CTI-P201 Entrance Exam

Exam Procedure

This exam is subject to the CTI Exam Terms and Conditions in full to which you, the Applicant, have submitted a signed copy to Crestron.

The Applicant has thirty (30) days from the time of downloading the exam to complete and submit the exam files. If there are errors, a single re-submission is permitted, but none further.

You may ask questions by replying to your True Blue Support case already opened at the start of this process.

Exam Results

The exam result is determined by comparing the programmed functionality to the scope of work as outlined in this document. To pass the exam, all programs must successfully and completely satisfy the scope of work.

A list of items not meeting the scope of work will be given to the Applicant after submission by the evaluator. Remember, you have only one (1) re-submission.

If you do not pass the exam, or fail to submit within the provided timeline, you may retake the exam after a three (3) month waiting period, or you may choose to attend the CTI-P101 Foundations of Crestron Programming class again. This three (3) month waiting period begins the day you receive notification of the exam results.

Once passed, the Applicant will be eligible to sign up for, and attend, the CTI-P201 Intermediate System Programming class.

We wish you the best of luck in your programming!

Introduction

Congratulations on completing the CTI-P101 Foundations of Crestron Programming course. This document outlines the steps to complete to qualify for entrance into the CTI-P201 Intermediate System Programming course.

It is recommended that you take the time to thoroughly practice your programming skills prior to attempting this exam.

Scope of Work

You have been tasked with upgrading a room with an existing Crestron system. You have been supplied with the current SIMPL Windows program archive and the VT Pro-e touchscreen archive that will need to be modified to support the new system requirements.

You must modify the provided SIMPL WIndows program and VT Pro-e project. A complete re-write of the program is not required and will not be accepted.

Modifications, Upgrades, and Additions to the Program

1. Add one Crestron GLS-OIR-C-CN occupancy sensor.
   a. Set to CrestNet ID 15.
2. Upgrade the TSW-752 to a TSW-770.
   a. Import Smart Graphics from the VT Pro-e project and modify as needed.
   b. Set to IP-ID 25.
3. Add a Crestron DM-RMC-4KZ-SCALER-C scaler to output #2 on the DMPS3-4K-250-C.
   a. The video output path moves from the DMPS HDMI output to the scaler's HDMI output. Update the program to support this hardware change.
4. Add a Crestron DM-TX-4KZ-302-C transmitter to the only DMPS3-4K-250-C DigitalMedia (DM) input.
   a. Add HDMI 2 input to the source selection smart graphic object.
   b. Update program to select between the two HDMI inputs on the transmitter.
   c. Remove the HDMI route that was on the DMPS HDMI input 1.
5. Add Airmedia to the source selections and update program routes. Use the DMPS's built in Airmedia functionality.
   a. Add a subpage directing the user to follow the on-screen instructions.
6. Upgrade the DVD player (Sony BDP Series (Infrared Control)) to a Sony BDP-CX7000ES, using the module Sony BDP-CX7000ES v1.3 (cm).
   a. Use RS232 port COM-01 on the DMPS.
   b. Retain all controls, and add the following controls:
      i) Disc + and Disc –.
      ii) Display the current disc text on the DVD subpage.
7. Create a new SIMPL User Module (UMC) that has 3 digital inputs (Power On, Power Off, HDMI) and one serial output (TX) to transmit the commands.
   a. The module must also have a parameter field with your name entered in it.
   b. Refer to the last page of this document for the new display protocol.
   c. Add this module to the program.
   d. Connect the module's serial output to a TCP/IP client symbol in SIMPL Windows. The IP address of the display is 192.168.1.102, TCP Port 49152. Program the client to connect only when the system is on.

8. Add a new light preset scene button on the lights subpage.
    a. "Movie" lights (Front Lights to 10%, Rear Lights to 5%).
9. Update the startup stepper.
    a. Select the built in Airmedia source.
    b. Create and recall a volume preset 1. Volume preset 1 should recall volume to 25%.
10. Add occupancy-triggered lighting.
    a. The occupancy sensor should trigger a light scene called "Walk-In" upon entering the room, if the lights are off. If any other light scene is active, then the occupancy sensor should not trigger any light scene.
11. All unused equipment should be removed from the program.

Submission

Remember to thoroughly test your program. It should compile without notices, warnings, or errors. Any unused signals should be handled according to the best practices discussed in the P101 course.
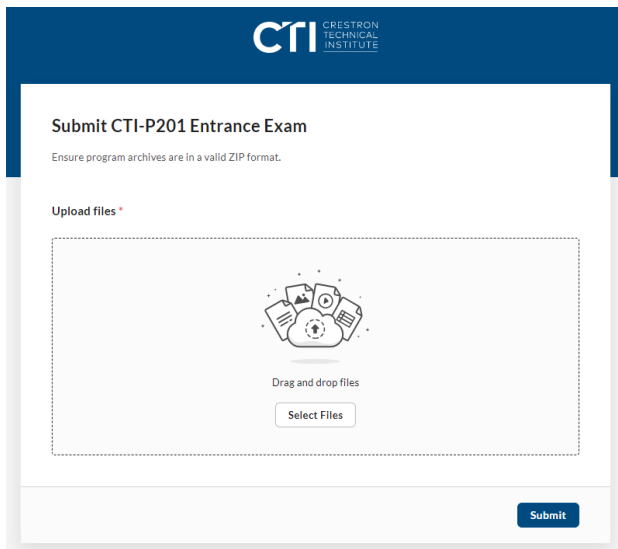
How to Submit

For your submission to be accepted, the following file name **must** be used:
(LastName)P201EntranceExam.zip
Example: SmithP201EntranceExam.zip

All program and interface archives, plus documentation, must be included within a single .ZIP file for submission.

Upload this single file using the Crestron Upload service located here: CTI-P201 Entrance Exam Upload

Enter your exam case number from Crestron Online Help (from "My Cases" in community.crestron.com).

Drag and drop the file into the area indicated or use the "Select Files" button to browse to your file.

Click the Submit button. Once completed, you will receive a confirmation message.

⚠️ **This system is NOT automatically monitored for activity**

Notify us of your exam submission using one of the following options:

1. Submit a comment in your community.crestron.com exam case with your exam file name.
2. Reply to the email in which you received your exam documents with your exam file name.

QuirkyTech TV-P50-S1 4K Display: Control Protocol

Command Format

All Commands are sent all in hex and follow a fixed format of five bytes. The command string is prefixed with an ESC character (hex 1B) and ends with a CR/LF. The second byte contains the command itself, and the third byte will contain any required data. (Byte values are shown between square brackets; [1B] is the same as \x1B or 1Bh or 0x0B. Commands do not require square brackets '[]'.)

Power On Example Command: [1B][51][31][0D][0A]

Prefix	Command Byte	Data Byte	CR (Carriage Return)	LF (Line Feed)
[1B]	[51]	[31]	[0D]	[0A]

Power Control

Command byte: [51]

Data byte: ASCII 0 (power off) or ASCII 1 (power on)

Input Selection

Command byte: [4A]

Data byte: ASCII H (select HDMI input)

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