ServCom Manual Server Configuration

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0.1 Color Key

Black – Option Current

Green – Option Depreciated

Blue – Option Not Implemented

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0.2 Overview

Purpose of Document: To demonstrate how to manually program the config file (.cfg) to configure ServCom (also known as Server Config).

The contents of this manual are listed according to the order of the config (.cfg) file itself. All commands are reproduced with the same format and justification as in the original file.

To create the .cfg file, open the Sign Management section in PrimeVue Manager and save with the file name and in the location which you specify.

1.0 Basic Settings

`<file_version>2.0</file_version>`
Displays the current config file version.

`<server>`
Notes start of server settings. Not a configurable setting.

`<notes></notes>`
Type text between the angle brackets to include in feedback emails (e.g. contact information, explanation of feedback email, etc.). For more feedback email settings, *see **4.0 Feedback***.

`<listen_port_number>1772</listen_port_number>`
1772 is the default listen port number. This number is used by the old listen protocol, which PrimeVue uses. This is the style that PrimeVue Manager uses.

`<new_listen_port_number>9762</new_listen_port_number>`
9762 is the default new listen port number. This number is for the new listen protocol, which PrimeVue 2 uses.

`<role>NONE</role>`
Specify the role of the computer as NONE, SENDER, or BACKUP. NONE should always be used unless a complementary SENDER or BACKUP computer is specified later in the config file. If you do not have both a SENDER and BACKUP, the sign will not output frames.

IMPORTANT: Make the entry in all caps.

`<sign_name>Default</sign_name>`
Enter desired name of the sign here. Default name is "Default."

`<sign_serial>000000</sign_serial>`
Enter the 9-digit TeamViewer number of the sign in this field. This number appears in feedback emails for identification purposes.

`<manual_consol_position>False<manual_consol_position>`
Enables specific default positioning of the ServCom window on the display of the computer running

ServCom (not the sign display).

```
<manual_consol_position_x>20<manual_consol_position_x_y>
<manual_consol_position_y>20<manual_consol_position_x_y>
```
Set desired x/y-coordinates at which to display ServCom, from the upper left-hand corner of the display.

```
<overlay_window>True</overlay_window>
```
Enables green overlay window to display portion of screen that is being screen raked. Option depreciated. (*See 6.2 Screen Rake Channel for current option.*)

```
<overlay_window_top>True</overlay_window_top>
```
Sets whether overlay window is always displayed on top of other windows. Option depreciated. (*See 6.2 Screen Rake Channel for current option.*)

```
<controller_type>DIS14</controller_type>
```
Enter the sign's controller type here (DIS14 or DIS12+).

```
<sign_color>True</sign_color>
```
Specifies whether a sign is color or monochrome. Option is unused; please ignore.

```
<sign_vp>true</sign_vp>
```
Set as True to enable Virtual Pixel processing for capable signs. Set to False to disable Virtual Pixel processing.

```
<device_class>001</device_class>
```
Option unused. Leave at 001.

```
<sign_width>704</sign_width>
<sign_height>192</sign_height>
```
Enter resolution of sign's width and height. This is the physical size of the sign. (Do not enter the Virtual Pixel size.)

```
<packet_size>1400</packet_size>
```
Default data packet size of 1400 is correct for all current signs. **Do not change.**

```
<frame_rate>33</frame_rate>
```
Default is 33 milliseconds in delay between frames. For 30 frames per second, set to 33. For 5 frames per second, set to 200. This option is depreciated. (*See **6.2 Screen Rake Channel** for current option.*)

```
<frame_timer_adjustment>10</frame_timer_adjustment>
```
This option is unused. Please ignore.

```
<render_to_screen>False</render_to_screen>
```
Render to screen shows output of ServCom on a display. Set as True to enable.

```
<use_opencl>False</use_opencl>
```
Hardware acceleration option. Enabling may improve performance for certain signs.

