanced Type-C Connection Exerciser" ," MCCI USB Switch 2301 Type-A gen2 Connection Exerciser" and "MCCI USB Switch 2101 Connection Exerciser". This document provides instructions on how to use features provided by the GUI application and other available control options. GUI overview is shown in the Figure 1

Figure 1 MCCI Cricket UI Overview



2 MCCI USB Switch Supported

2.1 MCCI USB4™Switch 3141

The MCCI® MCCI USB4™ Switch 3141 is a computer-controlled programmable 2:1 switch, connecting two USB Type-C receptacles to a single Type-C plug. It is compatible with USB4 hosts and devices, as well as older protocols such as Thunderbolt™ 3, USB 3.2 gen2 or gen1, USB 2.0, USB Type-C Alternate Modes, and of course Power Delivery show in Figure 2

The MCCI USB Switch 3141 automates connect/disconnect of one or two devices to a USB Type-C port. It can be used in stress testing, switching between peripherals (for example, a dock and a display), or any

automated reconfiguration of a USB Type-C port. For more information, see the product home page at www.mcci.com.

Figure 2 MCCI USB Switch 3141 USB4 Switch

2.2 MCCI USB Switch 3201 Enhanced Type-C Connection Exerciser

The MCCI MCCI USB Switch 3201 Enhanced Type-C Connection Exerciser (MUTT ConnEX-C) plugs and unplugs up to 4 USB-C® devices for automated testing of USB Type-C® products shown in Figure 3. For more information, see the product home page at www.mcci.com.

Figure 3 MCCI USB Switch 3201 Type-C Connection Exerciser

2.3 MCCI USB Switch 2101 USB Connection Exerciser

The MCCI USB 3.0 Connection Exerciser MCCI USB Switch 2101 automatically connects and disconnects a USB 2.0 or 3.2 gen1 host and device under push-button or software control. Connections can be single-stepped or repeated. The manual modes are useful for debugging attach/detach scenarios . For more information, see the product home page at www.mcci.com.

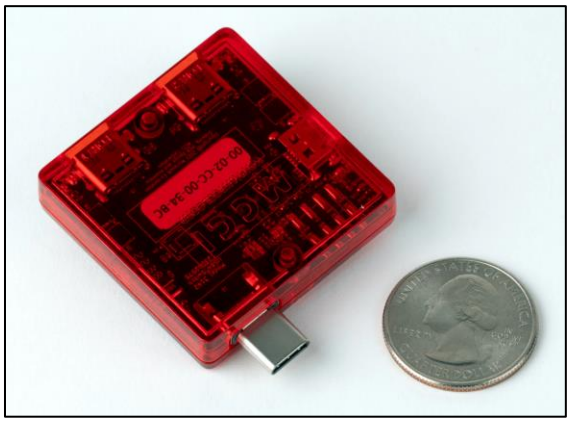
Figure 4 MCCI USB Switch 2101 connection Exerciser

2.4 MCCI USB Switch 3142

The MCCI® Model 3142 USB4 Switch is a computer-controlled programmable 2:1 switch, connecting two USB Type-C® receptacles to a single Type-C plug. It is compatible with USB4 hosts and devices at signaling rates up to 40 gigabits/second, as well as other protocols such as Thunderbolt™ 4, Thunderbolt™ 3, USB 3.2, USB 2.0, USB Type-C Alternate Modes, and of course USB Power Delivery. It also supports Extended Power Range (EPR) sources and sinks, allowing it to be used with source and sinks at up to 48V at 5A.
The MCCI USB Switch 3142 automates connect/disconnect of one or two devices to a USB Type-C port. Itcan be used in stress testing, switching between peripherals (for example, a dock and a display), or any

automated reconfiguration of a USB Type-C port. For more information, see the Product Home Page atwww.mcci.com.

MCCI USB Switch 3142

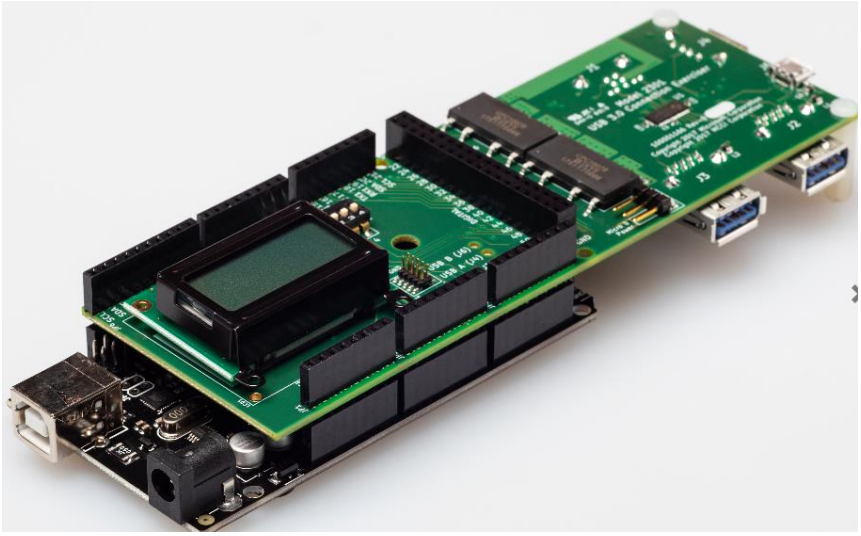


2.5 MCCI USB Switch 2301 Type-A USB 3.2 Gen2 Connection Exerciser

The MCCI USB Switch 2301 Type-A Connection Exerciser provides a four-to-one USB switch to automate interoperability tests for systems USB 3.2 gen1 or gen2. It uses the supplied Arduino-based controller and electronic switches to electrically plug and unplug any of the four different input ports. The Gen2-

capable Type-B plug can be connected to either of two Type-A receptacles, to a Standard-A receptacle (USB 2.0 only), or a Micro-B receptacle (USB 2.0 only). The Type-A Gen2 receptacles support USB 3.2 (gen 1 and gen 2) and USB 2.0 (high speed, full speed and low-speed) devices. The Standard-A receptacle supports USB 2.0 devices. . For more information, see the product home page at www.mcci.com.

Figure 5 MCCI USB Switch 2301 Type-A USB 3.2 Gen2 Connection Exerciser



3 Download and Installation

Download the installation setup for "MCCI USB Switch Cricket UI" software from here, the Knowledge base section in MCCI portal (https://portal.mcci.com/portal/kb) and follow the instruction for software installation.

4 MCCI Cricket UI Overview

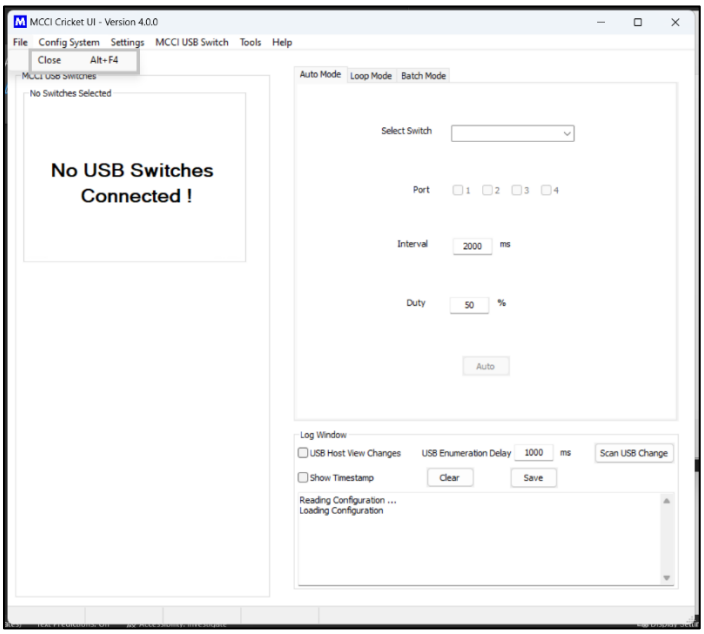
When the installation successfully completes, execute the "`Cricket UI`" file, from `Start → All Programs`, or from the shortcut provided on the desktop. When the application starts, the following GUI screen displays as Figure 1, the GUI window contains these following sections:

- MCCI USB Switch `3201/` MCCI USB Switch `3141/` MCCI USB Switch `2301/` MCCI USB Switch `2101/` USB Switch `Ports Control`: It has the option to control the ports of the device, this varies for MCCI USB Switch 3141, 3201, 2301 and 2101.
- `Loop Mode`: Switch the selected port in cyclic mode.
- `Select MCCI USB Switch`: Listed the number of devices attached in it and the user can select the device to be controlled.
- `USB Device Tree View Changes:` It displays the features of the attached Devices on to the port.

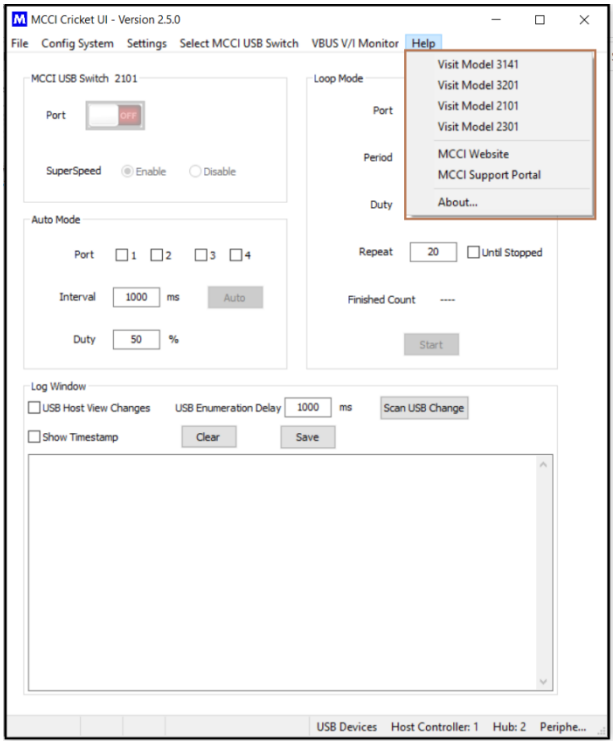
- `Log Window`: Print the device's switching activity logs with timestamp.
- `Menu Bar`: It has a File and Help menu. As shown below in Figure 6

FILE MENU

Figure 6 File Menu Bar



HELP MENU

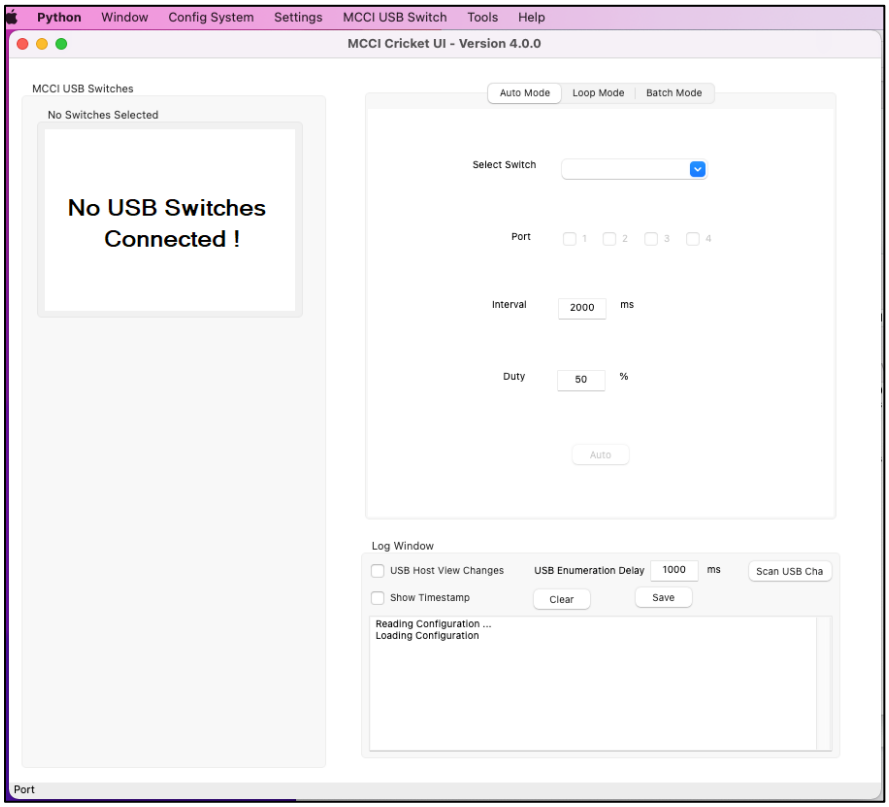


5 Mac OS Menu Overview

The menu bar in Mac OS has three menus, (MCCI Cricket UI), Window and Help menu as shown in Figure 7

Cricket UI APP MENU

Figure 7 Menu bar in Mac OS



6 Different Computer System

This Cricket UI application consists of three modules, such as User Interface, Device Control and USB Test Host.

