

WHITE PAPER

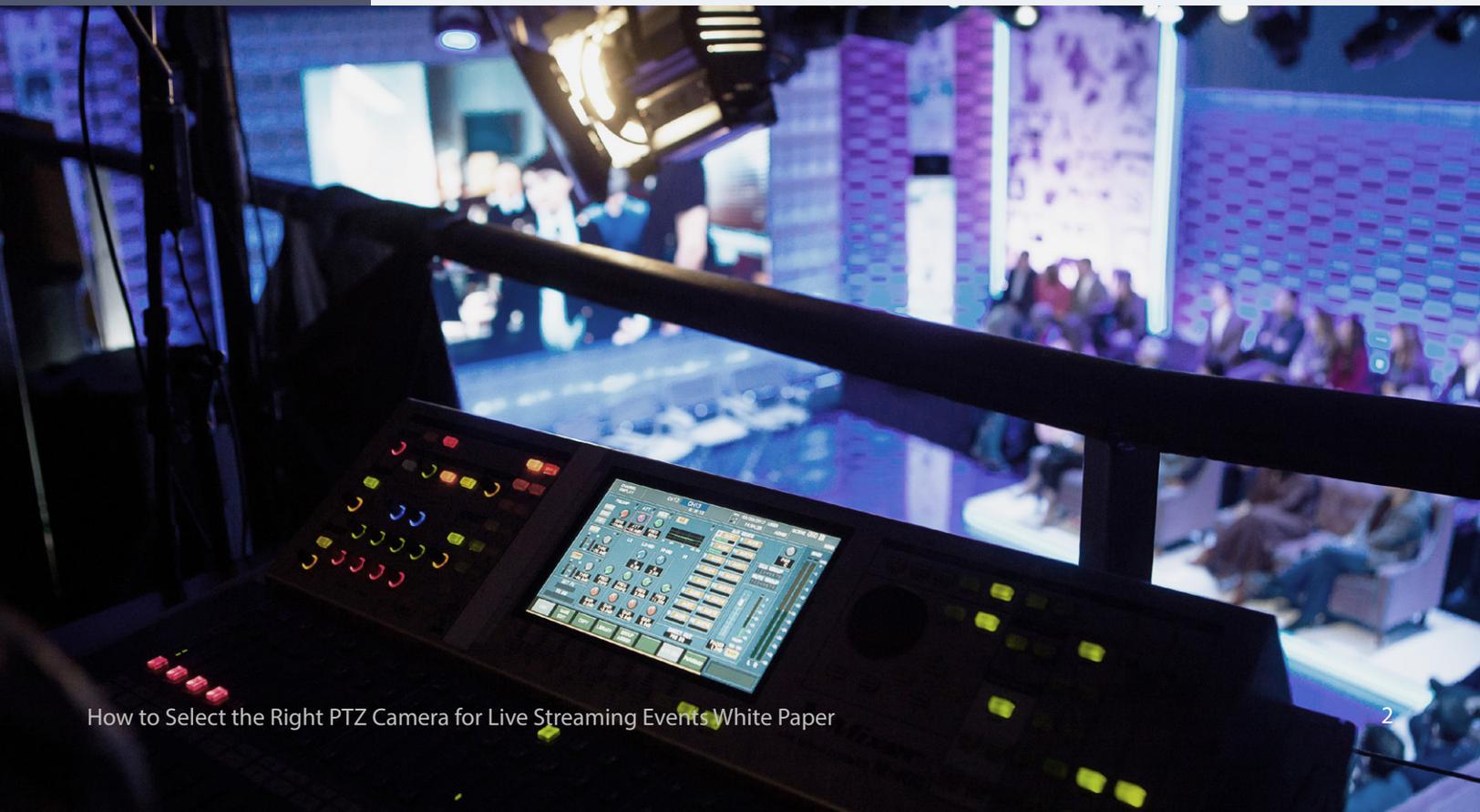
How to Select the Right PTZ Camera for Live Streaming Events:

5 Things You Need to Consider

Executive Summary

Today's AV integrators and managers serve or work in a wide range of industries across enterprise, higher education, government, houses of worship and more. There are a number of areas they must address in AV production environments to ensure professional quality results with equipment, software and services. As live video streaming becomes more popular across industries, it creates great opportunities to reach broad remote audiences but also produces risk for things to potentially go wrong.

