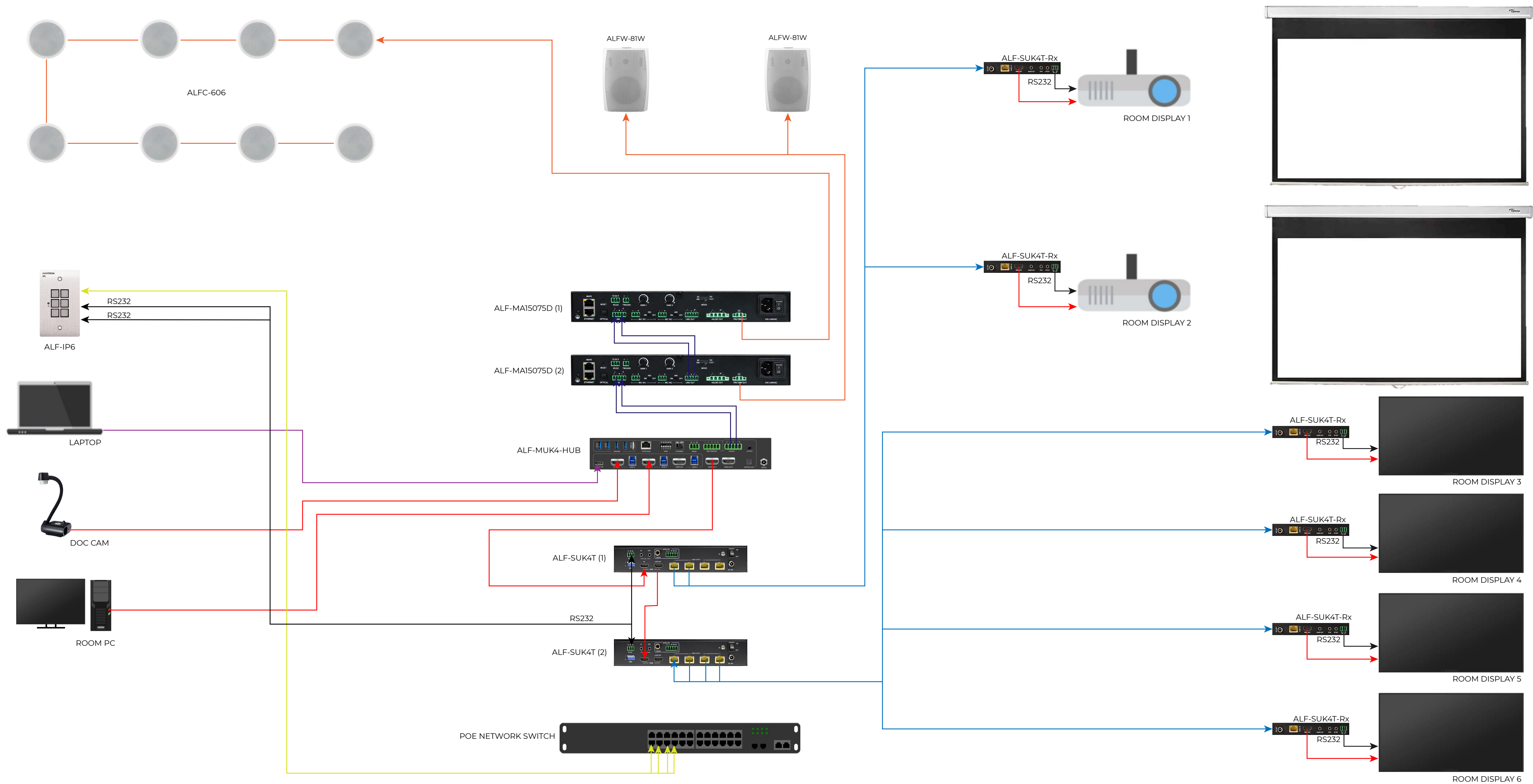




ALF-SUK4T
HDBT LONG DISTANCE SIGNAL DISTRIBUTION SOLUTION WITH AUDIO



HDMI



LAN



DANTE



USB 3.0



USB 2.0



USB-C



HDBT



SPEAKER



AUDIO

The Solution

This solution provides a flexible and scalable AV distribution system that combines long-distance video extension with integrated multi-zone audio reinforcement. At the core of the system is the ALF-SUK4T 1:4 HDBaseT distribution amplifier, delivering high-quality video to multiple displays across several rooms, while a coordinated audio system built around dual ALF-MA15075D amplifiers, ALFW-81W wall speakers, and ALFC-606 ceiling speakers ensures clear and consistent sound coverage throughout the space.

A range of input sources, including a laptop, document camera, and room PC, are connected to the ALF-MUK4-HUB, which operates as a seamless video switcher in this application. It provides fast, clean switching between sources with no visible delay, ensuring a smooth and professional presentation experience. The selected video signal is then routed to the ALF-SUK4T, where it is distributed via HDBaseT to multiple displays, supporting 1080p transmission up to 100 metres (328 feet) over standard CAT cabling.