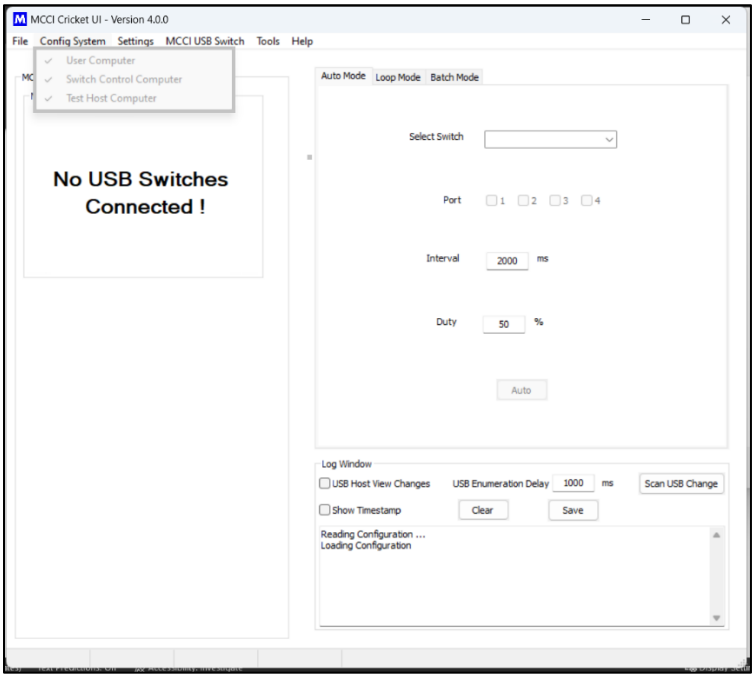
User Interface enables the user to access all features of this application which includes interface and control of all required USB Connection Exercisers (USB Switches), this module is called as User Computer. Device Control module works closely with the connected USB switches gets input from and send responds to the User Interface module, this USB Switch is called as Control Computer,

USB Test Host module provides the list of USB devices connected with the computer, User Interface module sends request to this module whenever USB device list is required. This module is called as Test Host Computer.

6.1 User Computer

Open the application in one computer, go to the *Config System* and select the *User Computer* sub menu, now the application runs user interface module in that computer as shown in Figure 9

Figure 8 Single Computer System

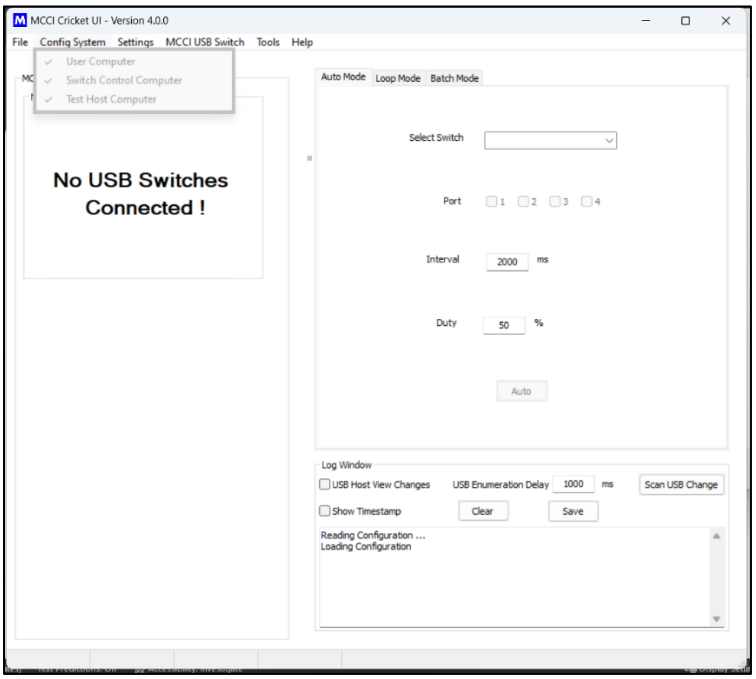


This User Computer acts as a Client in a network, communicates with the Control Computer Server and Test Host Computer server.

6.2 Single Computer System

In this configuration all the three modules are runs in a single computer, user can enable this as shown **Error! Reference source not found.** configuration by selecting all sub menu provided under the *Config System* menu as shown in **Error! Reference source not found.**.

Figure 9 Single Computer System



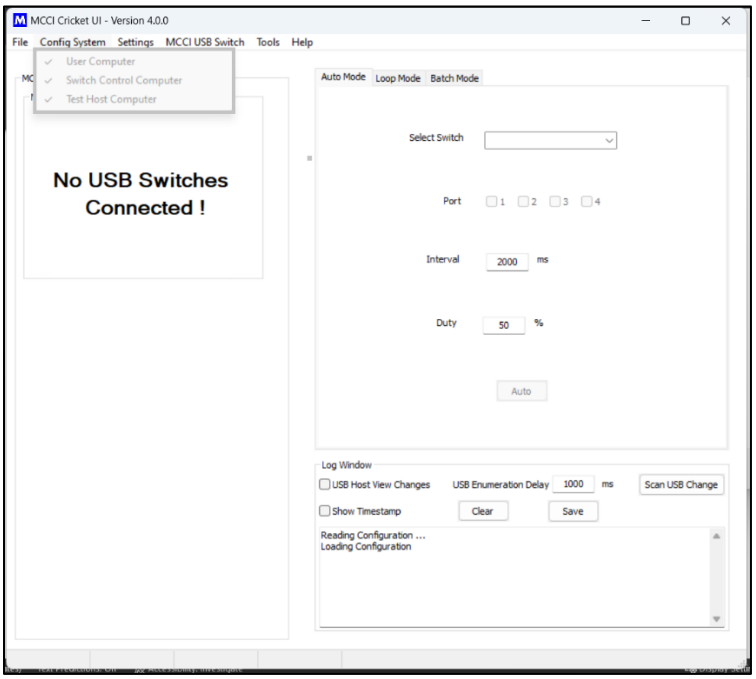
For getting plugged USB device list, the user computer uses the stored Port number and IP address to establish communication between User Computer and Test Host Computer.

7 GUI Feature and Options

7.1 Select MCCI USB Switch

The GUI can automatically detect the MCCI USB Switches 3141, 3201, 2301 and 2101 device, The device MCCI USB Switches 3201, 3141, 2301 and 2101 can be selected from the `Select MCCI USB Switch` as show in below Figure 10

Figure 10 Select MCCI USB Switch Menu



Auto Search MCCI USB Switch

Open the application go to the ***Select MCCI USB Switch*** and select "***Connect"*** sub menu, a dialog window will appear with title name of "**Select MCCI USB Switch"** then here it's searching available MCCI USB Switch(s) automatically.

Manual Search MCCI USB Switch

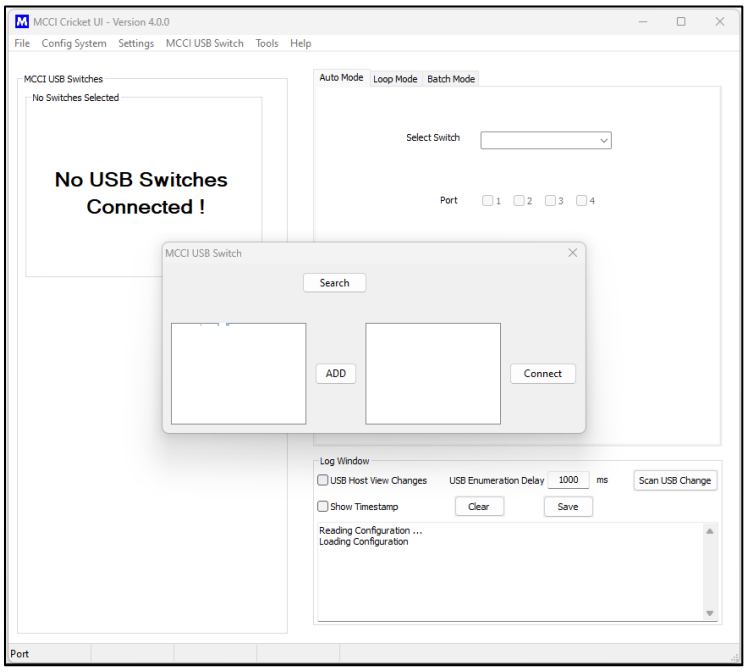
Click the `Search` button to get the list of connected, supported MCCI USB Switches, select a USB Switch from the drop down menu and click `Connect` button to select the USB Switch. The MCCI USB Switch panel gets changed based on the connected Switches .

The Select MCCI USB Switch control options and descriptions are mentioned in Table 1

Table 1 Select MCCI USB Switch Menu

Control Option	Description
Search	Clicking on that Search Button will show the attached devices in the USB bus/network
Connect Menu	Clicking on that Connect Button, connect the selected device
Disconnect Menu	Clicking on that Disconnect Button, Disconnect the selected device

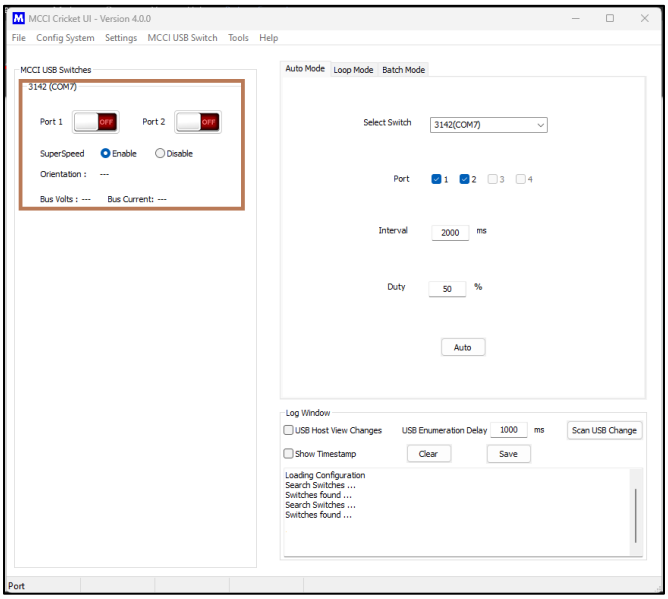
Figure 11 Select MCCI USB Switch Dialog



7.1.1 Connect menu

- Go to Select MCCI USB Switch
- Click on Connect Menu then open Select MCCI USB Switch dialog box
- The list of available devices is listed in list box **Error! Reference source not found.**.
- If only one switch is available UI skip the search dialog and directly connect the switch andupdate the UI.
- If multiple switches are available search dialog will appear and enable the user to select therequired switches.
- The below images are single switch connection windows **Error! Reference source not found.**

Figure 12 Single Switch Connection



The below images are multiple switch connection window see the below Figure 13

Figure 13 Selected Switches adding into add list box.

