



The Solution

This solution provides a compact and flexible live video production system built around the ALF-VM52, designed to manage multiple camera and presentation sources for streaming, recording, and local display applications. At the centre of the system, the VM52 combines switching, mixing, and output management into a single platform, making it well suited to lecture capture, events, houses of worship, training environments, and corporate presentation spaces where professional multi-source production is required.

The source configuration includes one ALF-30X-SDIC connected directly over SDI, providing a reliable broadcast-style camera feed into the mixer, while two ALF-20X-CAM cameras are connected over HDMI using ALF-TPUK150-RS extender sets. This allows those camera positions to be installed further away from the production area while still delivering stable video signals back to the VM52 over long distances. An additional ALF-30X-NDIC camera provides another professional video source, while a laptop feed connected over HDMI allows presentation content, graphics, or external media to be brought into the live production workflow.

With this combination of SDI, extended HDMI, and direct HDMI sources, the ALF-VM52 gives the operator the ability to switch seamlessly between camera views and presentation material, creating a polished and dynamic output for both in-room audiences and online viewers. The system supports output to a main display for audience viewing, while a separate confidence or preview monitor allows the operator or presenter to monitor content locally for smooth production control. This makes the setup ideal for environments where both public display and production monitoring are equally important.

Audio integration is also supported within the system, with connection to an external audio mixing desk for managed sound input into the production workflow. The ALF-VM52 also supports headphone monitoring, allowing the operator to check audio locally and ensure correct levels and program quality during live use. This adds an important layer of confidence during streaming, recording, or live presentation switching.

Overall, this solution delivers a versatile and professional video mixing platform that supports multiple camera formats, long-distance source extension, local monitoring, and live streaming capability. By combining PTZ cameras, presentation input, display outputs, audio monitoring, and network connectivity, the system provides a complete production solution for spaces that require high-quality live content creation and distribution.

ALF-VM52 Overview

The ALF-VM52 is a cutting-edge 5-channel live video multiview switcher designed for professional streaming, broadcasting, and hybrid production environments. Combining powerful switching, monitoring, and control capabilities into a compact and streamlined unit, it provides an all-in-one solution for managing multiple video sources with ease and precision.

Supporting up to five video inputs, the VM52 offers flexible connectivity with a combination of HDMI and SDI interfaces, allowing users to select up to four physical inputs alongside an additional NDI®|HX or USB-based local video source. This enables seamless integration of PTZ cameras, laptops, and IP video feeds, ensuring compatibility across a wide range of production workflows. With support for 4K60 HDMI inputs, the system delivers high-quality video performance suitable for demanding professional applications.

The unit features multiple output options, including dual HDMI, SDI, LAN, and UVC outputs, enabling simultaneous connection to main displays, confidence monitors, recording devices, and streaming platforms. Built-in NDI®|HX support allows for low-latency, high-quality video transmission over standard networks, making it ideal for IP-based production environments and remote workflows.

A 5.5-inch Full HD LCD display is integrated directly into the unit, providing real-time multiview monitoring and intuitive control of sources and transitions. This allows operators to preview feeds, manage switching, and monitor output without the need for additional external displays, improving efficiency and simplifying setup.

Designed as a true 3-in-1 solution, the ALF-VM52 functions as a video switcher, multiview monitor, and PTZ camera controller, reducing system complexity and minimizing the need for additional hardware. With its versatile connectivity, integrated monitoring, and professional-grade performance, the ALF-VM52 is ideal for education, corporate, live events, and content creation environments requiring reliable and flexible video production.

ALF-30X-SDIC Overview

The ALF-30X-SDIC is a professional PTZ camera designed for high-quality video capture in live production, streaming, and broadcast environments. Featuring a powerful 30x optical zoom, it delivers clear and detailed images even in large spaces, making it ideal for applications such as lecture halls, houses of worship, corporate events, and studios where flexible camera positioning and precise framing are essential.

Equipped with a 3G-SDI output, the ALF-30X-SDIC ensures reliable, low-latency video transmission over long cable runs, making it well suited for integration into professional AV and broadcast workflows. The camera also supports HDMI output for added flexibility, allowing it to be used in both traditional AV and hybrid production setups.

