QUICK START GUIDE

The **Marshall CV625** auto tracking camera is a combination of a 25X PTZ and a fixed 4K wide-angle "panoramic" imager. This combination allows for a variety of special auto tracking and auto framing modes.

For proper performance, it is important to match the panoramic camera setting to the desired installation height. The following steps will take the camera from initial startup to functional auto tracking. Once the camera is operating, ALL tracking functions are performed via web browser.

BASIC SETUP
Connect the camera to a monitor (either via SDI or HDMI). Connect to the local Ethernet network Supply power either via PoE+ or use the included 12volt power supply. When power is first applied, the camera will move through auto-calibration. Power up is complete when the LED on the camera base turns green.

1. IR Remote & IP Address
Install the included AA batteries in the handheld IR remote. This remote will be very useful to determine and set the camera's IP address.

It also provides a quick way to configure Exposure and Color parameters as well as set PTZ Preset positions.

Press the **Menu** button to place the camera menus on the monitor screen. Using the arrow keys, scroll to Ethernet and press the center button. This will display the current IP address. Select **DHCP On** or **Off**. With DHCP **On**, the camera will receive an IP address from the local network. If it is desired to set a Static address set DHCP **Off** then use the arrow keys to change the IP Address, Subnet Mask and Gateway. When the address is set, simply press the Menu button again.

Note: The unit ships with a Default address of 192.168.100.100 as the Static address. When a new Static address is saved, that overwrites the Default address and becomes the new Default.
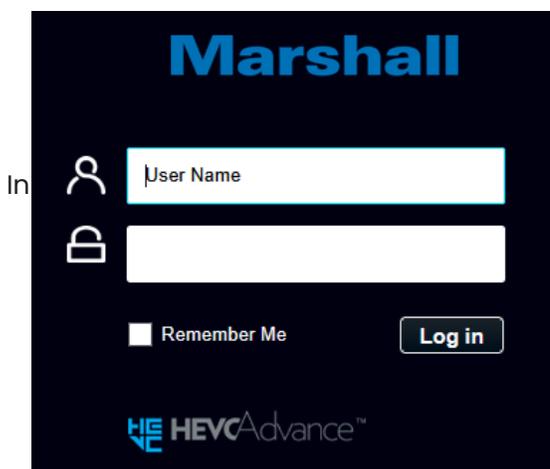
2. Web Browser
For best compatibility please use either Microsoft Edge™ or Google Chrome™ browser.

Type the camera's IP Address into the search window. The Log-page will appear. The initial Username and Password are **admin** and **9999**.

You will be prompted to change the password for improved security (this is optional but recommended). Setting a new Username will also set the user Privilege Level (Operator or Administrator).

Please note: the Username is case sensitive. ("**Admin"** is not the same as "**admin"**.)

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2. Matching the PTZ and Wide-Angle cameras

This step is **IMPORTANT** *for proper tracking operation.*

On the base at the front of the camera is a 3-position switch. This switch will be set according to the height relation between the camera location and the subject. This switch physically moves the wide-angle camera. Set the switch position according to the following table.

Switch Position	Camera Position
UP	Below subject or mounted upside down overhead
NORM (MID)	Desk, table, shelf below 6.5 feet
DOWN	Tripod, shelf or camera mount above 6.5 feet

Note: *A second step is required to match this setting via the web browser.*

Be sure that the wide-angle camera is not blocked by objects, shelf edges, etc. If the wide-angle camera cannot see the subject, AI tracking will not occur.

Next, in the web browser, navigate to Tracking by selecting the **Tracking** tab on the left side of the screen. Two images will appear. The larger image is from the main PTZ camera, the smaller image to the right is from the wide-angle camera. Just below the right image is a selection box for **Lens Tilt Direction**. Select Up, Normal or Down to match the switch.

4. Head Room & Body Framing

Another important step is to establish how close the subject's head will be to the top of the frame as well as how much of the body will be shown.

First, in the box below **Lens Tilt Direction**, check that Tracking Mode is set for **Everywhere Tracking.** This is the most common Auto Tracking mode, so it is a good place to start.

Now click the gear symbol in the upper right corner of the box.

Set Body Size.
Upper is approximately "head and shoulders" shot. Full is roughly head to belt.
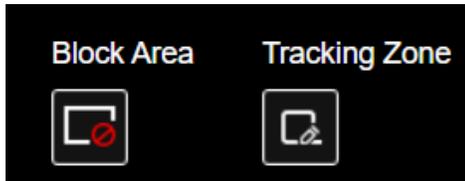
Head Position.
Low is max headroom. High is least headroom. Try Middle first.

Click **DONE** in the lower part of this window after changing either of these selections.

 The camera is ready to auto track. Click the Auto Tracking button near the left side of the page. White box = Tracking **ON**. Tracking will occur anywhere in the area that is visible to the wide-angle camera (right window). If the subject moves outside of the wide-angle view, tracking will stop. This is a good time to place a subject in front of the camera to confirm auto tracking.