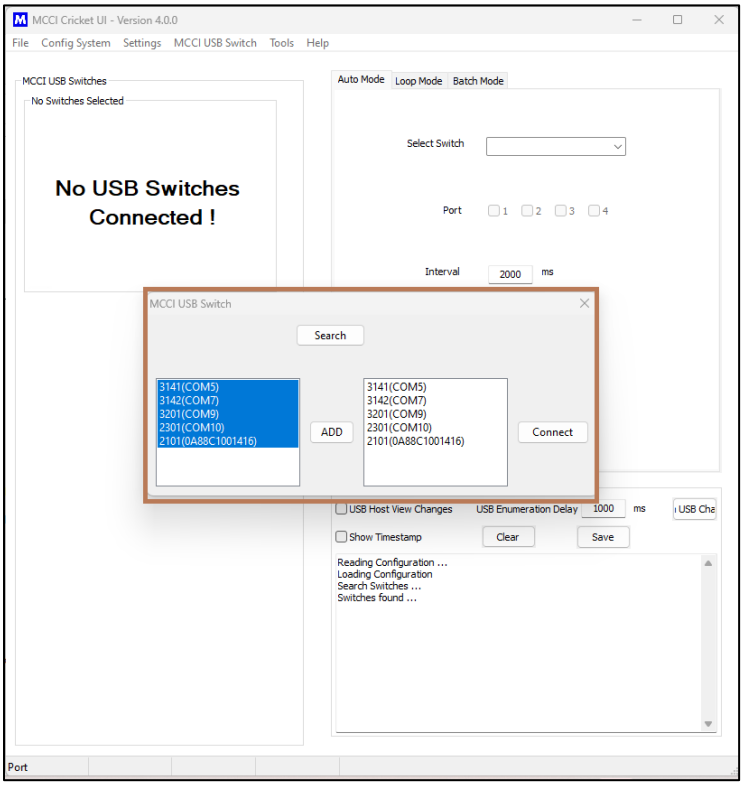
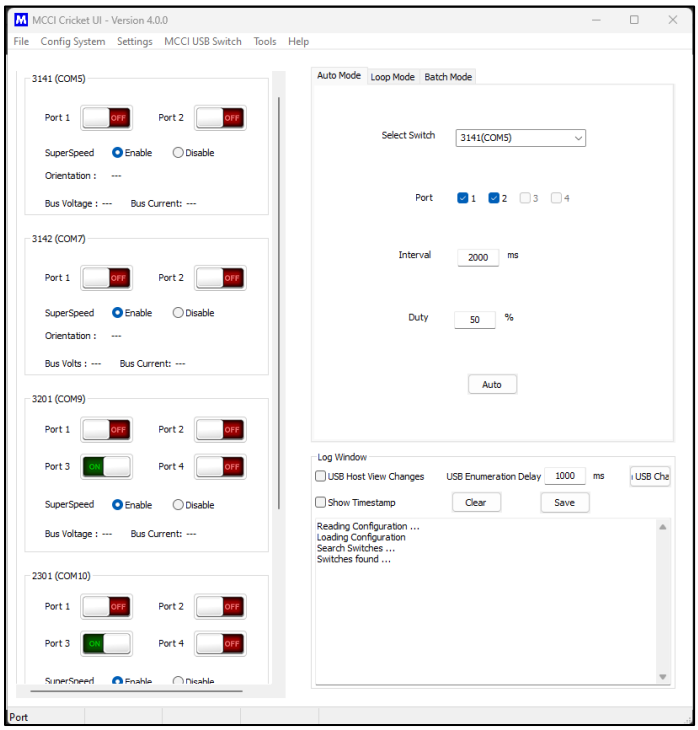


Figure 14 Mutliple Switches Connection



7.2 MCCI USB Switch 3201 UI Control Window

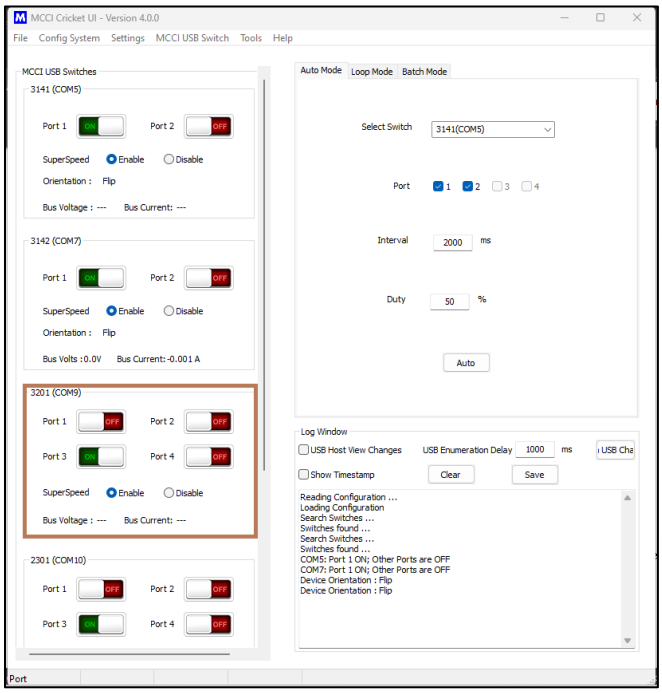
The control window of MCCI USB Switch 3201 appears in the UI, when the MCCI USB Switch 3201 device is selected from the `Manage` MCCI USB Switch `Panel` as shown in Figure 15

The control options of MCCI USB Switch 3201 are explained below:

- The **Port** buttons, which will get activated after the device is connected.
- **ON/OFF** switch to control the port state.

- Radio buttons to select Super Speed (**Enable**) or High Speed (**Disable**) lines.
- Volts and Amps button
    - Clicking on the **Volts** button will print the Bus Voltage
    - Clicking on the **Amps** button will print the Current Flow with the direction.
        - Negative value - Current flow from SUT (System Under Test) to DUT (Devices Under Test)
        - Positive value - Current flow from DUT to SUT
- **Auto** switch (continuously switch between the ports in the defined **interval** and **Duty**)

Figure 15 MCCI USB Switch 3201 UI Control Window

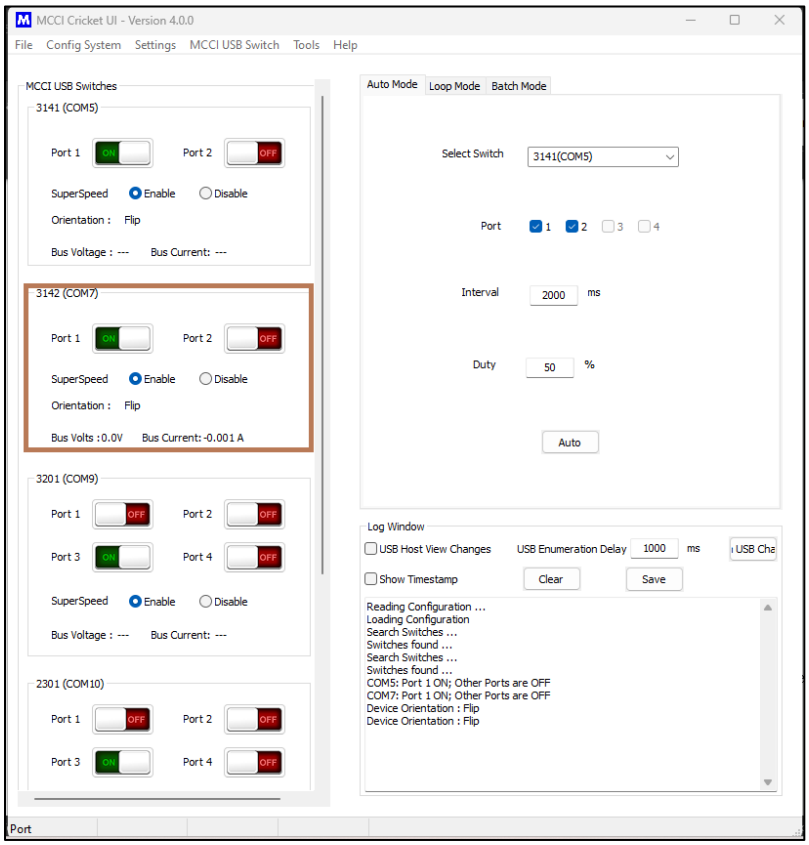


7.3 MCCI USB Switch 3141 UI Control Window

The control window of MCCI USB Switch 3141 appears in the UI, when the MCCI USB Switch 3141 device is selected from the `Select MCCI USB Switch Panel` as shown in Figure 16
The control options of MCCI USB Switch 3141 are explained below:

- The **Port** buttons will get activated after the device is connected.
- **ON/OFF** switch to control the port state.
- Radio buttons to **Enable**/**Disable** Super Speed lines (NOTE: Supports ONLY SuperSpeed).
- **Check Orientation** button to show the Type-C connector connection (Normal/Flip)
- **Auto** mode button (continuously switch between the ports in the defined **interval** and **Duty)** to provide switching interval.

Figure 16 MCCI USB Switch 3141 UI Control Window



7.4 MCCI USB Switch 3142 UI Control Window

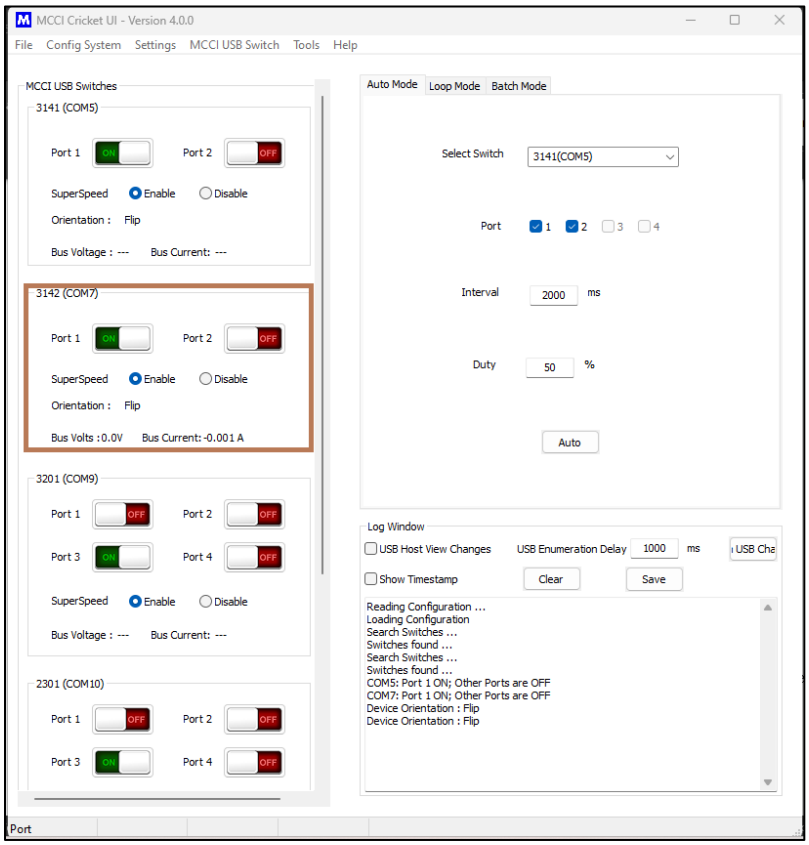
The control window of MCCI USB Switch 3142 appears in the UI, when the MCCI USB Switch 3142 deviceis selected from the `Select MCCI USB Switch Panel` as shown Figure 17

The control options of MCCI USB Switch 3142 are explained below:

- The **Port** buttons will get activated after the device is connected.
- **ON/OFF** switch to control the port state.
- Radio buttons to **Enable**/**Disable** Super Speed lines (NOTE: Supports ONLY SuperSpeed).
- **Check Orientation** button to show the Type-C connector connection (Normal/Flip)
- **Auto** mode button (continuously switch between the ports in the defined **interval** and **Duty)** toprovide switching interval.
- Volts and Amps button
    - Clicking on the **Volts** button will print the Bus Voltage
    - Clicking on the **Amps** button will print the Current Flow with the direction.
        - Negative value - Current flow from SUT (System Under Test) to DUT (DevicesUnder Test)