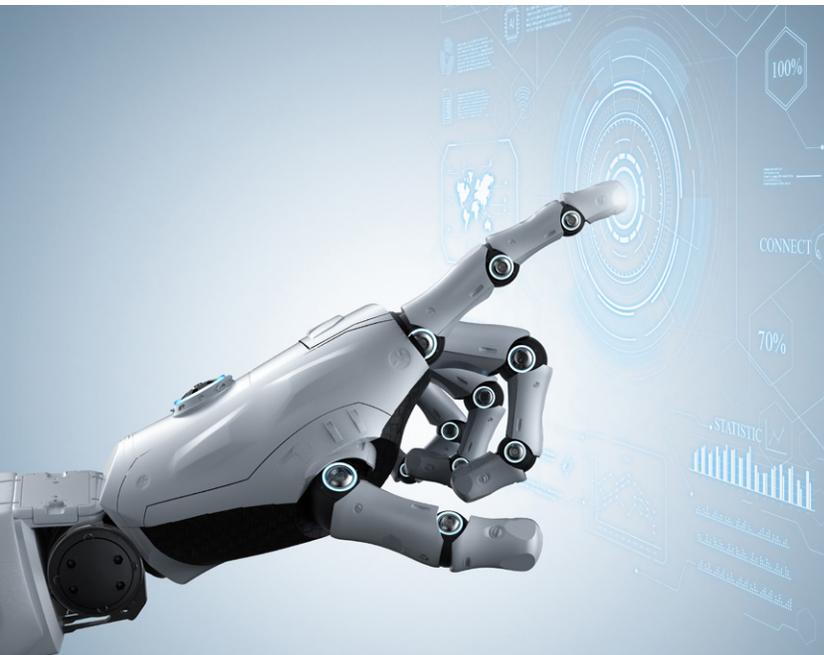
One of the key questions facing integrators, AV professionals and end users to properly capture and live stream events is how to select the right PTZ (Pan-Tilt-Zoom) camera. This white paper we will examine the new video technologies available and five main things to consider before making a final decision.



Video Technologies Today

It would be a mistake to simply review new features and functions of PTZ cameras today without a look at the emerging video trends surrounding them first. The Cloud with video SaaS (software-as-a-service) solutions and Artificial Intelligence (AI) are two disruptive technologies that are changing the way professional video cameras are being used. More video content is also the trend, both live and on-demand which creates considerations for creators as to how to stream, store and manage all of it. It is also clear that while the camera may be the center of attention for video productions, the entire experience requires smart integration with the rest of the equipment, software and Internet to create professional-looking presentations.

Capturing, storing and editing video or using enterprise video content management systems can be done on-premise but has largely moved to Cloud SaaS based solutions which can better provide ease of set-up, scalability and security. The enterprise and higher education institutions have been using such tools for several years to manage their training content and lectures. Do PTZ cameras easily work with these solutions? It depends on their connection options and compatibility with video capture hardware.



Artificial intelligence (AI) is defined as “the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self-correction.” Video software platforms are now leveraging AI technology to make video editing and creation quicker and easier than ever. In fact, AI is now the most in-demand tool in the media market. In some cases, AI embedded into drones can take on the role of the camera operator as well with automated filming. AI can also help software

tools to decide how and what videos to share online depending on a number of factors for the audience. Some video cameras are also harnessing AI into their software to help automate tracking and recording of moving targets.

The Rise in Popularity of Live Streaming



Faster internet networks, 4G and 5G cell connectivity are empowering video creators to serve on-demand video online and to broadcast live events via live streaming solutions. By 2020, live streaming is expected to account for 82% of all internet traffic. Many industries are using live video streams to reach their audiences. 55% of enterprises are using live video for company or division-wide broadcasts and that number is growing every month. Higher education institutions have made video almost as ubiquitous as books with 79% of them capturing lectures with video and 70% of them using video for remote teaching and learning. Houses of worship are also leveraging the power of video to reach new audiences at home as almost half of U.S. adults (46%) have seen someone share their faith online.

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A 2017 [Forrester report](#) cites that users will watch live video 10 to 20 times longer than recorded on-demand content, making live streaming the most impactful delivery method. Constraining that point is the fact that video consumers have an extremely low tolerance for a bad stream. For many, 90 seconds is the most a viewer will tolerate a spotty stream. Without the right equipment, software and a strong internet connection, those wishing to take advantage of a hungry market may be on the outside looking in.

How to Select the Right PTZ Camera for Live Streaming Events

Finding the right PTZ camera is a good start on your way to building a new live streaming engine or upping your game with better video for your existing live events. While features are certainly important, there are other factors to consider with a video camera. In this section we will review 5 key things you need to consider before selecting a PTZ camera.

1 Live Streaming Readiness



Are all PTZ cameras live streaming ready? Not exactly. There are many PTZ cameras on the market that are more designed for simple PC connectivity with USB better suited for videoconferencing or security use cases. The PTZ cameras you want for professional quality live streams or broadcasts should include multiple outputs with at least an HDMI connection, 3G SDI and IP (RJ45). These will provide you with enough high bandwidth options to connect your video to the internet and access several live streaming services to reach your audiences.

