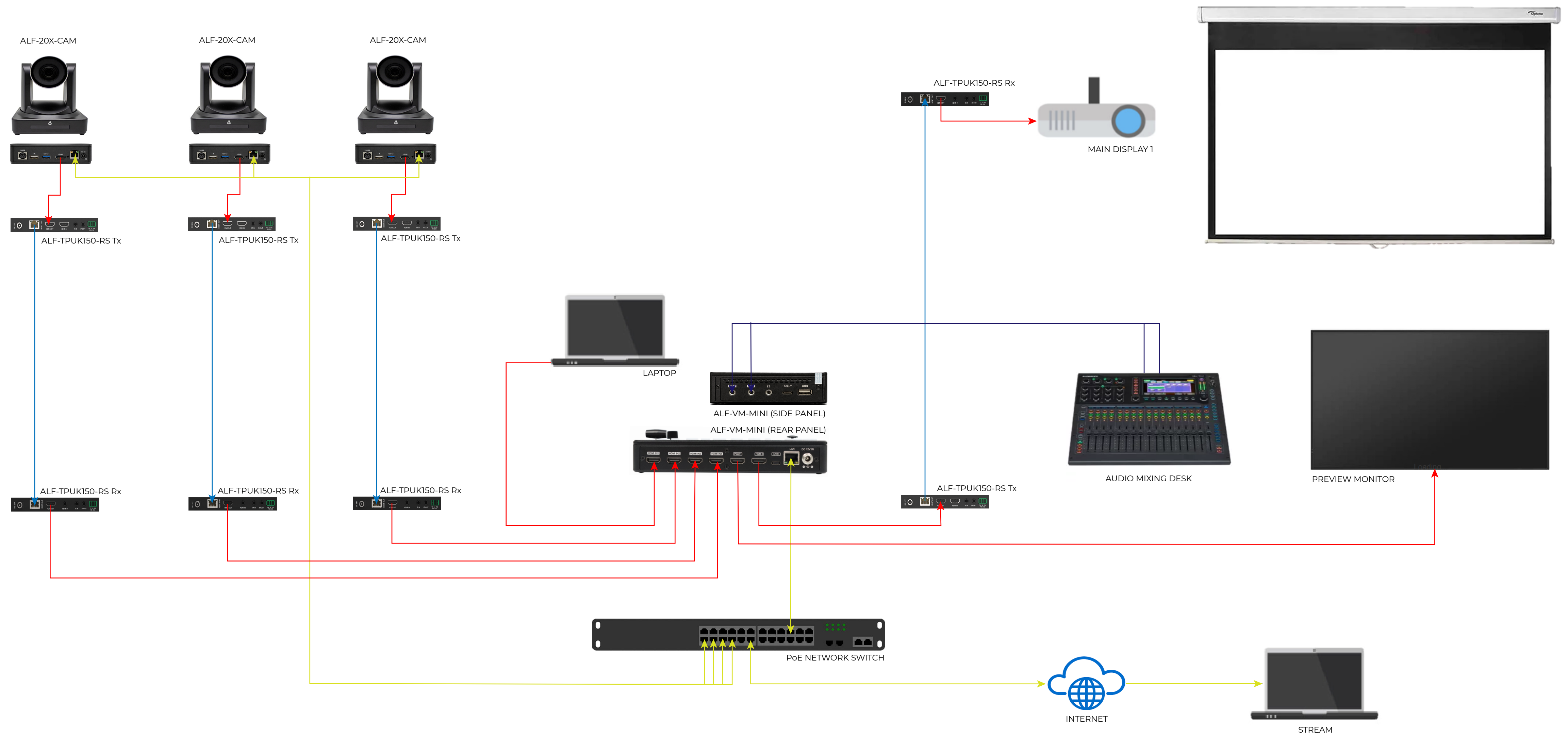




ALF-VM-MINI
VIDEO MIXING SOLUTION



HDMI



LAN



DANTE



USB 3.0



USB 2.0



USB-C



HDBT



SPEAKER



AUDIO

The Solution

This solution provides a compact and highly flexible video production system built around the ALF-VM-MINI video mixer, designed for live presentation, streaming, and content creation in professional AV environments. The VM-MINI serves as the central hub, combining video switching, processing, and streaming capabilities into a single, easy-to-deploy platform, making it ideal for classrooms, corporate spaces, and small event setups.