2.0 Screen Rake (*see 6.2 Screen Rake Channel*)

Note: This section is largely depreciated, because once a Screen Rake Channel has been created in PrimeVue Manager, all the options in this section will be available under **6.2 Screen Rake Channel**.

```
<screen_rake>False</screen_rake>
```
Used for billboards to capture specific portions of computer screen. Option depreciated.

```
<rakex>0</rakex>
<rakey>0</rakey>
```
Set x/y-coordinates of screen capture for screen rake.

```
<screen_rake_monitor_number>0</screen_rake_monitor_number>
```
Unused option. May be enabled in the future. Please ignore.

```
<screen_rake_whole_screen>False</screen_rake_whole_screen>
```
Enables capture of entire screen. Before sending capture area to sign, ServeComConsol will resizes the image to match sign resolution. Does not keep aspect ratio.

```
<app_check>DBCApp</app_check>
```
Specifies application to check for before running screen rake. Option depreciated.

```
<auto_start_app>False</auto_start_app>
```
Unused option. May be enabled in future. Please ignore.

```
<app_delay>30</app_delay>
```
Sets how long ServeComConsol delays after startup before screen raking. Time is set in seconds. Option depreciated.

```
<send_controller_registers>True</send_controller_registers>
```
Enable or disable register loading. This option should always be set to True. **Do not change.**

```
<send_status_request>True</send_status_request>
```
Enable or disable ServerCom requesting the current state of the controller. This option should always be enabled (True). Please ignore.

3.0 Brightness

```
<manual_dimmer_control>True</manual_dimmer_control>
```
Specifies whether ServCom controls dimming. This option should always be enabled (True). **Do not change.**

```
<dimmer_max>255</dimmer_max>
```
Values are set between 0 and 255. Dimmer Maximum sets how bright the sign can go. Default shipping setting varies.

```
<dimmer_min>9</dimmer_min>
```
Dimmer minimum sets how dim the sign can go. Default setting is 9.

```
<dimmer_reported_max>255</dimmer_reported_max>
```
Specifies new practical limit to sign brightness. This de facto limit is based on actual brightness the sign can output. Set maximum expected brightness needed here. The value set as Dimmer Reported Maximum will become the 255 for Dimmer Maximum above.

```
<dimmer_reported_min>0</dimmer_reported_min>
```
The value set as Dimmer Reported Minimum will become the 0 for Dimmer Minimum above.

```
<dynamic_power_limit>False</dynamic_power_limit>
<dpl_red>0</dpl_red>
<dpl_green>0</dpl_green>
<dpl_blue>0</dpl_blue>
<dpl_yellow>0</dpl_yellow>
<dpl_black>0</dpl_black>
<dpl_white>0</dpl_white>
<dpl_target>0</dpl_target>
```
Dynamic power limit should be set to False. All other values should be ignored. **Do not change.**

