



HOW TO DESIGN

a High Definition PTZ Camera System



Depending on your project requirements — whether it is for a broadcast, professional A/V or videoconference application — our selection of cameras and accessories should provide you with the type of format that your project requires.

STEP 1 3-Chip vs. Single-Chip

3-chip cameras have historically given the best quality images; since the incoming light is divided into red, green and blue then processed, the resulting output signal becomes the sharpest, most vibrant color image.

Presently single CMOS imager cameras are capable to provide better than 3 chip top quality high-definition images, at a lower price point. Compared with 3-chip cameras, single CMOS cameras are significantly smaller, and consume less power. There are a wide variety of single-chip HD cameras that Vaddio carries, for virtually any type of application.

STEP 2 CMOS or CCD


Traditional CMOS image sensors require more light than comparably sized CCD image sensors. However, the latest CMOS image sensors — the Exmor™ series — use the latest technological advancements to reach a superior light gathering capability when compared with CCD sensors. Vaddio's HD-20 PTZ camera is designed around the Exmor™ sensor technology. This is the most important aspect of a camera sensor, especially when low light situations are present in the area that you need to install PTZ cameras.

STEP 3 Optical Zoom & Angle of View

Placement of cameras plays a role in the zoom capability and angle of view a camera will require.

Typically, smaller rooms used for videoconference applications need a wider angle of view when zoomed out — up to 70 degrees — in order to capture all people seated at a table. Smaller conference rooms don't need as much zoom magnification because of their size, so 10x is typically adequate.

In larger venues, such as a lecture hall, a camera with narrow angle of view — 2 degrees — may be necessary to zoom in on a presentation area. Larger and deeper rooms require a higher zoom magnification to obtain close up shots that viewers expect to see of a presenter.

 By going to www.vaddio.com/tech-center and downloading our PTZ Image Size Calculator, you will be able to obtain the width and height of the image that can be captured by any of the cameras we offer, both zoomed all the way in, as well as zoomed out.

STEP 4 Output Format

Typically, HD robotic PTZ cameras have an analog component (YPbPr) as the standard output for the camera. Most of the cameras also include another type of analog or digital output or offer optional video formats (HD-SDI, RGBHV, etc.) through the installation of optional slot cards. Visit our website at: www.vaddio.com for our selection of optional slot cards.

STEP 5 CCU or PRO / SR

Does your project require multiple cameras or the ability to adjust the camera's color and shading video levels? Are the auto iris and auto white balance capabilities of the camera acceptable? Vaddio's camera control unit (CCU) solution allows users to not only adjust color and iris level of each individual camera, it also delivers power, control and video over three Cat. 5 cables up to 500 feet away.

Our PRO systems, for the Sony BRC-series cameras and the Panasonic HE100, allow power, video, IR and control to be extended on three Cat. 5 cables up to 500 feet. The PRO systems are ideal for situations where automatic iris and white balance are acceptable, such as videoconference applications.

Vaddio Short Range (SR) systems for our HD-20, HD-19 and HD-18 extend power, video, control and IR up to 100 feet over two Cat. 5 cables. The two Short Range options include our standard SR, which delivers component YPbPr video, or the DVI/HDMI, which delivers DVI and component YPbPr video. In addition, the DVI/HDMI Short Range includes daisy chain, for connecting RS-232 to multiple cameras. As with the PRO systems, the SR solutions are ideal for videoconference and other applications where auto iris and auto white balance are acceptable.

STEP 6 Camera Placement

While all of our WallVIEW camera solutions come with a standard wall mount included, our catalog also provides you with a variety of camera mounting options to fit the environment where the camera will be installed.

HD PTZ Camera System Configurations