The system incorporates three ALF-20X-CAM PTZ cameras, each connected via HDMI and extended over ALF-TPUK150-RS transmitter and receiver sets. This allows cameras to be positioned optimally throughout the room while maintaining reliable long-distance signal transmission back to the mixer. In addition, a laptop is connected directly via HDMI, enabling presentation content, media playback, or external sources to be seamlessly integrated into the production workflow.

At the core, the ALF-VM-MINI enables smooth and professional switching between all connected sources, allowing operators to transition between camera views and presentation content without visible interruptions. The mixed video output is delivered to a main display for audience viewing, while a separate output feeds a confidence or preview monitor, giving the operator or presenter real-time visibility of the active content and ensuring accurate control during live operation.

Audio is integrated through an external audio mixing desk, with the VM-MINI supporting headphone monitoring for real-time audio verification. This allows operators to monitor audio levels and ensure consistent sound quality throughout the production. The system also supports direct streaming functionality via the network, enabling video content to be broadcast to online platforms or recorded for later use, making it well suited to hybrid and remote participation scenarios.

Overall, this solution combines long-distance HDMI extension, multi-camera capture, and centralized video mixing into a streamlined and scalable system. With the ALF-VM-MINI at its core, it delivers reliable performance, flexible source integration, and professional output, providing an efficient solution for environments requiring high-quality video production and live streaming capabilities.

ALF-VM41 Overview

The ALF-VM-MINI is a compact and versatile video mixer designed for live production, streaming, and multi-source presentation environments. Combining video switching, processing, and streaming capabilities into a single unit, it provides an efficient all-in-one solution for applications such as classrooms, corporate meeting spaces, houses of worship, and small event setups where simplicity and reliability are essential.

The unit supports multiple HDMI inputs, allowing connection of PTZ cameras, laptops, and other video sources, with seamless switching between inputs to ensure smooth, professional transitions. Built-in video processing and scaling maintain consistent output resolution and image quality across connected displays and recording devices.

A built-in 5" Full HD display provides real-time preview and system monitoring, enabling operators to view active sources, manage layouts, and control switching directly from the unit without requiring an external monitor. This enhances usability and simplifies deployment, particularly in compact or mobile production environments. The ALF-VM-MINI provides flexible output options, enabling simultaneous connection to a main display and a confidence or preview monitor. This allows content to be presented to an audience while giving operators real-time visibility of the active source. Integrated USB output enables the unit to function as a webcam source, allowing easy integration with UC platforms such as Teams and Zoom, as well as streaming software like OBS.

Audio integration is supported via external sources, with headphone monitoring available for real-time audio verification during live production. This ensures accurate control of audio levels and overall system performance. The unit also supports network-based streaming, enabling direct broadcast of video content to online platforms or recording systems. With its compact design, intuitive operation, and integrated streaming functionality, the ALF-VM-MINI delivers a powerful yet simple solution for professional video mixing. It is ideally suited for environments requiring high-quality multi-source switching, local display output, and live content distribution in a streamlined form factor.

ALF-20X-CAM Overview

The ALF-20X-CAM is a professional PTZ camera designed for high-quality video capture in conferencing, streaming, and live production environments. Featuring a 20x optical zoom lens, it delivers clear and detailed images across medium to large spaces, making it ideal for meeting rooms, classrooms, houses of worship, and corporate presentation environments where flexible camera coverage is required.

The camera supports HDMI output, enabling easy integration with AV systems and video switchers, while also being well suited for extended installations when paired with HDMI extension solutions. Its smooth and precise pan, tilt, and zoom functionality allows operators to create dynamic shots and quickly recall preset positions, ensuring consistent and professional results during live use.