The camera offers smooth and accurate pan, tilt, and zoom control, enabling operators to capture dynamic shots and preset positions with ease. Integration with control systems via RS-232 and RS-485 allows for centralized management and automation, making it suitable for both manual operation and pre-programmed camera movements. With its combination of high zoom capability, professional connectivity, and precise control, the ALF-30X-SDIC provides a reliable and versatile solution for capturing high-quality video in demanding production environments.

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-30X-NDIC Overview

The ALF-30X-NDIC is a professional PTZ camera designed for high-quality video capture in modern IP-based production and streaming environments. Featuring a powerful 30x optical zoom, it delivers sharp, detailed images even in large venues, making it ideal for applications such as lecture theatres, houses of worship, live events, and corporate productions where flexible camera positioning and precise framing are essential.

With built-in NDI®|HX support, the ALF-30X-NDIC enables low-latency, high-quality video transmission over standard network infrastructure, reducing the need for dedicated video cabling and simplifying system design. In addition to its IP capabilities, the camera also supports HDMI and SDI outputs, providing compatibility with traditional AV and broadcast workflows for hybrid system integration. The camera offers smooth and accurate pan, tilt, and zoom control, allowing operators to capture dynamic shots and store preset positions for quick recall. Integration with control systems via IP, RS-232, and RS-485 making it suitable for both manual operation and automated production environments.

Combining high zoom performance, versatile connectivity, and IP-based workflow support, the ALF-30X-NDIC provides a powerful and flexible solution for professional video capture in both traditional and networked AV systems.

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-VM52 Video Mixer
- 1 x ALF-30X-SDIC PTZ camera
- 2 x ALF-20X-CAM PTZ camera
- 1 x ALF-30X-NDIC PTZ Camera
- 3 x ALF-TPUK150-RS HDMI extender kit
- 6 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. Lecture Capture and Hybrid Learning Environment

In a university or training facility, the system enables seamless capture and distribution of both presenter content and multiple camera angles. The ALF-30X-SDIC provides a high-quality SDI feed for wide room coverage, while the ALF-20X-CAM cameras—extended over ALF-TPUK150-RS—capture additional angles such as audience or whiteboard views. The ALF-30X-NDIC integrates into the network for flexible IP-based video contribution. All sources are managed by the ALF-VM52, allowing operators to switch between cameras and presentation content from a laptop. The final output is sent to a main display for in-room viewing, a confidence monitor for presenters, and simultaneously streamed or recorded for remote participants.

2. Corporate Live Streaming and Town Hall Events

For corporate communications, the system supports professional live streaming of presentations, announcements, or town hall meetings. Multiple camera feeds and a laptop presentation are switched through the ALF-VM52 to create a polished production. The HDMI and SDI outputs feed both in-room displays and external recording systems, while the LAN and USB outputs allow direct streaming to platforms such as Teams, Zoom, or OBS. Headphone monitoring ensures accurate audio control, while the mix of SDI, HDMI, and NDI sources provides flexibility for different room layouts and production requirements.

3. House of Worship Production System

In a worship environment, the system enables dynamic video production with multiple PTZ cameras capturing different areas such as the stage, congregation, and musicians. The ALF-30X-SDIC delivers a stable primary feed, while the ALF-30X-NDIC allows for easy network-based integration. Additional cameras connected via HDMI extenders expand coverage without distance limitations. The ALF-VM52 allows operators to switch between live camera feeds and presentation content such as lyrics or announcements. Outputs are sent to in-room displays and confidence monitors, while streaming capabilities enable live broadcast to online audiences.

4. Event and Conference Production Setup

For conferences or live events, the system provides a compact yet powerful production solution capable of handling multiple video sources. Cameras positioned around the venue are connected via SDI, HDMI, and HDBaseT extension, feeding into the ALF-VM52 for seamless switching and multiview monitoring. A laptop input allows integration of presentations or sponsor content. The system outputs to large format displays for audience viewing and a confidence monitor for speakers, while also supporting live streaming and recording. Headphone monitoring ensures audio quality is maintained throughout the event, delivering a professional and reliable production workflow.