2 Features and Options



The features and options of a PTZ camera are incredibly important and cannot be ignored to suit your specific needs but these must be weighed against your budget, and even the skill level of your operators. Will the camera(s) be mounted from the ceiling, the wall or on a tripod? Check that the vendor offers compatible mount options. The optical zoom range is more important than the digital zoom but it is also dependent on lens focal length and the distance from your presenter target. The bigger the zoom, the better is not always true but a 10X or higher optical zoom can work in most presentation environments. Lens focus presets are also quite useful when shooting live to avoid reliance on autofocus and resetting target distances.

If you do not have the necessary production team to follow every speaker around every room or stage, an auto-tracking feature camera could perfectly suit your needs and remove the requirement of a professional videographer. Beware of the cameras that use voice tracking technology versus facial recognition as live events can involve multiple speakers and background noise to throw off the tracking effectiveness.

Your live events may only require a single camera, while others would benefit from multiple camera angles. Ensure your PTZ camera provides an optional easy to use joystick controller to manage one or more units with pre-programmed functions. If you do not have a professional staffed production team, are the user controls easy for novice operators? Pan speed and smoothness are essential elements for live productions where speaker movement or multiple speakers are the norm. No matter what the features and options, the most important thing is the vendor gives you the opportunity to a full trial of the camera so it can be tested fully in your environment by your production team.

3 Integration with Supporting AV Technologies



The PTZ camera is at the center of attention for video productions, but the truth is it is only one piece of a larger complex rollout of technology components. Integration with other audio and video equipment is essential for successful video experiences. There should be enough connection options to support multiple use cases and video quality depending on the need to record, stream or use and store internally. Many PTZ cameras come with their own software, but it's important that they also can work with popular third party software platforms or streaming solutions. Several of these solutions offer excellent editing, storing and searchability features not available with built-in PTZ camera software.

4 Company Expertise and Longevity



The Pro AV camera market is mature but is adding new entries every year. The cameras you review should come from reputable manufacturers who have been developing video and collaboration products for many years. Why is this important? Manufacturers who invest in research and development tend to stay ahead of the industry trends and the needs of customers. Beware of newer vendors who are launching cheaper made cameras or are new to the video industry. PTZ cameras are an investment in your long-term video strategy and you need a partner who will be with you all along the way.

5 Warranty and Support



Your live events cannot afford any downtime, and neither can your video cameras. It is often overlooked but your PTZ camera needs a warranty program that will ensure that your organization is looked after when technical problems arise. Look for a vendor who backs their cameras with at least three years of warranty and a quick advanced replacement turnaround time with localized toll-free support. Some manufacturers make claims but do not back them up with uniform warranty coverage for every camera model.

Conclusion

Decision-makers of PTZ camera purchases have a great deal of data points to consider before making a selection. Weighing the five things you need to consider with live streaming readiness, features and options, integration with supporting AV technologies, company expertise and longevity, and a strong warranty program can help to ensure you make the right choice for your organization or your customer. Having an opportunity to test drive the camera for 30 days or more can also provide you with the everyday environment to understand the fit before committing to buy.

Contact AVer today, the leader in video streaming and learn about how you or your customers can start streaming video with any of our Auto Tracking or Professional PTZ Live Streaming cameras.

About AVer Information Inc.

AVer is an award-winning provider of video and collaboration solutions that improve productivity and enrich lives. Our Pro AV product portfolio includes cutting-edge auto tracking cameras and PTZ live streaming cameras to serve any presentation, training or lecture environments. We strive to provide industry leading product quality, service and support that exceeds our customer's expectations. We are also deeply committed to our community, the environment and employ stringent green processes in all we do. Learn more at pro.averusa.com.

Why AVer?

You demand excellence in video performance. AVer delivers the highest value, product quality and features with advanced auto tracking and live streaming-ready professional PTZ cameras. With auto tracking functionality you can save production time and money without the need for an experienced camera operator. Easy-to-use with built-in software, integration with other popular platforms and simple set-up, AVer offers a truly plug-and-play experience to stream your live video. We understand your presentations and events cannot afford any downtime, and neither can your video cameras. That's why we developed AVerCare, the industry-leading 3 year warranty with free RMA shipping and 24 hour replacement time to keep your video projects up and running.

From the moment you meet AVer we want to make sure that your experience with us is enjoyable and satisfying. With our free US-based, live phone email and chat technical support, free product training and unrivaled warranties, AVer serves as your partner rather than simply your vendor.

- **Exceptional product quality and innovation with advanced auto tracking functionality and live streaming-ready cameras**
- **Committed to serving our partners and customers – pre and post-sale**
- **Pro Evaluation program and industry-leading AVerCare 3 warranty with free RMA shipping and 24 hour replacement**
- **Pro AV cameras are 100% TAA compliant**