4.0 Feedback

```
<feedback>False</feedback>
```
Enabling allows use of feedback, such as in emails.

```
<feedback_timespan>0</feedback_timespan>
```
This option is unused. Please ignore.

```
<suppress_evening_blank_message>False
</suppress_evening_blank_message>
```
Allows for the disabling of feedback email starting at the time time specified below.

```
<start_blank_hour_military>0</start_blank_hour_military>
```
Specify hour to begin ignoring sign potential frozen output and to suppress feedback emails. Always specify value in military time. Valid values are 0 to 23.

```
<blank_time_duration_hours>0</blank_time_duration_hours>
```
Specify how many hours to ignore potential frozen output. Value should always be set to a whole number.

```
<email_enabled>False</email_enabled>
```
Set as True to enable feedback emails, False to disable.

```
<email_to>LEDservice@formetco.com</email_to>
```
This field sets which email address(es) will receive feedback emails. Copy in subsequent lines in the format of `<email_to>[email address here]</email_to>` in order to add additional receiving email addresses.

```
<email_port>25</email_port>
<email_host>smtp.gmail.com</email_host>
<email_username>noreply@adtechintlsupport.com</email_username>
<email_password>techsupport</email_password>
<email_from>noreply@adtechintlsupport.com</email_from>
```
Enter login credentials for the appropriate SMTP Server.

```
<email_ssl>True</email_ssl>
```
Set to "True" to enable an encrypted connection.

```
<email_frequency>86400</email_frequency>
```
Set email frequency in seconds. Defaults to 86,400 seconds, which is about once a day. Always set value without use of commas.

```
<email_cable_test_threshold>10</email_cable_test_threshold>
```
Setting unused. Please ignore.

```
<auto_config_refresh>False</auto_config_refresh>
```
Used for signs that do not have feedback. If enabled, periodically refreshes settings to correct graphical errors. Enable only for signs that do not have feedback.

```
<config_refresh_timeout>7200000</config_refresh_timeout>
```
Sets time for auto configuration refresh in milliseconds.

```
<web_cam_uri>http://192.168.0.51:81/SnapshotJPEG?
      Resolution=320x240&Quality=1</web_cam_uri>
```
Sets location and resolution of a sign's web cam for the purpose of attaching images to feedback emails.

```
<web_cam_attachment_enabled>False</web_cam_attachment_enabled>
```
Set as True to enable the attachment of images from the sign's web cam to feedback emails.

```
<dbcappfreezecheck>False</dbcappfreezecheck>
```
Set as True to enable checking whether DBCApp has frozen. Set to False to disable checking if DBCApp has frozen.

```
<dbcappfreezecheck_notification_timeout>
      7200000</dbcappfreezecheck_notification_timeout>
```
Set how often in milliseconds to be notified if DBCApp is frozen. Emails will only be sent if DBCApp is frozen.

```
<dbcappfreezecheck_timeout>300000</dbcappfreezecheck_timeout>
```
Sets how long a screen must be frozen to count as an error to be reported. Set in milliseconds.

5.0 Advanced Settings

```
<reset_internet_power_timeout>
```

```
180000</reset_internet_power_timeout>
```
Sets how long internet must be disconnected in milliseconds for CPS100 Intelligent Power Strip to power cycle the sign.

```
<calbypass>0</calbypass>
```
Always leave at 0 for current signs. Changing to 1 forces sign to bypass color calibration. **Do not change.**

```
<12bitcolor>0</12bitcolor>
```
To enable 12-bit, set to 1. Use only if a sign's performance improves from using 12-bit instead of 16-bit color (unnecessary for most signs).

```
<gclock>_4MHz</gclock>
```
Signs should be tested at _8MHz, shipped at _4MHz, and can be lowered in the field as needed to maintain a quality image. G Clock affects the speed at which the LEDs blink. (Please ensure the underscore comes before the number in the G Clock value.)

```
<dclock>_8MHz</dclock>
```
Signs should be tested at _8MHz, and shipped at _4MHz. Data Clock is the speed at which data is transmitted from display board to display board.

```
<controller_packet_ack>False</controller_packet_ack>
```
Should always be set to False. **Do not change.**

```
<gclock_doubler>True</gclock_doubler>
```
Option unused. Please ignore.

```
<mbi_red_cfg>171</mbi_red_cfg>
<mbi_green_cfg>171</mbi_green_cfg>
<mbi_blue_cfg>171</mbi_blue_cfg>
<mbi_yellow_cfg>171</mbi_yellow_cfg>
```
Each should bet set at an integer value between 0 and 255. The standard setting is 171, which is considered to be the sign's 100% brightness setting. (New signs are not shipped at 100% brightness, so they will come set to values lower than 171.) This setting controls how much current the driver supplies to the LED.

Setting values above 171 will overdrive the LEDs. This is not recommended, as it shortens the lifespan of the LEDs.