Positive value - Current flow from DUT to SUT

Figure 17 MCCI USB Switch 3142 Control UI window



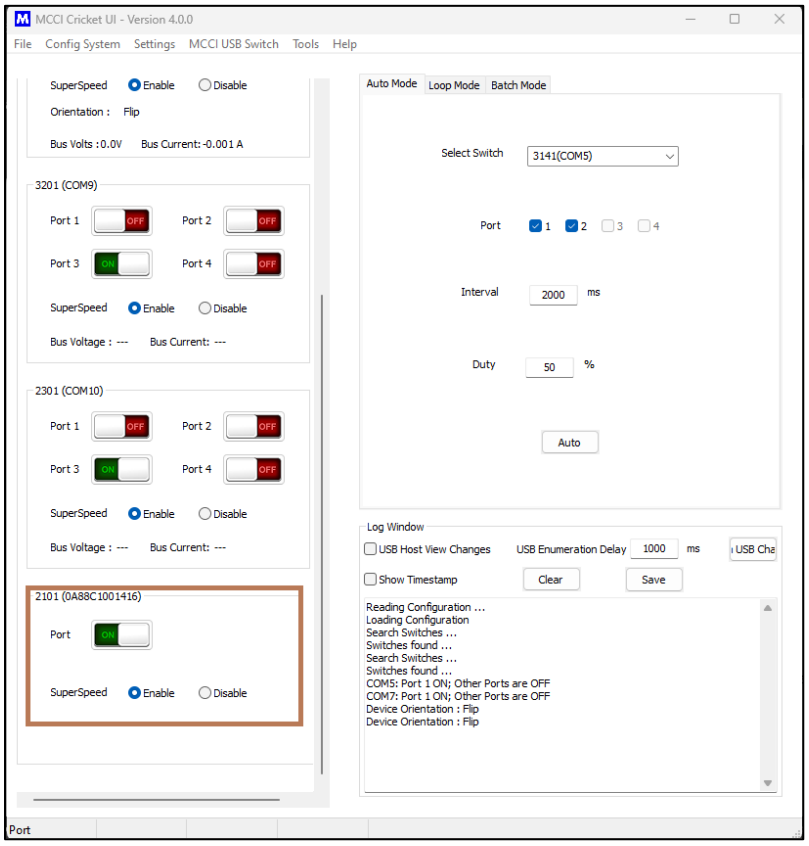
7.5 MCCI USB Switch 2101 UI Control Window

The control window of MCCI USB Switch 2101 appears in the UI, when the MCCI USB Switch 2101 device is selected from the `Select MCCI USB Switch Panel` as shown in Figure 18

The control options of MCCI USB Switch 2101 are explained below:

- The **Port** button will get activated after the device is connected.
- **ON/OFF** switch to control the port state.
- **Auto** mode button controls for selecting speed.
    - Radio buttons to select SuperSpeed (**Enable**) or High Speed (**Disable**) lines.

Figure 18 MCCI USB Switch 2101 Control window



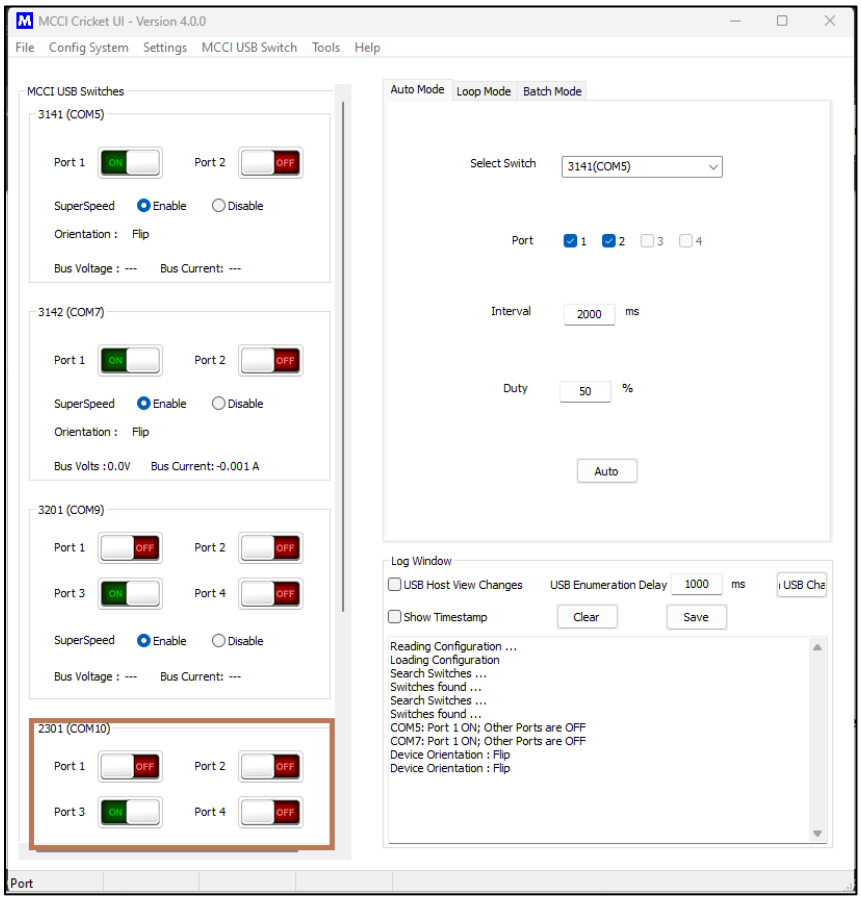
7.6 MCCI USB Switch 2301 UI Control Window

The control window of MCCI USB Switch 2301 appears in the UI, when the MCCI USB Switch 2301 device is selected from the `Select MCCI USB Switch Panel` as shown in Figure 19

The control options of MCCI USB Switch 2301 are explained below:

- The **Port** buttons, which will get activated after the device is connected.
- **ON/OFF** switch to control the port state.
-
- Radio buttons to select Super Speed (**Enable**) or High Speed (**Disable**) lines.
- Volts and Amps button
    - Clicking on the **Volts** button will print the Bus Voltage
    - Clicking on the **Amps** button will print the Current Flow with the direction.
        - Negative value - Current flow from SUT (System Under Test) to DUT (Devices Under Test)
        - Positive value - Current flow from DUT to SUT
- **Auto** switch (continuously switch between the ports in the defined **interval** and **Duty**)

Figure 19 MCCI USB Switch 2301 UI



7.7 Modes of Operation

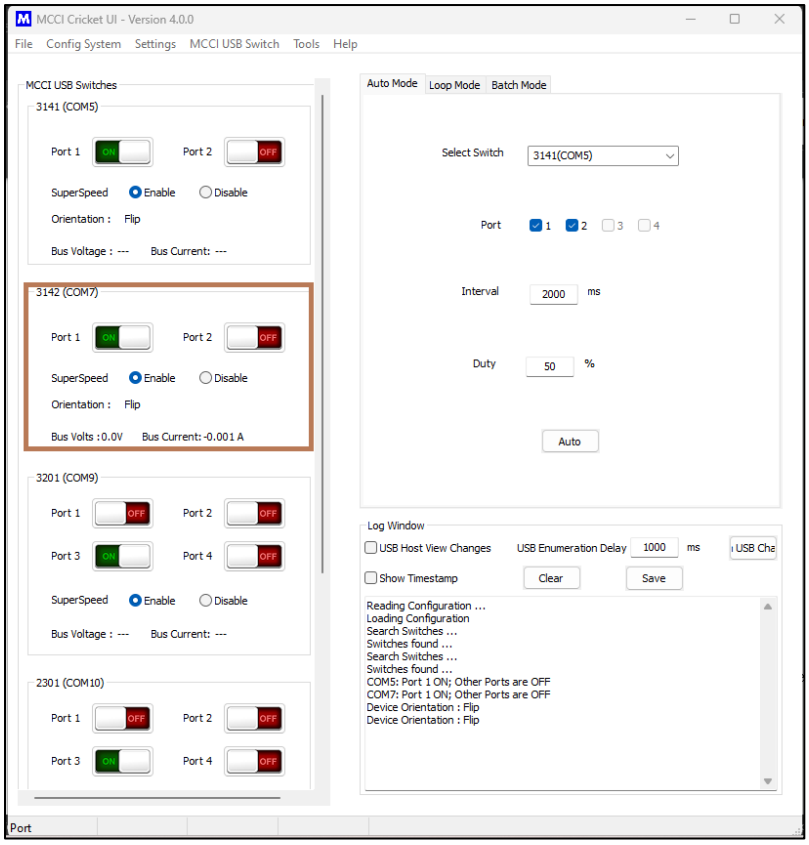
In order to control the device, the GUI has supported 3 modes of operation

- Manual Mode
- Auto Mode
- Loop Mode

This section contains the detailed explanation about the modes.

7.7.1 Manual Mode

Figure 20 Manual Mode



- The `Port` switch can be controlled manually using available button(s) in the UI as shown in the Figure 20
- `ON/OFF` button is used to enable/disable the ports of the connecting device.
- `Enable/Disable` the Super Speed lines anytime using the radio button.
- Icon(s) and description for all MCCI USB Switch(s) are mentioned in Table 2.

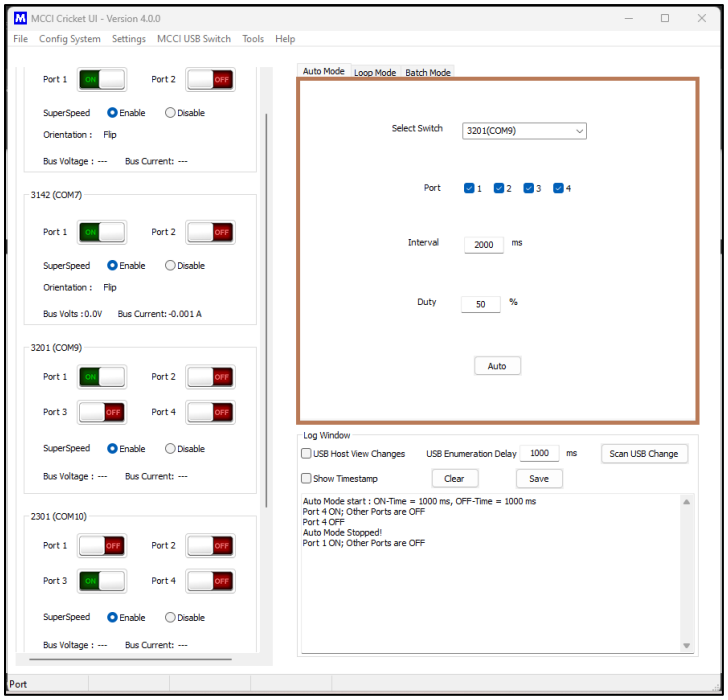
Table 2 Manual Mode Control Options

Icons	Description
PORT <n>	Select the active port switch button.
ON/OFF	The selected port should be ON /OFF
Super speed Enable and Disable	Enable/Disable the Super Speed option

7.7.2 Auto Mode

- In GUI, the `Auto` mode is used to switch between the available `Port`(s) of the selected devicescontinuously with configured `Interval`/delay (Default is **1000ms**) and `Duty` (default is **50%**).
- Duty cycle is the ratio of time allocated for the switch to be ON compared to the time the loadswitch to be OFF.
- User can't change the Port and Speed in the middle of Auto mode execution
- This mode (MCCI USB Switch 3201) can Start/Stop using the `Auto` button
- This mode (MCCI USB Switch 3141) can Start/Stop using the `Auto` button .
- This mode (MCCI USB Switch 2101) can Start/Stop using the `Auto` button .
- This mode (MCCI USB Switch 2301) can Start/Stop using the `Auto` button .
- This mode (MCCI USB Switch 3142) can Start/Stop using the `Auto` button .

Figure 21 MCCI USB Switch 3141 Auto Mode Controls



```
Note: If USB Device Tree Changes option is enabled, Then Delay
specifies in that window is override the auto-mode interval.
```

The MCCI USB Switch 3201/3141/2101/2301 auto mode control options and description are mentioned in Table 3.

Table 3 Auto Mode Control Options

Control Option	Description
Port	Switching the port(s) between selection of port numbers
Duty	Percentage of ON time in total time period (ON + OFF).
Interval	Auto-mode switching interval (Default 1000 MS)
Auto/Stop	Start/Stop the auto mode

Whenever MCCI USB Switch(s) connected the corresponding port will be enabled.

Whenever switching the MCCI USB Switch(s) make sure to enable the particular port by checking and then switch the auto mode, *depends on port selection auto mode is working.*.

