

# Masters 2021 Helper Library

The library has 3 classes that you will use directly.

## **TCPClientHelper**

This class simplifies making a TCP/IP connection to a server or device. It automatically creates a worker thread and utilizes a serial queue to emulate a serial port to the programmer. You send your command to the TX property and if connected to the device or service it will send that string.

When a string comes in from the remote device it will raise an event with that information as well as update the RX property with the string that was received. Connect and Disconnect methods allow the programmer to have control over the connection. Limited status information is available as well as limited errors as to why a connection failed or disconnected. The Class is more of an example on how to use the TCP Client method and leveraging a thread to make the code non blocking. The programmer is encouraged to expand its capabilities and add in the proper error checking to make it more robust.

## **LogFileWriter**

This class will write time and date stamped lines that end in [0D][0A] to a file specified by the programmer. A Property for the path and properties to return the program path as well as the user folder path are included with a single method that will open, write, and close the file. It also creates the file if it does not exist.

This is a simplified example method provided as a starting point for the programmer to expand. You are encouraged to expand and add in more error checking and safety features to ensure operation across platforms.

## **VirtualConsole**

This is the Virtual Console class that was provided in Masters 2019 with minor changes. It allows the user of a console for debugging and custom commands for a Crestron Virtual Control server room program. NOTE: You MUST open the port used on the host operating system. Failure to open the port in the OS firewall on Virtual Control will cause communication to not function.

There is no authentication, and it is a wide open telnet style connection. There is no security at all programmed into this class. It is recommended to the user to add such features or upgrade it to use AES encryption if security is needed.

This class will function on a 4 series processor if the programmer wanted a limited access console without authentication.