If you need to hit a white point with the sign, the appropriate color values may be lowered.

```
<sbc_reset_timeout>0</sbc_reset_timeout>
```
This option allows you to set how long the screen will wait before going blank after it stops receiving data. Set this value in seconds. If left at 0, the sign will leave up the last received image until new data is received. If the sign begins to receive data again, the sign will pick up where it left off and operate normally.

```
<cable_left_to_right>False</cable_left_to_right>
```
Option is unused. Please ignore.

```
<cable_top_to_bottom>True</cable_top_to_bottom>
```
Set to True if sign is wired top to bottom. Set to False if sign is wired bottom to top. This setting only matters if there is more than one row per output. Typically used for EMC signs.

```
<fan_on_temp_c>46</fan_on_temp_c>
<fan_off_temp_c>41</fan_off_temp_c>
```
Options unused. Please ignore.

```
<board_width>16</board_width>
<board_height>8</board_height>
```
Options unused. Please ignore.

```
<displayboard_type>P20DPD_X</displayboard_type>
```
Set display board model here. Enter model name exactly, including underscores.

```
<displayboard_driver>MBI5030</displayboard_driver>
```
Set display board driver here. Enter driver name exactly.

```
<gamma_red>2.2</gamma_red>
<gamma_green>2.2</gamma_green>
<gamma_blue>2.2</gamma_blue>
<gamma_yellow>2.2</gamma_yellow>
```
Leave these values set to 2.2. **Do not change.**

```
<parallel_output>False</parallel_output>
```
Set as True if the sign is capable of parallel output.

To use the **Parallel Output** option, a board must have 1) exactly one row per output, 2) rows of the same length, and 3) connectors which are arranged sequentially without any spaces (e.g. if E goes bad, it should not be plugged into G instead. All rows must be reconnected to remain sequential).

If the sign fails even one of these requirements, do not use the **Parallel Output** option. In general, all billboards meet this requirement. Many EMC signs, however, do not.

```
<throttle_byte_delay>100</throttle_byte_delay>
```
Value should be set to 100. **Do not change. Critical.**

```
<throttle_enabled>True</throttle_enabled>
```
Should always be set to True. **Do not change.**

```
<broadcast_frame_sync>True</broadcast_frame_sync>
```
Set to True if entire sign should be synchronized to a single image. Disable only if sign frames are split between different computers.

```
<vp_demo_mode>False</vp_demo_mode>
```
Option unused. Please ignore.

6.0 Channels

```
<channels>
```

6.1 PrimeVue Messages Channel

```
<pv_driver>
```
Denotes PrimeVue Messages channel.

```
<path_option>Default</path_option>
```
Option currently unused. Please ignore.

```
<name></name>
```
Option currently unused. Please ignore.

```
</pv_driver>
```

6.2 Screen Rake Channel

```
<screen_rake_driver>
```
Denotes Screen Rake channel for billboards.

```
<name>Screen Rake Channel</name>
```
Enter desired name of channel here.

```
<rakex>0</rakex>
<rakey>0</rakey>
```
Enter desired x/y-coordinates for upper left-hand corner of capture area. This coordinate corresponds with the upper left-hand corner of your computer screen.

```
<rake_width>128</rake_width>
<rake_height>32</rake_height>
```
This option sets the width and height of capture area. For best image quality, enter exact physical size of sign. For Virtual Pixel signs, enter double the physical size (i.e. the Virtual Pixel size).

If you enter a different resolution, ServCom will automatically resize the image to fill the sign display.

```
<full_screen>False</full_screen>
```
If set to True, ServCom will ignore the width and height options above, and instead screen rake the entire monitor. The image will be resized to fit the dimensions of the sign. Aspect ratio will not be maintained.

```
<show_outline>True</show_outline>
```
Enables green overlay window to display portion of screen that is being screen raked.

```
<keep_on_top>True</keep_on_top>
```

Sets whether overlay window is always displayed on top of other windows.

`<frame_hold_time>33</frame_hold_time>`

Default is 33 milliseconds of delay between frames. For 30 frames per second, set to 33. For 5 frames per second, set to 200.

`<app_to_check>DBCApp</app_to_check>`

Specifies application to check for before running screen rake.

`</screen_rake_driver>`

6.3 Decklink Live Video Channel

`<decklink_driver>`

Denotes DeckLink Live Video Channel.

`<name>DeckLink Live Video Channel</name>`

Enter desired name for channel here.

`<decklink_id>0</decklink_id>`

Always set to 0 unless the computer has multiple DeckLink devices.