Control is supported via standard interfaces such as RS-232 and RS-485, allowing seamless integration with third-party control systems or joystick controllers for centralized operation. This makes the camera suitable for both manual control and automated workflows within larger AV systems. With its combination of reliable performance, flexible connectivity, and professional PTZ control, the ALF-20X-CAM provides a versatile and cost-effective solution for capturing high-quality video in a wide range of applications.

ALF-TPUK-RS Overview

The ALF-TPUK150-RS is a professional HDBaseT transmitter and receiver extender set designed to deliver high-quality HDMI, USB, and control signals over long distances using a single CAT cable. Supporting transmission distances of up to 150 metres, it provides a reliable solution for extending AV signals in meeting rooms, classrooms, and large-scale installations where equipment needs to be located far from the display or control position.

The system supports HDMI video extension with high signal integrity, ensuring stable and consistent image quality across extended runs without noticeable degradation. In addition to video, the TPUK150-RS enables USB extension, allowing devices such as cameras, microphones, or touch displays to be connected remotely while maintaining full functionality at the host location.

Integrated RS-232 pass-through allows for control signal extension alongside video and USB, enabling remote management of connected devices such as displays or cameras. This makes it ideal for systems requiring centralized control without additional cabling infrastructure.

With its ability to extend multiple signal types over a single cable, combined with reliable long-distance performance and simple installation, the ALF-TPUK150-RS provides a flexible and efficient solution for modern AV and collaboration environments.

Solution Bill of Quantities

- 1 x ALF-VM-MIMIVideo Mixer
- 3 x ALF-20X-CAM PTZ camera
- 4 x ALF-TPUK150-RS HDMI extender kit
- 9 x ALF-HDMI 3.3ft HDMI Cables
- 1 x ALF-HDMI 16.5ft Cables

Third Party Equipment

- 1 x Room Display
- 1x Room display mounting bracket
- 1 x Preview Monitor
- 1 x Audio mixer /mixing desk
- 1 x PoE Network Switch

Solution Use Cases

1. Hybrid Classroom and Lecture Capture

In an education environment, the system enables lecturers to deliver engaging sessions using multiple camera angles and presentation content. The ALF-20X-CAM cameras capture the lecturer, audience, and whiteboard, with signals extended over ALF-TPUK150-RS for flexible placement. A laptop provides presentation material, all managed through the ALF-VM-MINI for seamless switching. The output is sent to a main display for in-room viewing and a confidence monitor for the presenter, while built-in streaming allows sessions to be broadcast or recorded for remote students.

2. Corporate Meeting and Training Spaces

For corporate environments, the system supports professional presentations and hybrid meetings. Multiple PTZ cameras and a laptop input are switched through the ALF-VM-MINI, providing smooth transitions between speaker views and content. The built-in 5" Full HD display allows operators to monitor sources directly on the unit, reducing the need for additional equipment. Outputs are sent to a main display for participants and a preview monitor for control, while USB and network streaming enable easy integration with Teams, Zoom, or other collaboration platforms.

3. Live Events and Small Production Setups

In live event scenarios, the system delivers a compact and portable production solution. Cameras positioned around the venue are connected via HDMI extenders, feeding into the ALF-VM-MINI for dynamic switching between different angles. The operator can monitor all sources via the integrated display or external preview monitor, while the main output feeds large displays or projection screens. Headphone monitoring ensures accurate audio control, and streaming capability allows events to be broadcast live to online audiences.

4. Houses of Worship and Community Streaming

In a worship or community setting, the system enables high-quality video production and live streaming of services or events. Multiple PTZ cameras capture different perspectives of the stage and congregation, while a laptop input allows integration of lyrics or announcements. The ALF-VM-MINI manages all sources, outputting to in-room displays and a confidence monitor for the production team. With integrated streaming and audio monitoring via headphones, the system provides a reliable and easy-to-use solution for reaching both in-person and remote audiences.