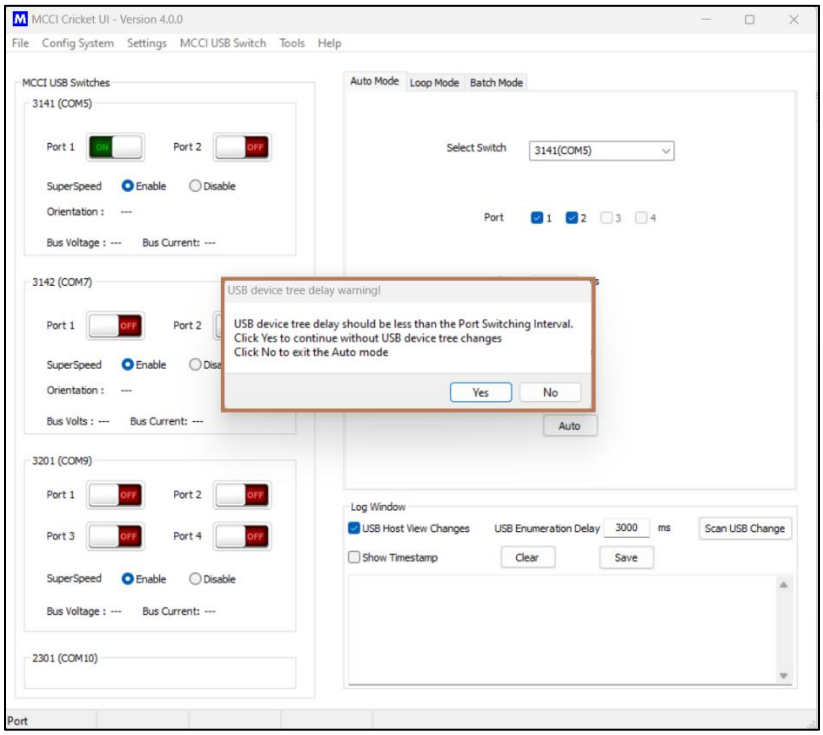
- MCCI USB Switch "3201" Enable the "four" ports.
- MCCI USB Switch "2301" Enable the "four" ports.
- MCCI USB Switch "3141" Enable the "Two" ports.
- MCCI USB Switch "3142" Enable the "Two" ports.
- MCCI USB Switch "2101" Enable the "one" port.

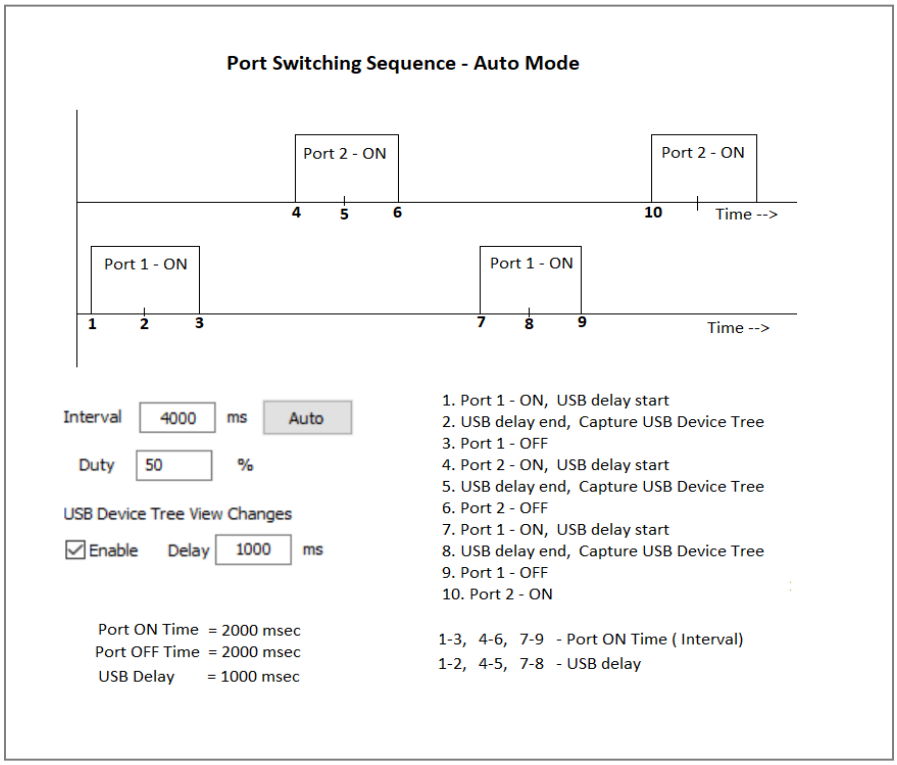
Note: without selecting any port click on auto mode button warning message will occurred here open the one dialog window with name as *"please Select a port to continue Auto mode".*

henever the `Auto` control is clicked, the program will compare the `Interval` time with the `USB Host Device View Changes` delay, if it is less than that, then warning message will be displayed with two options, the warning message shown in **Error! Reference source not found.**.

Option 1: Click `Yes` – to start the Auto mode without USB Device Tree Changes option.
Option 2: Click `No` – to cancel the Auto mode start action, then the User needs to update the Interval time manually.

Figure 22 USB device tree delay warning-Auto Mode

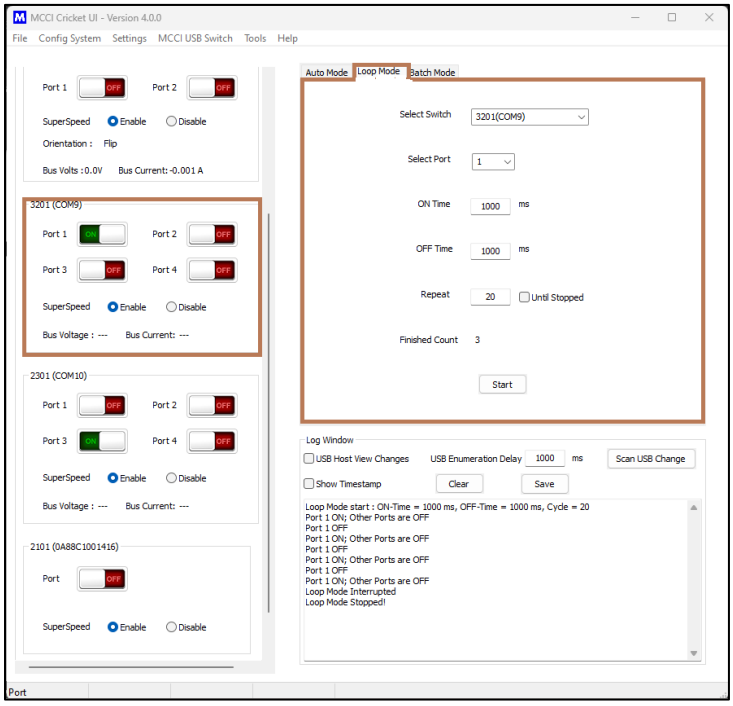




7.7.3 Loop Mode

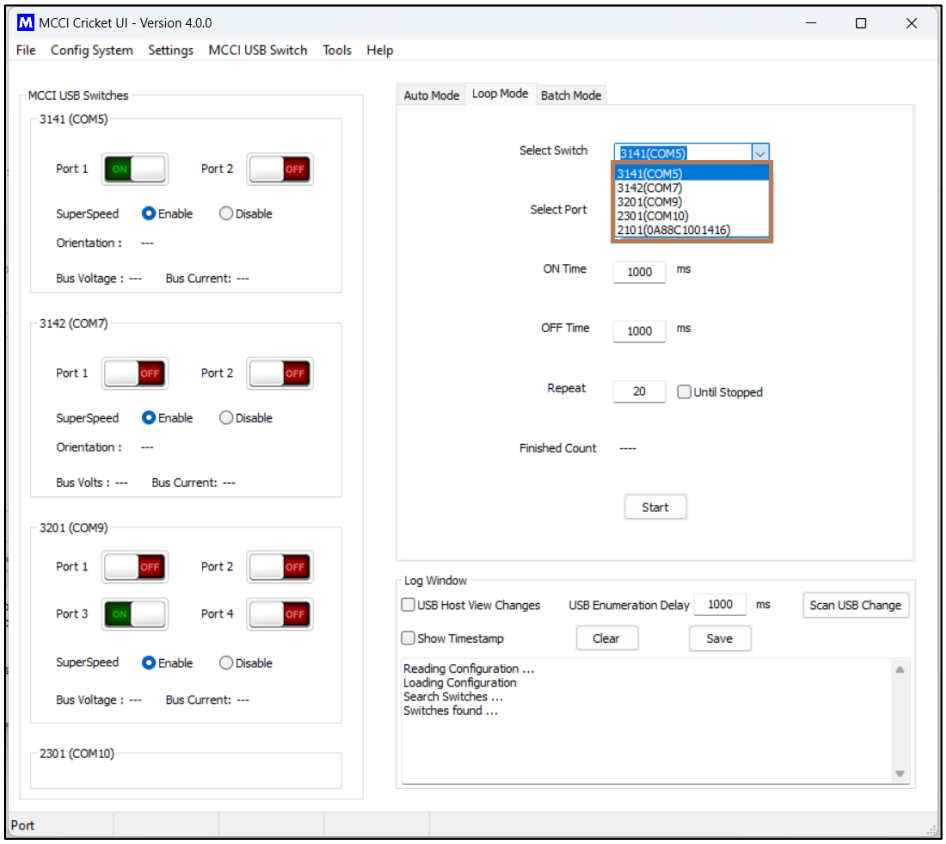
Here, the Loop Mode execution is similar in all devices as shown in Figure 23

Figure 23 Loop Mode in Cricket UI



- In the loop mode the connected device port numbers will be automatically detected, Select a port number from `Port` drop down menu, the detected port will be switched ON and OFF based on the repeat cycles given the `Period`, `Duty` will determine the ratio of the ON/OFF time for the selected port(s).
- Click on the `Start` button to start the loop mode operation.
- Click on the `Stop` button to stop the loop mode operation.
- User can't change the Port and Speed in the middle of loop mode execution.

- Loop mode control and its default values are shown in Figure 24 Loop Mode controls

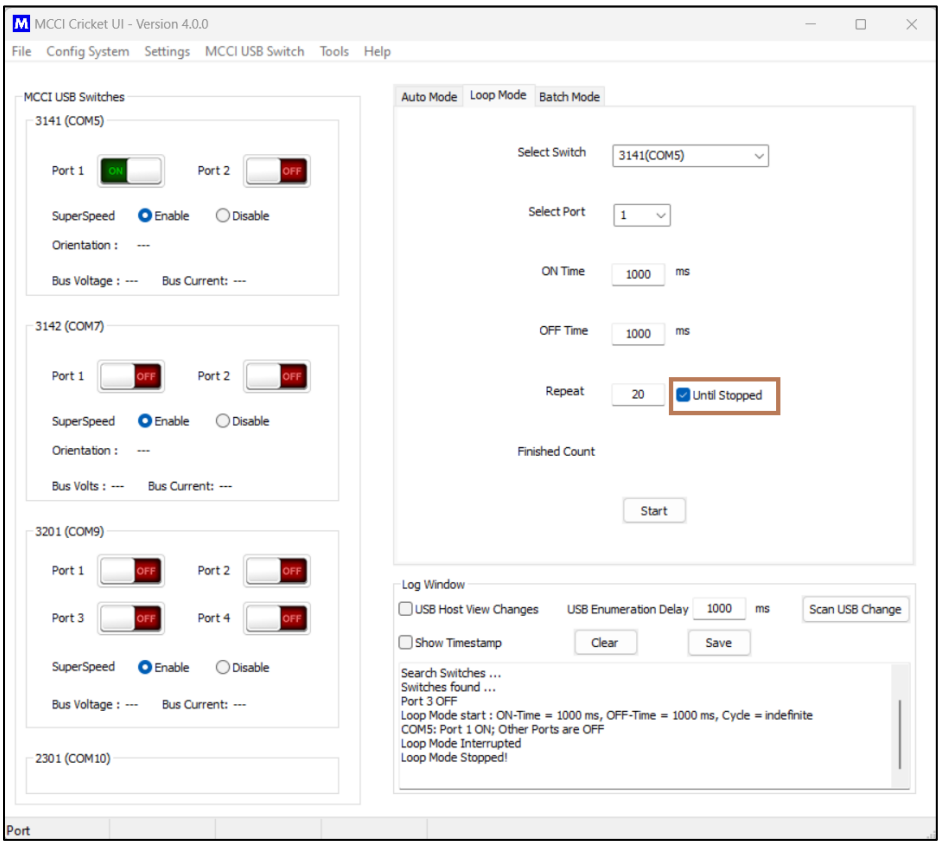


7.7.4 Until Stopped

- In the loop mode the connected device port numbers will be automatically detected, Select a port number from `Port` drop down menu, the detected port will be switched ON and OFF based on the given the `Period`, `Duty` will determine the ratio of the ON/OFF time for the selected port(s).
- If the “Until stopped” checkbox is checked.
- The port will work depending on the configuration until the “`Stop`” button is pressed.
- Click on the `Start` button to start the loop mode operation.
- Click on the `Stop` button to stop the loop mode operation.