`<video_mode>720p 59.94Hz</video_mode>`

Select video mode that corresponds to video source. **IMPORTANT:** Video Mode must exactly match the capture source, with the exact resolution and screen refresh rate. Below is a complete list of valid values for this field (entry for Video Mode must be entered exactly as found below):

PALp	1080p 23.98Hz
PAL	1080i 60Hz
NTSCp	1080i 59.94Hz
NTSC 2398	1080i 50Hz
NTSC	4kDCI 25Hz
720p 60Hz	4kDCI 24Hz
720p 59.94Hz	4kDCI 23.98Hz
720p 50Hz	4k(3840x2160) 30Hz
1080p 60Hz	4k(3840x2160) 29.97Hz
1080p 59.94Hz	4k(3840x2160) 25Hz
1080p 50Hz	4k(3840x2160) 24Hz
1080p 30Hz	4k(3840x2160) 23.98Hz
1080p 29.97Hz	2k(2048x1556) 25Hz
1080p 25Hz	2k(2048x1556) 24Hz
1080p 24Hz	2k(2048x1556) 23.98Hz

`<pixel_format>8Bit YUV</pixel_format>`

Please leave at 8Bit YUV. Other options may be added in the future.

`<capture_mode>Native Sign Resolution</capture_mode>`

Sets how the sign captures video. **IMPORTANT:** Each setting input must be spelled as each heading in this list:

- Native Sign Resolution – Captures the physical size of the sign. Captures double the physical size if a Virtual Pixel-enabled sign.
- Fullscreen – Captures full resolution of selected video mode.
- Custom Resolution – Captures video of a custom width and height

```
<keep_aspect_ratio>False</keep_aspect_ratio>
```
Option currently unused. Please ignore.

```
<model>Mini Recorder</model>
```
Option currently unused. Please ignore.

```
<capture_xoffset>0</capture_xoffset>
<capture_yoffset>0</capture_yoffset>
```
Enter desired x/y-coordinates for upper left-hand corner of capture area. This coordinate corresponds with the upper left-hand corner of your computer screen.

If Capture Mode is set to fullscreen, Capture Offset is ignored.

```
<capture_width>0</capture_width>
<capture_height>0</capture_height>
```
Only functional if "Custom Resolution" is enabled under capture mode. Sets resolution of capture from point set in Capture Offset (above).

```
            </decklink_driver>
        </channels>
```

7.0 Faces

```
    <face>
```
Each face has its own brightness control through a photocell/dimmer, thus allowing you to adjust brightness separately.

```
        <controller>
```
Controller type defined earlier in config file (*see page 2, **1.0 Basic Settings***).

```
            <ipaddress>192.168.13.3</ipaddress>
```
Enter IP Address of the controller that ServCom is going to talk to.

```
            <x>0</x>
            <y>0</y>
```
Specifies upper left-hand corner of area the controller outputs to.

```
            <width>192</width>
            <height>48</height>
```

Sets resolution of controller output area on the sign.

`<feedback_ip>192.168.13.50</feedback_ip>`

Enter IP of the feedback controller that is matched to main controller.

`<custom_driver>NA</custom_driver>`

If set to NA, controller will use driver set above (*see 5.0 Advanced Settings for Displayboard Driver settings*). If set to anything else, this controller will use the driver type entered. Use the following options: MBI5030, MBI5040, or MBI5042

`<payload>controller0.pload</payload>`

Option unused. Please ignore.

`<firstconnector>0</firstconnector>`

Always set to the default of 0. **Do not change.**

`<lastconnector>7</lastconnector>`

Always set to the default of 7. **Do not change.**

`<board_chip_length>8</board_chip_length>`

Board Chip Length: How many chips on each board are servicing each color channel or the number of drivers per board per color channel. (For example, if a board has 32 drivers, and four color channels, the board chip length is 8.)

Enter the number of chips that service a given color channel.

`<connector>`

There are eight connectors, each with its own settings.