The SUK4T features an HDMI input and loop output, allowing for easy cascading to additional units where expanded distribution is required, making the system highly scalable. Each of the four HDBaseT outputs connects to a receiver at the display endpoint, ensuring reliable signal delivery and consistent image quality across all screens. PoC (Power over Cable) support simplifies installation by powering receivers directly over the CAT cable, reducing the need for local power supplies.

In parallel with the video system, audio is distributed and amplified using two ALF-MA15075D amplifiers, providing sufficient power and zoning flexibility for both ceiling and wall-mounted speakers. The ALFC-606 ceiling speakers deliver even audio coverage across larger areas, making them ideal for background audio and speech reinforcement, while the ALFW-81W wall speakers provide more focused output where higher intelligibility or directional sound is required. This combination ensures balanced audio performance across different zones within the environment.

Control is managed centrally via the ALF-IP6 keypad, with RS-232 pass-through over HDBaseT enabling direct control of displays and projectors at each endpoint. This allows users to manage display power, input selection, and volume from a single interface, simplifying system operation and reducing the need for additional control infrastructure.

Overall, this solution integrates seamless video switching, long-distance HDBaseT distribution, and multi-zone audio reinforcement into a single cohesive system. It is ideally suited for training facilities, classrooms, and multi-room presentation environments where synchronized video, clear audio, and simple control are essential.

ALF-IP6 Overview

The ALF-IP6 is a programmable wall-mounted keypad controller designed for simple and intuitive AV system control. Featuring six configurable buttons, it allows users to manage key room functions such as display power, input selection, volume control, and system on/off. The unit communicates over IP and includes RS-232 and dual IR ports for flexible integration with displays, switchers, and amplifiers. Its clean, low-profile design makes it ideal for meeting rooms, training spaces, classrooms, and hospitality environments requiring reliable, straightforward control.

ALF-MUK4-HUB Overview

The ALF-MUK4-HUB is a professional seamless video and USB switcher designed for reliable source management in modern AV environments. It supports multiple input formats, allowing connection of devices such as laptops, room PCs, and document cameras, with clean, instantaneous switching that eliminates screen blanking or delays for a smooth presentation experience.

The unit features built-in scaling to ensure consistent output resolution and optimal image quality regardless of the input source. While it includes USB host and device switching for peripherals such as cameras and microphones—making it suitable for BYOM and UC applications—it can also operate purely as a high-performance video switcher where USB functionality is not required.

Compact and easy to integrate, the ALF-MUK4-HUB provides dependable performance and flexible deployment, making it an ideal front-end switching solution for meeting rooms, training spaces, and larger distributed AV systems.

ALF-SUK4T Overview

The ALF-SUK4T is a professional 1:4 HDBaseT distribution amplifier designed to reliably extend and distribute a single HDMI source to multiple display locations over long distances. Featuring one HDMI input and a dedicated HDMI loop output, the unit allows for easy signal pass-through and cascading to additional SUK4T units, making it ideal for scalable installations where more outputs are required.

Equipped with four independent HDBaseT outputs, the ALF-SUK4T can transmit high-quality 1080p video up to 100 metres (328 feet) over standard CAT cabling, ensuring stable performance without signal degradation. The system also supports PoC (Power over Cable), enabling connected HDBaseT receivers to be powered directly from the transmitter, reducing the need for local power supplies and simplifying installation at display endpoints.

In addition to video distribution, the SUK4T supports bidirectional IR and RS-232 pass-through over the HDBaseT link, allowing for remote control of connected devices such as displays and projectors. This enables seamless integration with control systems, ensuring centralized management of display functions including power, input selection, and volume.

With its robust design, long-distance transmission capabilities, and flexible expansion options, the ALF-SUK4T provides a reliable and efficient solution for multi-display AV distribution in environments such as training rooms, classrooms, and commercial installations.

ALF-MA15075 Overview

The ALF-MA15075D is a professional multi-channel power amplifier designed for high-performance audio distribution in commercial and conferencing environments. It delivers reliable and efficient amplification with a focus on flexibility, supporting both low-impedance and constant voltage speaker systems to suit a wide range of installation requirements.

The amplifier features Dante audio networking, allowing it to receive audio directly over the network from compatible DSP processors and other Dante-enabled devices. This enables a streamlined, fully digital signal path that reduces the need for analogue cabling while maintaining high audio quality and system scalability. It can also integrate easily into hybrid systems where both networked and analogue audio sources are present.

Designed for stable and consistent operation, the unit provides clean power output across multiple channels, making it suitable for driving distributed speaker systems such as ceiling speakers as well as front-of-house loudspeakers. Its architecture ensures efficient performance with low distortion, delivering clear and intelligible audio for speech and program material.