- User can't change the Port and Speed in the middle of loop mode execution shown in Figure 25

Figure 25 Until Stopped

- 

The loop control options and descriptions are mentioned in below Table 4.

Table 4 Loop Mode Control Options

Control Option	Description
Port	Select a port number from drop down menu.
Period	Time between two successive ON/OFF cycle (MS).
Duty	Percentage of ON/OFF Time in total time period (ON + OFF).
Cycle	Number of cycles.
Until Stopped	Until stopped the loop.
Start/Stop	Start the loop / Stop the loop.

The MCCI Cricket UI Loop mode configuration default values and Descriptions are mentioned in Table 5

Table 5 Loop Mode Configuration Default Values

Parameter	Default Values
Port	Port are updated in depends on connecting device.
Period	2000 MS
Duty	50%
Cycle	20

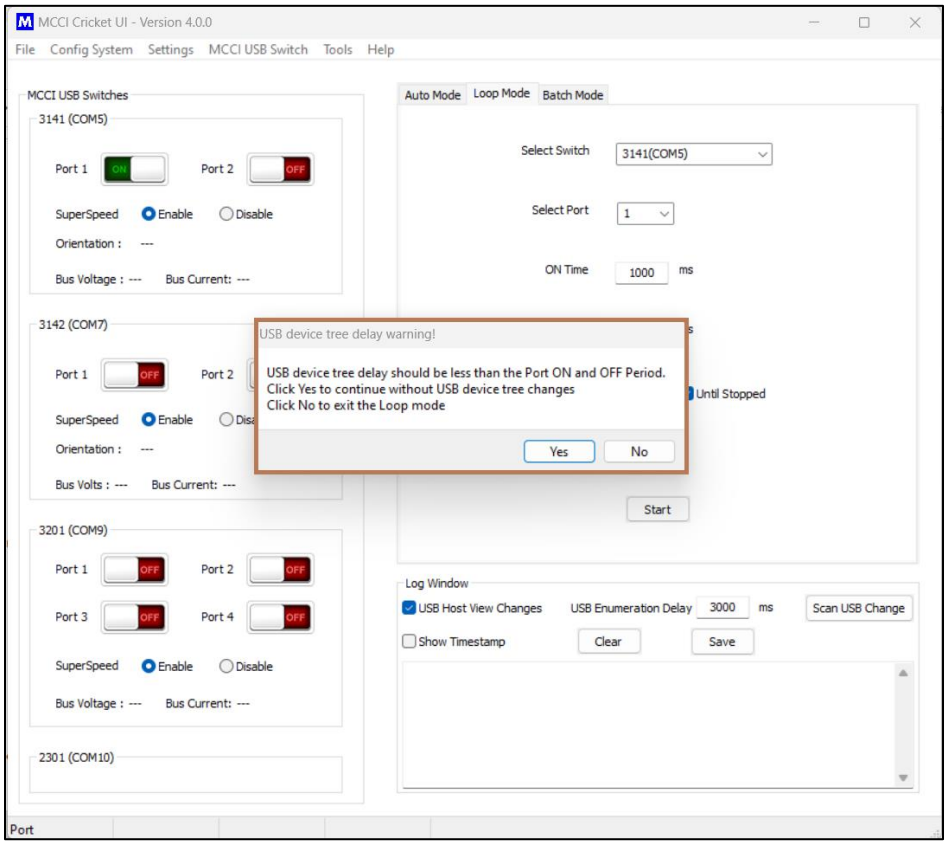
Note: If USB Device Tree Changes option is enabled, Then Delay specifies in that window is override the auto-mode interval.

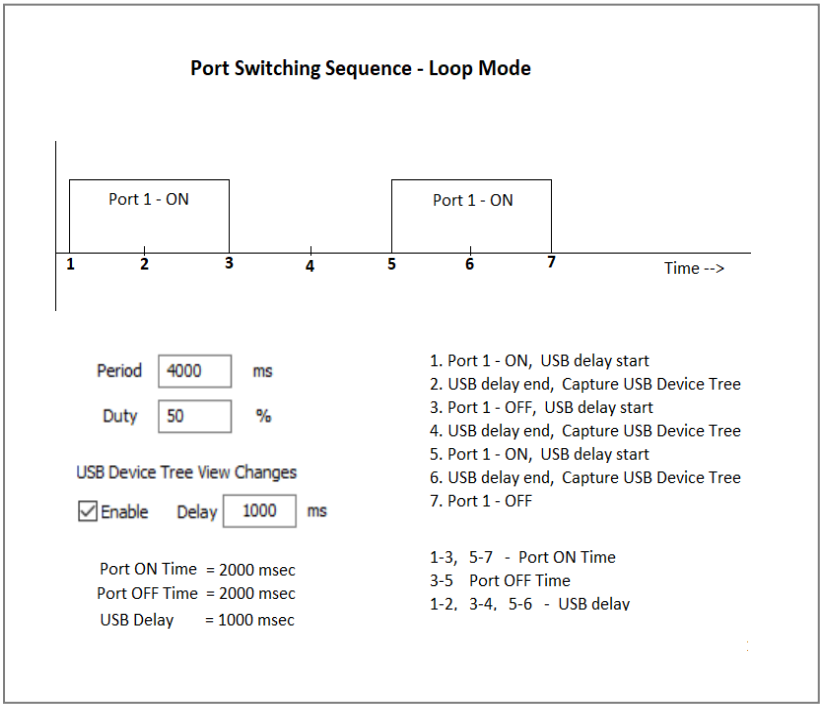
Whenever the Start control is clicked, the program will compare the Period (ON Time and OFF Time) with the USB Device Tree Changes delay, if it is less than that, then warning message will be displayed with two options, the warning message is shown in Figure 26

Option 1: Click yes to start the Loop mode without USB Device Tree Changes option.

Option 2: Click No to cancel the Loop mode start action, then user need to update the Period and Duty manually

Figure 26 device tree delay warning-Loop Mode

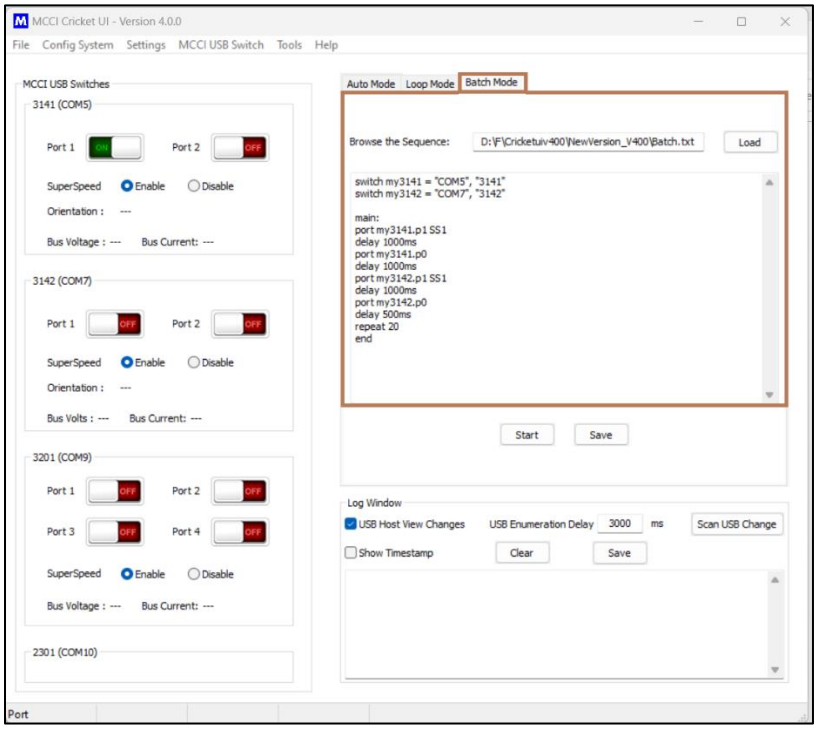




7.7.5 Batch Mode

This mode provides customized way to control the USB Switches with the simple instructions. User canconnect and control multiple MCCI USB Switches with the simple syntax such as switch, port, speed, read, delay and repeat.

Figure 27 Batch Mode



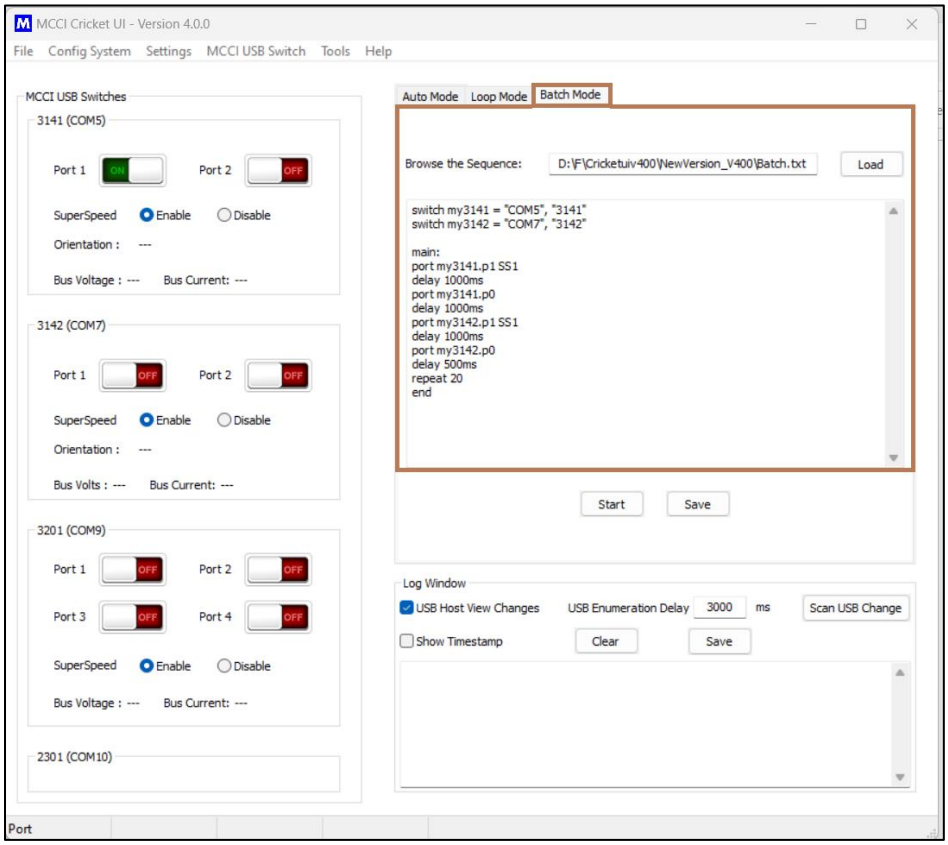
- Click on the `Start` button to start the Batch mode operation.
- Click on the `Stop` button to stop the Batch mode operation.
- Click on the `Save` button to Save the Batch mode Script.
- A load button is used for importing a specific batch mode script file in script log window.

7.7.5.1 Batch mode syntax

Batch mode commands can be created by using simple syntax. Example script for the Batch modeoperation as show below Table 6, Table 7, Table 8Table 6 batch mode script with single device.