`<chip_length>96</chip_length>`

Total number of chips per color channel serviced by the connector. This number can be calculated as follows: <segment_width> x <segment_height> x <board_chip_length> = <chip_length>

`<xoffset>0</xoffset>`
`<yoffset>0</yoffset>`

Sets the x/y-coordinates of the connector's output within the resolution of its controller

`<segment_width>12</segment_width>`
`<segment_height>1</segment_height>`

Enter in the correct number of boards that the connector services (number of boards wide by boards tall).

`</connector>`

For unused connectors, set to the following specifications:
`<connector>`
  `<chip_length>8</chip_length>`
  `<xoffset>0</xoffset>`
  `<yoffset>[height of controller]</yoffset>`

```
            <segment_width>1</segment_width>
            <segment_height>1</segment_height>
        </connector>
```
For the Y Offset, enter the height of the controller (**not** the height of the connector).

```
    </face>
```
Denotes end of current face configuration. Add additional faces as needed.

8.0 Dimmer Settings

```
    <dimmer_settings>
```
Indicates start of dimmer settings, which are used to manage the dimming behavior of the sign.

```
        <integration_samplecount>60</integration_samplecount>
```
Enter the number of samples the sign will track. Two samples are taken per second, therefore 60 samples would include the last 30 seconds of data. (The default is 60 samples.)

```
        <sign_brightness_change_percent_per_second>0.08
                    </sign_brightness_change_percent_per_second>
```
Set in decimal form how quickly the sign will change brightness. Use 0.08 (i.e. 8% change per second) for **all** signs.

```
        <sign_max_nits>7500</sign_max_nits>
```
Set this number to the maximum brightness of which the sign is currently capable in nit.

```
        <sign_minimum_nits>150</sign_minimum_nits>
```
Set this number what you want the minimum brightness to be. This number is only accurate if the maximum is properly set (otherwise sign may display dimmer values than desired).

```
        <als_photocell>
            <sign_brightness_profile>2</sign_brightness_profile>
```
Set sign brightness profile here. Profiles available are as follows:

1 = Economy
2 = Standard
3 = Vibrant
4 = Demo

```
            <als_housing_reduction_percent>0.1
                        </als_housing_reduction_percent>
        </als_photocell>
```
This value sets compensation for light loss in the photocell housing. Change should be unnecessary with current photocell housing.

```
    </dimmer_settings>
```
Denotes end of dimmer settings.

9.0 Web Server

Internal and external web servers host different web pages. The internal server is local and cannot be reached beyond the sign's local network. The external server requires only an internet connection to reach.

```
<internal_web>
    <web_server>
        <enable_web_server>True</enable_web_server>
```
Set to True to enable web server, which enables web tools for use.

```
        <web_server_port>80</web_server_port>
        <enable_basic_auth>False</enable_basic_auth>
        <web_server_username>signserver</web_server_username>
        <web_server_password>adtech</web_server_password>
```
Set the above to reflect the web server's settings.

```
    </web_server>
</internal_web>

<external_web>
    <web_server>
        <enable_web_server>False</enable_web_server>
        <web_server_port>13376</web_server_port>
        <enable_basic_auth>True</enable_basic_auth>
        <web_server_username>signserver</web_server_username>
        <web_server_password>adtech</web_server_password>
    </web_server>
</external_web>
```
Instructions for internal web apply to external web as well.

10.0 Frame Driver

```
<channels>
    <test_pattern_driver>
            <name>Test pattern Channel</name>
            <seconds_per_pattern>5</seconds_per_pattern>
    </test_pattern_driver>
</channels>
```
This is a channel for test patterns. It is used for cabinet manufacturing. Please ignore.