6. Tracking Zone & Blocking Area

In the same box where we set Body Size and Head Position are two other useful functions:

Tracking Zone describes the main area to be tracked.
Blocking Area describes non tracking area(s).

To create a Tracking Zone, first click the **Tracking Zone** button, move the mouse pointer to the right window, press the left mouse button and draw a green Tracking Zone box.

To create a Block Area, first click the **Block Area** button, move the mouse to same window, press the left mouse button and draw a red Block Area box. Click the **DONE** button at the bottom.

When Auto Tracking is selected, the Tracking and Blocking functions will be active until they are deleted. To delete a Tracking or Blocking box, first select a Tracking or Blocking box, move the mouse to the box until a 4-headed arrow appears. *Clicking on the Block Area or Tracking Zone will not change unless the Block Area or Tracking Zone button is selected.* Click the left mouse button, the box will change color, then press the **Delete** key on the computer and the box will be deleted.
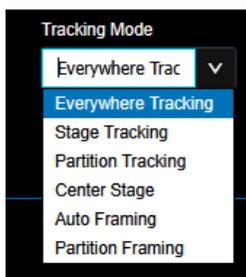
7. SDI vs HDMI Outputs

To change the video output, select **System** and **Output** in the browser window. The SDI and HDMI outputs normally both display the primary PTZ image. Output resolutions up to UHD 2160 x 1080 / 59.94 are available.

The HDMI output can display the primary PTZ image or the Panoramic camera as a picture-in-picture overlay. This can be set by selecting PIP to On and Mode Select to PTZ. The size and position of the overlay image can also be set. It is necessary to select **Apply** at the bottom of the page and answer "yes" in the popup window that appears.

When the camera is in UHD 4K mode, it is possible to have both the main image and a 4K panoramic overlay on the screen at the same time. Select Resolution to the desired 4K mode (2160). Set Panoramic 4K mode **On**. Set PIP On. Set Mode Select to PTZ. Click **Apply**.

8. Special Tracking Modes

In the browser Tracking window, the Tracking Mode pulldown menu is the "Master" control that selects the various available tracking/framing modes. This list enables or disables various controls. Depending on the item selected, various buttons and function may appear to be missing or locked.

Everywhere Tracking
Standard, single person auto tracking

Stage Tracking
Assumes subject is standing on an actual stage. Zoom is set manually. Tracking is limited to pan Left and Right only.

Partition Tracking
A partition zone may be set (similar to Tracking zone). When the subject is in the defined partition zone, the shot will be set as defined by Head, Body and Zoom settings previously stored. When the subject moves out of the defined partition, tracking will be the same as Everywhere Tracking mode.

Center Stage
Center Stage mode works along with Presets. When a subject moves into the area of an existing PTZ Preset, the camera will attempt to frame the subject in the middle of the Preset. The Center Stage switch above the Center Stage pulldown menu can be turned **On** or **Off** to enable or disable this feature as needed.

Auto Framing

Similar to Tracking except the area is defined creating a Block zone instead of a Target zone. In this mode, Body Size and Head Position choices are not available.

Partition Framing

Same as Auto Framing except only functional when the camera is operating in a PTZ Preset area previously saved during non-tracking PTZ operation.

9. Definitions

Tracking

The camera automatically follows a single subject (person) as they move left or right in the target area (classroom, meeting room, auditorium, office, etc.) The small wide angle in the base of the PTZ camera provides all tracking information to the PTZ. If the subject moves outside of the view of the wide angle camera, tracking will cease until the subject moves back into view.

Framing

This refers to the vertical placement and size of the subject in the video frame (Tilt and Zoom). Framing in this case does **not** refer to left/right centering or offset. Several controls affect Framing. Controls for Body Size and Head Position are the primary controls. For best results, it is important to match the switch on the base of the camera with Lens Tilt Direction in the browser window. Establishing a Tracking Zone or Block Area will also affect Framing.

Preset

Preset refers to saving a Pan, Tilt, Zoom combination via traditional PTZ controls. It is possible to set a Preset via the IR hand held remote control or via web browser. Presets should be set when the camera is not operating in auto Tracking mode.

4K/UHD

The CV625 camera is capable of UHD output of 3840 x 2160 up to 60, 59.94, 29.97 or 25 fps. This is available via the HDMI output. The SDI output maximum is 1080p at the same frame rate. USB output is entirely dependent on the application running on the attached computer. For example: the HDMI output might be providing UHD while outputs SDI 1080p at the same time but a computer application may see only 720p. This is not a limitation of the camera. Computers use UVC protocol to control the USB stream. The format and frame rate appearing at the computer can often be changed via Setup selections in various applications such as OB Studio™, Teams™, etc.

P-P

This refers to Picture-in-Picture mode available via the HDMI output of the camera. When selected, the wide angle "omni" camera (in base of camera) will appear as an overlay on the primary PTZ camera video.