



ALF-WUK4A
VIDEO VIDEO SWITCHING SOLUTION WITH AUDIO

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HDMI
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LAN
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DANTE
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USB 3.0
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USB 2.0
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USB-C
- 
HDBT
- 
SPEAKER
- 
AUDIO

The Solution

This solution provides a compact and efficient AV presentation system that combines multi-source video switching with integrated audio distribution, centred around the ALF-WUK4A 4x1 HDMI switcher. Designed for meeting rooms, classrooms, and collaborative spaces, the system enables multiple users to connect and switch between sources while delivering both high-quality video and clear audio reinforcement.

At the core of the system, the ALF-WUK4A manages up to four HDMI input sources, including laptops and a room PC, allowing all devices to remain connected simultaneously. The switcher supports both automatic and manual switching, enabling seamless plug-and-present operation or controlled source selection depending on the application. With support for 4K video, the system ensures sharp and detailed image quality on the main room display.

The ALF-WUK4A also features ARC (Audio Return Channel), allowing audio from the display to be routed back through the system, as well as a dedicated audio output for integration with external amplification. RS-232 control is included, enabling integration with third-party control systems for automated switching and system management, making the solution suitable for more advanced installations.

Audio distribution is handled by the ALF-PA2B amplifier, which receives the audio signal from the switcher and provides reliable amplification for the connected speaker system. Paired with ALFC-406 ceiling speakers, the system delivers clear and even sound coverage throughout the space, ensuring speech intelligibility and consistent audio performance for presentations and media playback.

Overall, this solution combines flexible HDMI switching, integrated audio routing, and reliable amplification into a streamlined system. With the ALF-WUK4A as the central switching hub and the ALF-PA2B and ALFC-406 providing audio support, it offers a practical and scalable solution for environments requiring simple operation, high-quality video, and effective sound reinforcement.

ALF-WUK4A Overview

The ALF-WUK4A is a compact and reliable 4x1 HDMI switcher designed to simplify multi-source connectivity in professional AV environments. It allows up to four HDMI input devices—such as laptops, media players, or room PCs—to be connected simultaneously and switched to a single display output, making it ideal for meeting rooms, classrooms, and huddle spaces. The unit supports both automatic and manual switching modes, providing flexibility for different use cases. In auto mode, the switcher detects and selects the active input when a device is connected or powered on, enabling a seamless plug-and-present experience. In manual mode, users can select inputs directly, offering greater control in structured presentation or controlled environments.

With support for 4K video resolution and ARC (Audio Return Channel), the ALF-WUK4A ensures high-quality video and allows audio to be returned from the display to an external audio system. It also includes RS-232 control, enabling integration with third-party control systems for automated operation. The switcher maintains stable signal performance across all inputs, ensuring consistent and reliable operation. Designed for ease of use and quick installation, the ALF-WUK4A provides a straightforward solution for managing multiple HDMI sources. Its compact form factor and intuitive operation make it a practical and efficient choice for everyday AV switching applications.

ALF-PA2B Overview

The ALF-PA2B is a compact and efficient stereo power amplifier designed to deliver reliable audio amplification in professional AV environments. Ideal for meeting rooms, classrooms, and small commercial spaces, it provides clean and consistent sound reinforcement for both speech and background audio applications. The amplifier supports multiple input types, including line-level and microphone inputs, allowing flexible integration with a variety of audio sources such as switchers, media players, and presentation systems. Its simple interface ensures easy setup and operation, making it suitable for both standalone use and integration into larger AV systems.

With its efficient power output, the ALF-PA2B can drive ceiling or wall-mounted speakers effectively, delivering balanced audio coverage across the listening area. Its compact form factor allows for discreet installation behind displays, under tables, or within equipment racks, helping maintain a clean and organized system design. Reliable, easy to use, and versatile, the ALF-PA2B provides a practical amplification solution for everyday AV installations requiring clear audio performance and straightforward integration.

ALFC-406 Overview

The ALFC-406 is a compact 2-way in-ceiling loudspeaker designed for clear and consistent audio in commercial AV environments. Featuring a 4-inch driver, it delivers balanced sound for speech and background music, making it ideal for meeting rooms, classrooms, and hospitality spaces.

Supporting both low-impedance and 70V/100V line systems, the ALFC-406 offers flexible integration into a wide range of audio installations. Its low-profile design and easy installation make it a practical and reliable choice for distributed audio applications.

Solution Bill of Quantities

- 1 x ALF-WUK4A HDMI Switcher
- 1 x ALF-PA2B Amplifier
- 2 x ALFC-406 Ceiling Loudspeakers
- 4 x ALF-HDMI 6ft HDMI Cables
- 1 x ALF-HDMI 16.5ft Cable

Third Party Equipment

- 1 x 3rd Display
- 1 x Display mounting bracket

Solution Use Cases

1. Meeting Rooms with Integrated Audio

In meeting spaces, multiple laptops and a room PC can be connected to the ALF-WUK4A, allowing users to switch between sources easily using auto or manual modes. Video is sent to the main display in 4K, while audio is extracted via ARC or audio out and amplified by the ALF-PA2B to ALFC-406 ceiling speakers, ensuring clear and consistent sound throughout the room.

2. Classrooms and Training Environments

In educational settings, instructors can connect several devices and switch between them during lessons using the ALF-WUK4A. The system delivers high-quality video to the main display while routing audio through the ALF-PA2B to ceiling speakers for even coverage, ensuring all students can clearly see and hear the content being presented.

3. Boardrooms with Centralised Control

In corporate boardrooms, the ALF-WUK4A enables multiple presenters to remain connected while RS-232 control allows integration with a central control system for automated switching. Audio from presentations is routed through the amplifier and ceiling speakers, providing a clean and professional AV experience with minimal user interaction.

4. Reception Areas and Digital Signage

For reception or signage applications, the ALF-WUK4A can switch between different content sources such as PCs or media players. The 4K output ensures high-quality visuals on the display, while audio is distributed via the ALF-PA2B and ALFC-406 speakers, creating an engaging and professional environment for visitors.