11.0 Thunderbolt Settings

```
    <thunderbolt_sign>
```
Beginning of Thunderbolt settings, which is used to configure controller and cabinet layouts.

```
        <invert_failed_ps_signal>False</invert_failed_ps_signal>
```
Indicate whether to invert the input required to indicate if a power supply has failed. (Some power supplies are the opposite of normal, which would require setting to true.)

```
        <clock_settings>
            <g_clock_mhz>8</g_clock_mhz>
            <d_clock_mhz>12</d_clock_mhz>
        </clock_settings>
```
Set the G Clock and D Clock speeds here. Defaults are 8 and 12 respectively.

```
        <network_error_settings>
            <idle_error_threshold>20</idle_error_threshold>
            <jabber_error_threshold>5</jabber_error_threshold>
            <rx_error_threshold>3</rx_error_threshold>
            <port_reinit_threshold>2</port_reinit_threshold>
```
Set threshold for the above errors. The count is the number of errors required to set off an alert.

```
            <idle_error_decay_minutes>10
                                </idle_error_decay_minutes>
            <jabber_error_decay_minutes>60
                                </jabber_error_decay_minutes>
            <rx_error_decay_minutes>60</rx_error_decay_minutes>
            <port_reinit_decay_minutes>60
                                </port_reinit_decay_minutes>
```
Set time required for decay loops. At the end of each decay loop without error, one recorded error will be dropped from the threshold count. This allows a gradual decay of error data.

```
        </network_error_settings>

        <led_board_def>
            <led_board_pixel_width>20</led_board_pixel_width>
            <led_board_pixel_height>20</led_board_pixel_height>
```
LED board width and height options are unused. Please ignore. (Option depreciated.)

```
            <led_board_driver>MBI_5041</led_board_driver>
```
Indicate the type of driver used by the sign. Most current signs use MBI_5041.

```
            <led_board_pixel_layout>RGB</led_board_pixel_layout>
```
LED board pixel layout option is unused. Please ignore. (Option depreciated.)

```
            <led_board_model>FTILE_LM_P16</led_board_model>
```
Enter the LED board model number found on the back of the F-Tile.

```
        </led_board_def>

        <cabinet_template>
            <controller_template>
                <daughter_card>DCFT553S</daughter_card>
```

Indicate the type of daughter card (hub card) used by the controller.

```
<monitor_ps_1>False</monitor_ps_1>
<monitor_ps_2>False</monitor_ps_2>
<monitor_ps_3>False</monitor_ps_3>
<monitor_ps_4>False</monitor_ps_4>
```

Set which power supplies you wish to monitor.

```
<controller_output>
    <led_board>
        <led_board_x>0</led_board_x>
        <led_board_y>0</led_board_y>
    </led_board>
    <led_board>
        <led_board_x>1</led_board_x>
        <led_board_y>0</led_board_y>
    </led_board>
    <led_board>
        <led_board_x>2</led_board_x>
        <led_board_y>0</led_board_y>
    </led_board>
</controller_output>
```

Set x and y coordinates for the display boards for each output. Within each output section, describe each panel reached in sequence (in the example above: 0,0; 1,0; 2,0). Repeat for each output on the controller. (Repeat with additional controllers if a cabinet contains multiple controllers.)

```
        </controller_template>
    </cabinet_template>

    <face>
        <cabinet>
            <x_pos>0</x_pos>
            <y_pos>0</y_pos>
            <cabinet_template_ID>2</cabinet_template_ID>
```

Set the x and y position of the cabinet (NOT the display boards). Cabinet template ID indicates which template this cabinet follows based on the order defined above. (Note: the ID numbers begin with 1, not 0). Repeat for additional cabinets sequentially row by row from the top left (from front of sign).

```
        </cabinet>
    </face>

    <chain>
        <endpoint_a>192.168.136.32</endpoint_a>
        <endpoint_b>192.168.136.96</endpoint_b>
```

Enter appropriate IP addresses of endpoint A and endpoint B.

```
        <cabinet_indexes>
            <cabinet_index>2</cabinet_index>
            <cabinet_index>1</cabinet_index>
```

```
                <cabinet_index>0</cabinet_index>
            </cabinet_indexes>
```
Chain indexes are dictated by how cabinets are arranged. List cabinets by face order from end A to end B (i.e. in the order they are wired). In the above example, the chain begins on cabinet 2. (Note: the numbers used to identify cabinets here are *different* from Cabinet IDs, which are set by ServCom.)

```
        </chain>
```

```
    </thunderbolt_sign>
```
Denotes end of Thunderbolt settings.

```
</server>
```
Denotes end of server configuration file.