With straightforward control and integration options, the amplifier can be managed as part of a larger AV system, working seamlessly alongside DSP platforms and control systems. This makes it an ideal solution for meeting rooms, training spaces, and commercial installations requiring dependable, network-enabled amplification.

ALFC-606 Overview

The ALFC-606 is a compact 2-way ceiling loudspeaker designed to deliver clear, balanced audio for speech and background music in professional environments. Featuring a 6” woofer with a dedicated high-frequency driver and integrated backbox, it provides controlled sound dispersion and consistent performance, making it ideal for meeting rooms, training spaces, and commercial installations.

The speaker supports both low-impedance (8Ω) and constant voltage (70V/100V) operation, with selectable power taps of 30W, 15W, and 7.5W, allowing flexible system design and easy scalability across multiple zones. With a frequency response of 70Hz–20kHz and 90dB sensitivity (1W/1m), it ensures clear speech intelligibility and smooth audio reproduction across a wide coverage area.

Designed for distributed audio systems, the ALFC-606 is well suited for use as a primary or supplementary speaker, providing even sound coverage throughout a space. Its integrated backbox enhances acoustic performance while simplifying installation, making it a reliable solution for environments requiring consistent, high-quality overhead audio.

ALFW-81W Overview

The ALFW-81W is a high-performance wall-mounted loudspeaker designed for clear and dynamic audio reproduction in professional environments. Featuring a 2-way speaker design with an 8” woofer and high-frequency driver, it delivers balanced sound with strong low-frequency response and detailed high-end clarity, making it ideal for both speech and program audio.

Engineered for front-of-house and stereo presentation applications, the ALFW-81W provides wide and even sound dispersion, ensuring consistent coverage across meeting rooms, training spaces, and presentation areas. Its output characteristics make it well suited for delivering impactful media playback while maintaining excellent speech intelligibility.

The speaker is compatible with low-impedance and constant voltage systems, allowing flexible integration into a variety of audio system designs. Its robust enclosure and clean aesthetic enable discreet installation in professional spaces, while maintaining durability and long-term reliability.

Ideal for use alongside distributed ceiling speakers, the ALFW-81W enhances the overall audio experience by providing focused, high-quality sound at the front of the room, complementing broader room coverage systems and ensuring a well-balanced listening environment.

Solution Bill of Quantities

- 1 x ALF-MUK4-HUB Seamless video switcher
- 2 x ALF-SUK4T 1:4 HDBT distribution amplifier
- 1 x ALF-IP6 Keypad Controller
- 2 x ALF-MA15075D Amplifiers
- 2 x ALFW-81W Surface mount loudspeakers
- 8 X ALFC-606 Ceiling loudspeakers
- 3 x ALF-HDMI 6ft HDMI Cables
- 1 x ALF-HDMI 6.5ft Cables
- 1 x ALF-TSC6 Table box (optional)

Third Party Equipment

- 6 x Displays
- 6 x Display mounting bracket
- 1 x PoE Network Switch

Solution Use Cases

1. Multi-Room Training Centre with Distributed Audio

In a training facility, instructors can connect a laptop, document camera, or room PC to the ALF-MUK4-HUB and seamlessly switch between content sources. The selected video is distributed via the ALF-SUK4T to displays across multiple rooms, ensuring all participants view the same material. Audio is reinforced through the ALF-MA15075D amplifiers, with ALFC-606 ceiling speakers providing even coverage and ALFW-81W wall speakers enhancing clarity at the front of the room. This creates a consistent audio-visual experience across all training spaces, even when rooms are divided or used independently.

2. Classroom and Lecture Hall with Speech Reinforcement

In an education environment, lecturers can present from multiple sources while the system distributes video to several displays or projectors throughout the room and overflow areas. The combination of ceiling and wall-mounted speakers ensures speech intelligibility and balanced sound coverage for all students, regardless of seating position. The seamless switching capability allows educators to move between teaching materials without interruption, while centralized control simplifies daily operation.

3. Corporate Presentation Spaces with Multi-Zone Audio

In a corporate setting, this solution enables presentations to be shared across multiple meeting rooms or breakout areas. The ALF-SUK4T distributes video to displays in each space, while the dual amplifiers power both ceiling and wall speakers to provide clear and consistent audio in every zone. This setup is ideal for large meetings, company briefings, or hybrid collaboration sessions where both visual content and audio clarity are critical across multiple areas.

4. Event Spaces and Overflow Areas

For event venues or conference spaces, the system allows a single source to be distributed to multiple displays in the main room and additional overflow areas. The scalable nature of the SUK4T, with its loop output, allows for easy expansion as needed. Audio is evenly distributed using ceiling speakers for ambient coverage, with wall speakers providing additional reinforcement where required. Centralized control via the ALF-IP6 ensures simple management of displays and audio levels, delivering a professional and synchronized experience for all attendees.