Below image shown in batch mode script and Run script Figure 28

Figure 28 Batch Mode Script



Initialize the Switch

a. starts with key word - "switch."
b. assign name for the switch - "gchild3201" (users' choice)
c. Port connected - "COMX" (COM port in which the required switch is connected)
d. Model of the Switch - "3201" (When user connected MCCI USB Switch 3201)
e. Model of the Switch - "3141" (When user connected MCCI USB Switch 3141)
f. Model of the Switch - "2301" (When user connected MCCI USB Switch 2301)
g. Model of the Switch - "2301" (When user connected MCCI USB Switch 3142)

Example:

switch gchild3201 = "COM8", "3201" switch gchild3141 = "COM8", "3141"switch gchild2301 = "COM8", "2301"

Program loop starts with the key word "main"

"main"

Program loop ends with the key word "end"

"end"

Example:

Main

<.Script >

End

Switch ON port x of connected 3201, 3141, 2101 ,2301 and 3142

a. Starts with key word – "port"
b. Mention the port no – "gchild<switch name>.pX" < Switch name dot pX = here X is the port number like p1, p2, p3 or p3)
c. Mentioned the speed info – "SS1" (for super speed) and "SS0" (for High speed)

Example:

port gchild3201.p1 SS1

Adding of delay

a. starts with the keyword - "delay."
b. provide the delay in msec - "1000ms" (integer value followed by unit "ms")

Example

delay 3000ms

Switch OFF port x of connected 3201, 3141, 2101

and 2301Example.

port gchild3201.p0

Repeat the loop.

a. starts with the keyword - "repeat."

b. Integer value to repeat the loop (code between main and end)

Example

repeat 1000

Other commands

a. starts with the key word - "read"

b. Options

1. "voltage" - to read the voltage.
2. "current" - to read the current
3. "USB" - to read the USB Tree view change (connected/disconnected USB device lists)

Example

read USB

read voltage

read current

Table 6 batch mode script with single device

```
Switch gchild3201 = “COM8”, “3201”
main:
port gchild3201.p1
SS1delay 3000ms
read USB
port
gchild3201.p0
delay 1000ms
repeat 100
end
```

Table 6 Batch Mode Script with two devices

```
switch my2101 = "0A88C1001416", "2101"
switch my3141 = "COM10", "3141"

main:
port  my2101.p1  SS1
port  my3141.p1  SS1
delay 1000ms
port   my2101.p0
port   my3141.p0
delay 1000ms
port  my2101.p1  SS0
port  my3141.p2  SS0
delay 1000ms
port my2101.p0
port my3141.p0
delay 1000ms
repeat 50
end
```

Table 7 Batch Mode Script with Three devices

```
                    switch my3201 = "COM10", "3201"
switch my2101 = "0A88C1001416", "2101"
switch my3141 = "COM10", "3141"

main:
port my2101.p1
SS1port my3141.p1
SS1port my3201.p1
SS1read voltage
read current
delay 1000ms
port my2101.p0
port my3141.p0
port my3201.p0
delay 1000ms
port my2101.p1 SS0
port my3141.p2 SS0
port my3201.p3 SS0
delay 1000ms
port my2101.p0
port my3141.p0
port my3201.p0
delay 1000ms
repeat 50
end
```

8 Voltage and Current Plotting

8.1 VBUS V/I Monitor Menu

User can view the chart of VBUS Volt (V) and Current (A) data of the USB test device which is connected the selected USB Switch. Volt and Current data plotted in a single chart, Volt scale represented in the left Y axis and the Current scale represented in the right Y axis.

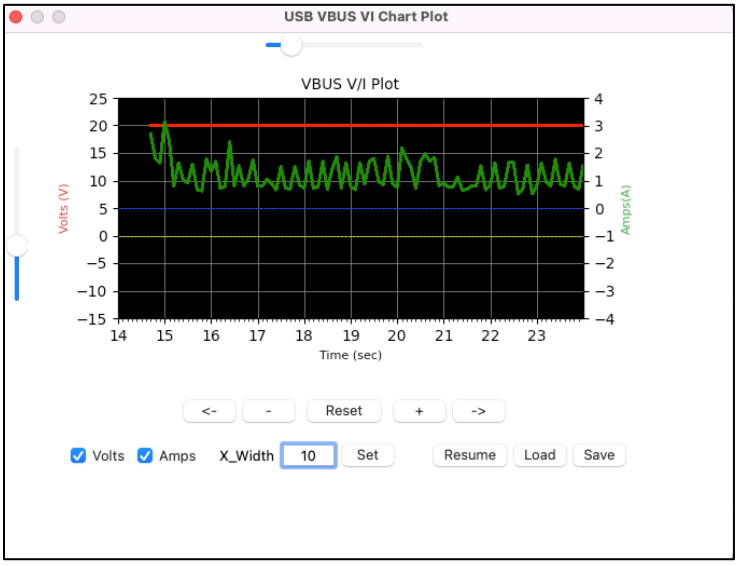
Open the application go to the ***Select MCCI USB Switch*** and select ***"VBUS V/I Plot"*** submenu, then a dialog window will appear with title name name of VBUS V/I Plot. Here Display the plot for MCCI USB Switch 3201 and 2301 Connection Exerciser only shown in Figure 29

- Voltage data shows in Volts (V) and Amps (A) data shows in Amps with same time period of samples please shown in Table 8
- Times in Seconds Time(Sec).

Table 8 VBUS V/I Plot

Parameter	Default Values
X-Width	Total number of samples viewed in a chart, maximum limit of 500 samples
Pause	To Pause and Resume the live chart
Load	Load the selected CSV file and show Volt and Current data in chart
Save	Save the Volt and Current chart as CSV file.

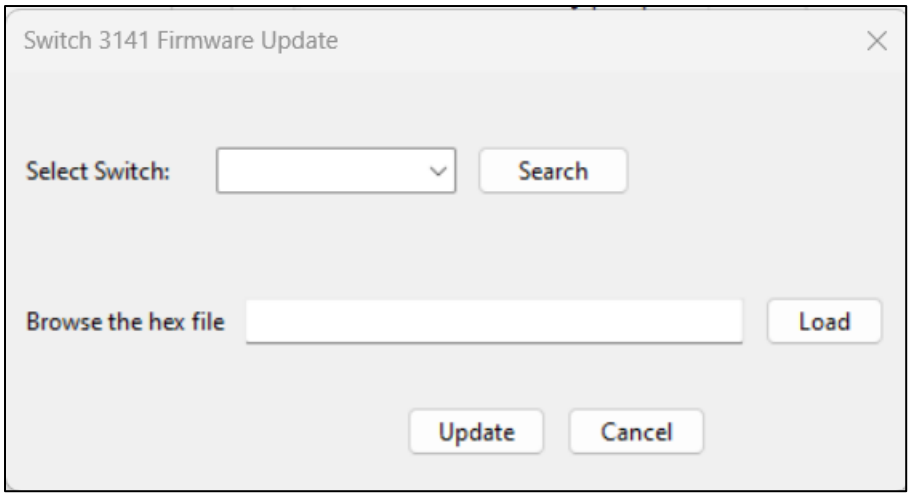
Figure 29 USB VBUS VI Chart Plot



9 Firmware Update

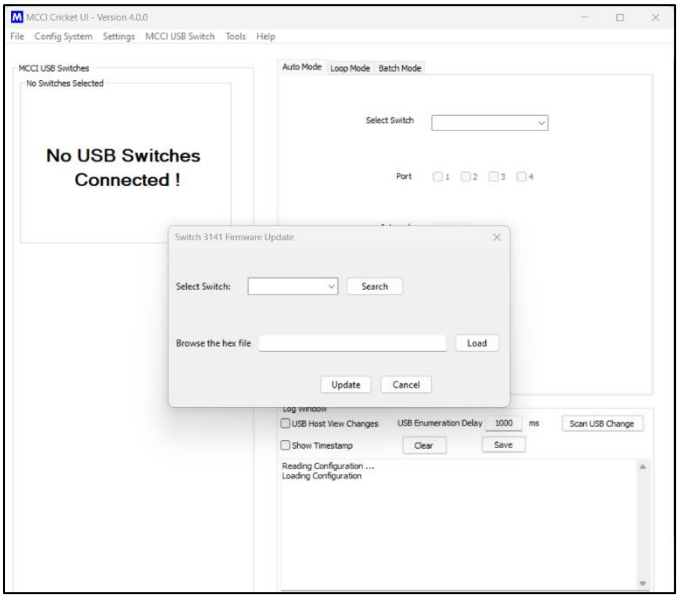
Here Cricket UI provides the feature of Firmware update to MCCI USB Switch 3141 and MCCI USB Switch 3142 shown Figure 30.

Figure 30 Switch 3141/3142 Firmware Update



9.1 Tools Menu

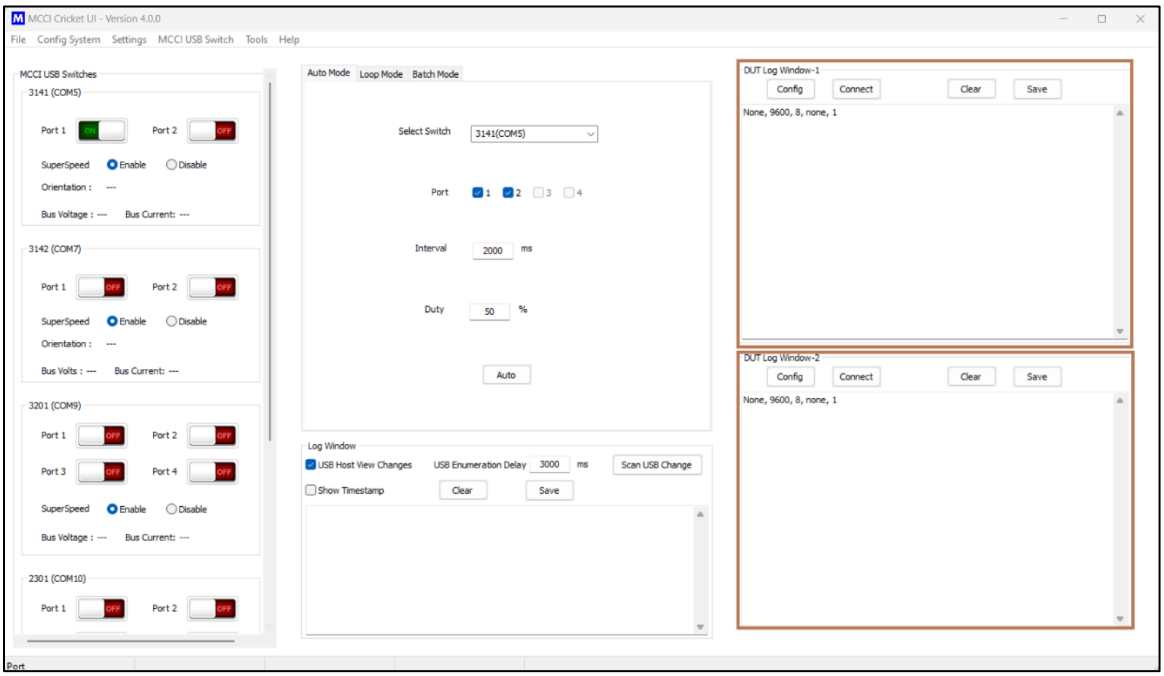
- Go to the Tools menu and select submenu of Firmware Update.
- disconnect the switches for Before connecting the MCCI Switch3141/3142.
- Once searching switches found in dropdown box list, select Switch.
- Load Switch3141 or Switch3142 <.ino > hex files from the local machine.
- Just click on update, started the Firmware update.



10 DUT Log Window

Device Under Test shortly called as DUT, this feature enables the user to test their device behavior bymonitoring the data over the serial port. There are two DUT Log panels available to connect serial port of two test devices. Users can show/hide the DUT Log panels based on their test scenario visit below image shown in Figure 31.

Figure 31 DUT Log window



10.1 DUT Config Dialog

This dialog contains three sections. Settings, COM port settings and Data to watch Figure 32

10.1.1 Settings

To select the interface type, by default it is serial, no support provided for network interface. Also usercan customize the name of the DUT Log Window. Click on “save” to retain the settings data in future.

10.1.2 COM port settings

To configure the serial port related settings such as select port, baud rate, start and stop bits, etc. Clickon “save” to retain the settings data in future.

10.1.3 Data to Watch and Match Action

Users can provide word to watch surrounded with double quotes, can provide multiple words to watch. Application parses the serial in data continuously, if any match found it will do the action as selected in the “Match Action” section. There are two actions, one is “stop sequence” and another one

is “count match”. When user selects the “stop sequence”, the application will stop the USB

Switching operations.

once the data match found. When use selects the “count match”, the application starts to count the match and display the number of matches found in the Log window. All the DUT related actions will bedisplayed in the Log window shown in image Figure 34

Figure 32 DUT Config Dialog

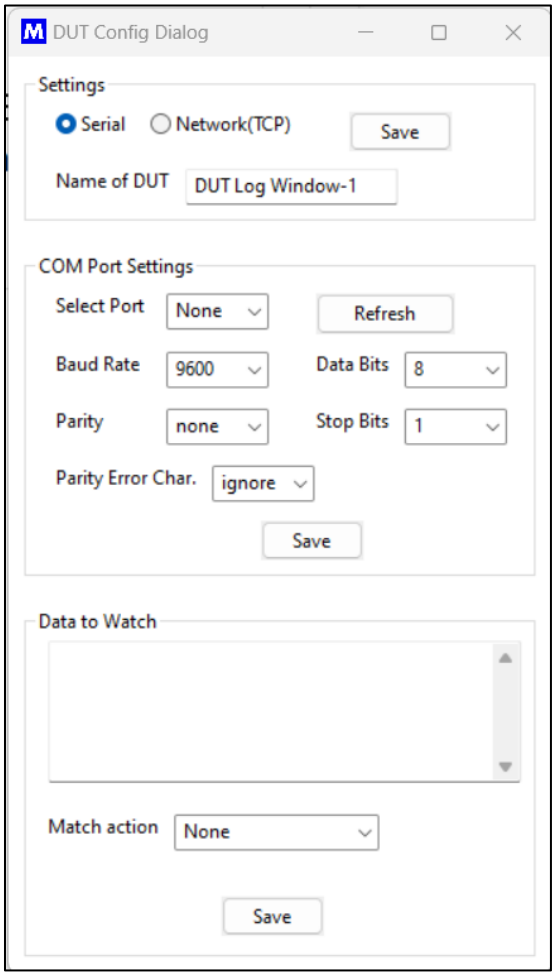
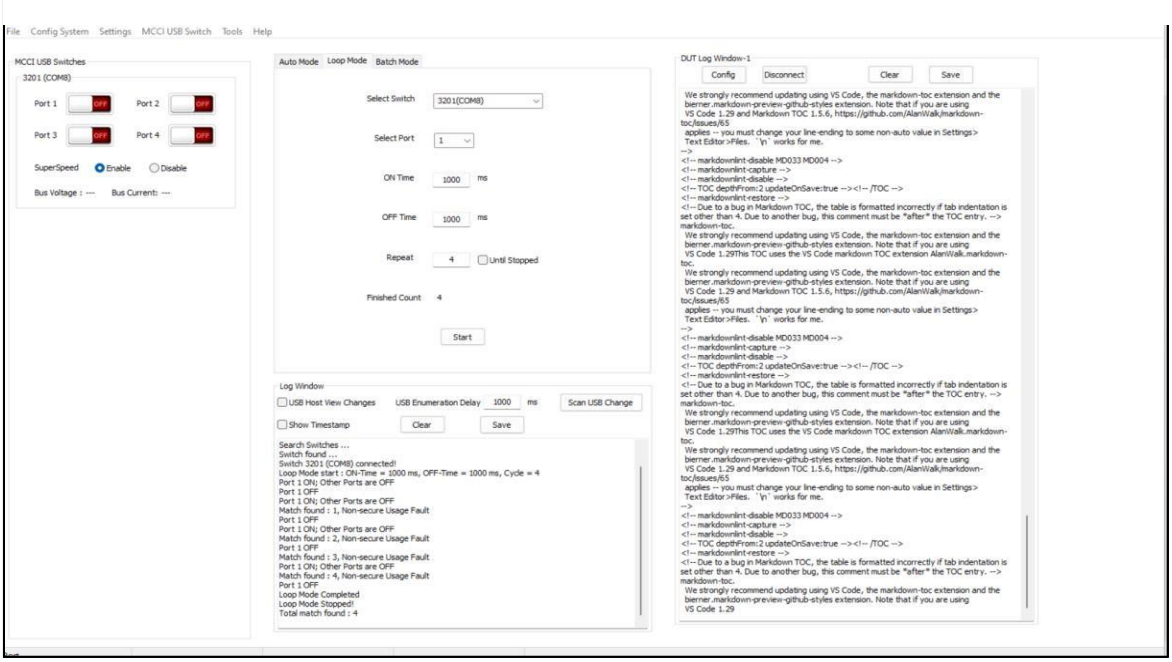


Figure 33 DUT Log Window

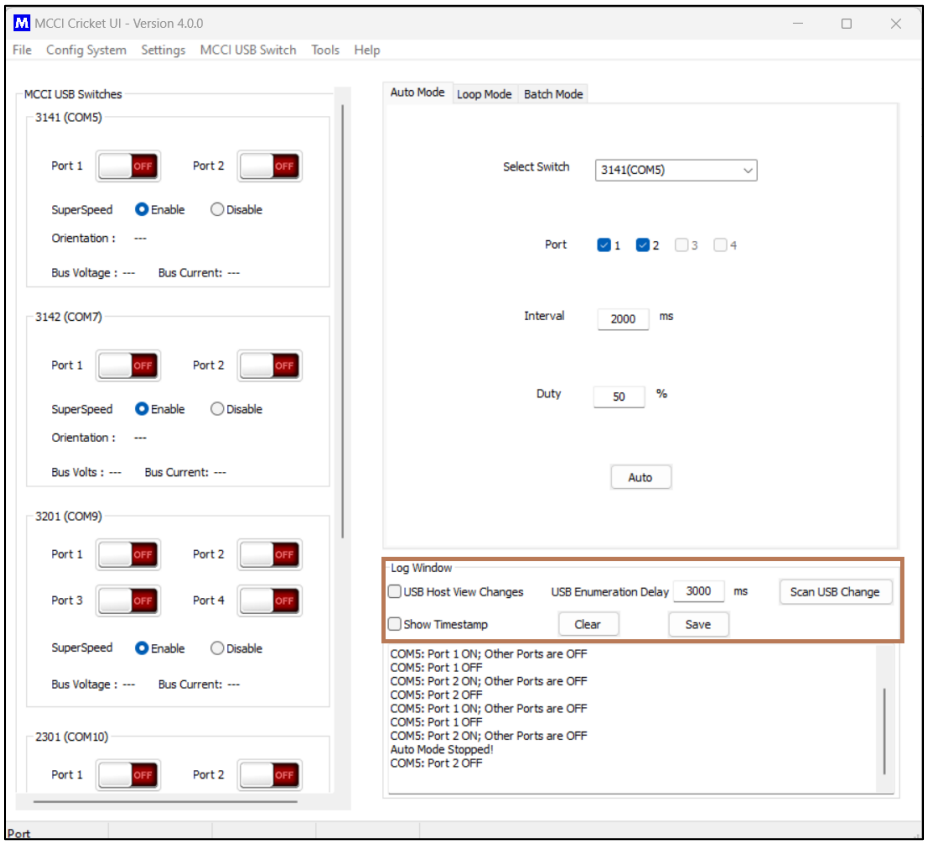


11 Log Window

The log window helps to log the device activities, it has an option to enable and disable the timestamp. Log window and plug-in/plug-out list of the USB devices after every port state changes in UI show as **Error! Reference source not found.**.

- `USB Host View Changes`**:** to check the plug-in/plug-out list of the USB devices after every port state changes.
- `Show Timestamp`: Option to log the device information with timestamp
- `Show USB Tree View Changes`: Option to display the USB device tree view changes log in the log window
- `Clear`: Clears the log window
- `Save`: Save the log to a file in selected location.

Figure 34 Log window



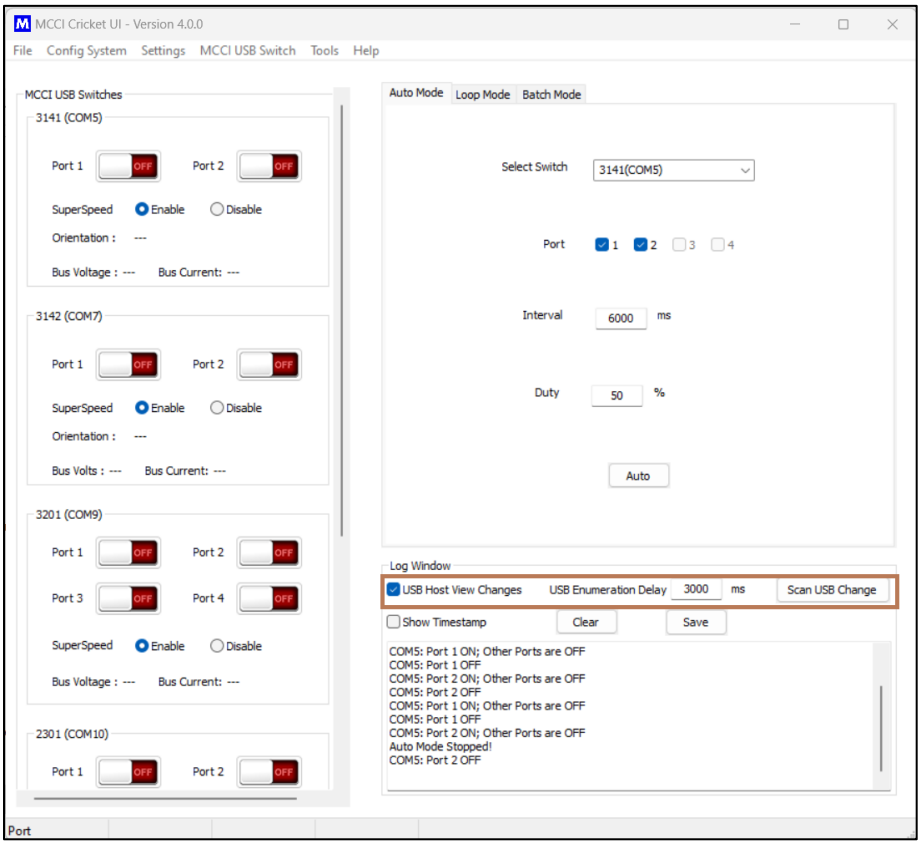
11.1 USB Host View Changes

This feature is convenient for the users to check the plug-in/plug-out list of the USB devices after every port state changes.

The options of the `USB Host View changes` are explained in this section. The respective UI window is shown in the Figure 35`USB Enumeration Delay`: Minimum delay required for port connect/disconnect feature of the device (Depends on connected device enumeration time)

- `Scan USB Change`: Gets the list of connected USB device(s) and display the Device information in the “USB Device Tree View Changes” panel.

Figure 35 USB Device Tree View Change Control Options



11.1.1 USB Delay Override

Auto Mode:

Whenever `Show USB Tree View Changes` option is enabled, the program will compare the `Interval` time with the USB Device Tree View Changes `Delay`, if it is less, then the `Interval` time will be overridden by the USB Device Tree View Changes `Delay`.

For example, `Interval` = 1000 MS , `Delay` = 2000 MS, `Duty` = 50%, when the `Show USB Tree View Changes` option is enabled, then the `Interval` will be updated as 1500 MS by the program.

Loop Mode:

Whenever `Show USB Tree View Changes` option is enabled, the program will compare the `Period` (Port ON and OFF Time) with the `USB Device Tree View Changes` delay, if it is less, then the `Period` will be calculated based on the USB Device Tree Changes `Delay`, and the `Duty` to make both Port ON and OFF Time equal to the USB Device Tree Changes delay.

For example, Period = 4000 MS, Duty = 75%, Delay = 2000 Ms. Based on the Period and Duty Port ON Time = 3000 MS, Port OFF Time = 1000 Ms. When the Show USB Tree View Changes option is enabled, then the Period will be updated as 8000 MS to make the Port OFF Time equal to the Delay which is 2000 Ms.

12 Disconnect & Close the Application

12.1.1 Disconnect

To disconnect a device, click the Disconnect option from the Select MCCI USB Switch panel and the selected device can be disconnected.

12.1.2 Close

To close the application, Click Close from the File Menu as displayed in. The application will be closed.

13 Getting Help

If you have a question about using the GUI usage or operation, please visit MCCI's support community. Feel free to post a question! We'll do our best to assist, and you may benefit from the experience of others. You may also post private questions to MCCI by opening a ticket or by sending email to techsupport@mcci.com.