

House of Worship

Design Guide

DOC-0585-001 - V 2.0 - May 2024

Room Application

Remote Worship, Audio Conferencing, Voice Lift, Presentation, Wireless Microphones.

Included Interfaces

VoIP - Analog Telco - USB Audio – Camera

Primary Equipment

- CP2 128VT DSP Mixer
- BMA 360 Beamforming Microphone
- Unite 260 4K PTZ Camera
- Dialog 20 USB Wireless Microphone

Software/Firmware revisions utilized

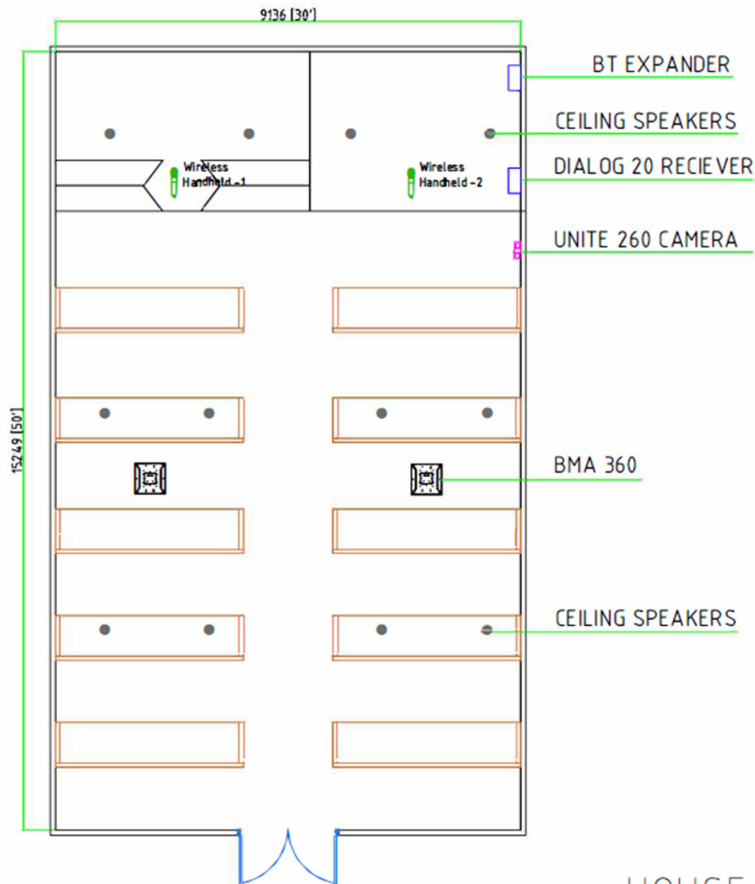
- Console Ai Version: v7.7.0.14
- DSP Version: 8.7.14.13
- BMA 360 Version: 1.0.8.4



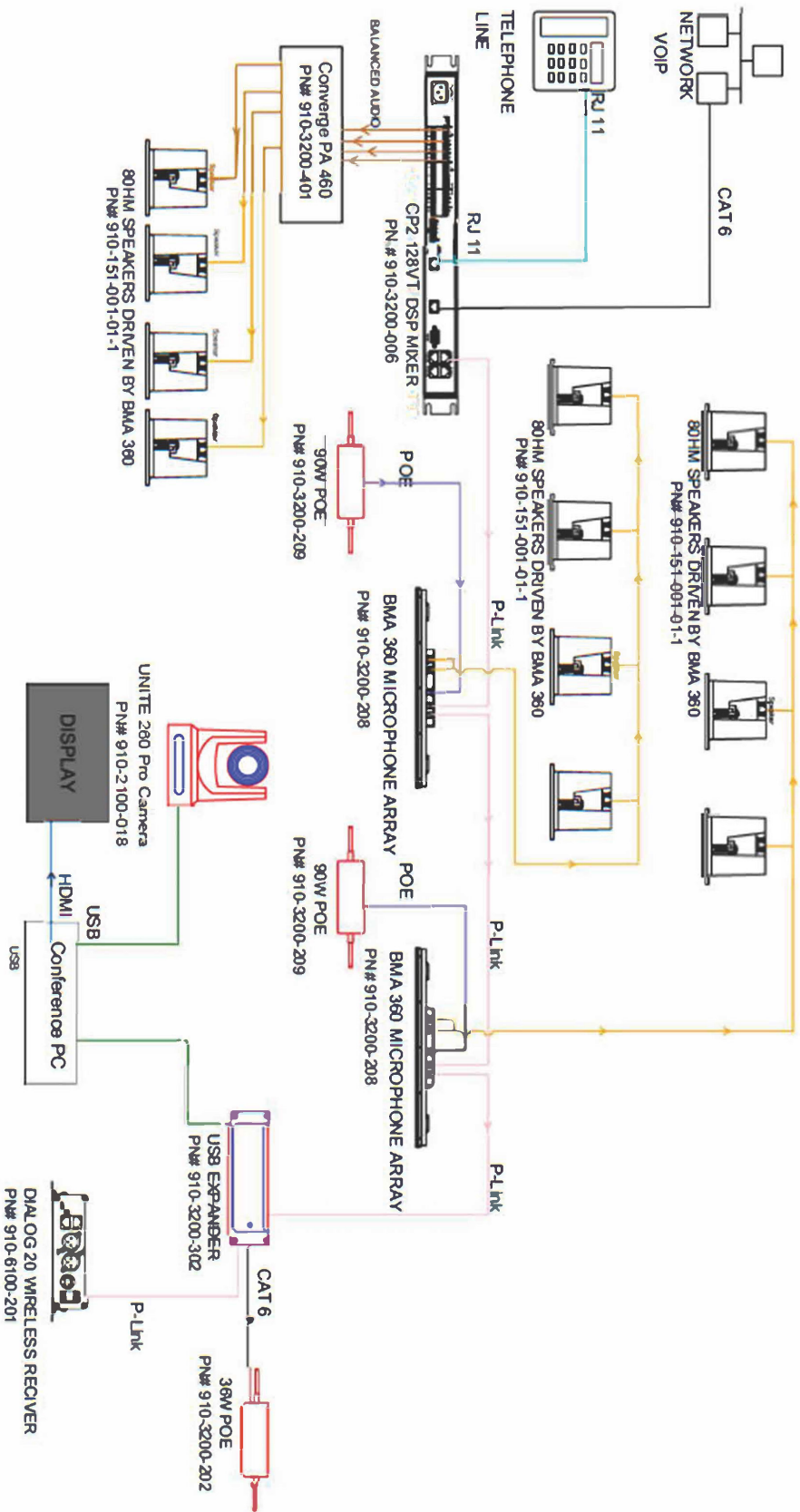
Notes:

This design provides both in room Voice Lift, excellent coverage and multiple connection options for remote attendees while keeping both cost and complexity at a minimum.

Room Illustrations



Wiring Diagram



NOTE: ANY INDIVIDUAL P-LINK MUST NOT EXCEED 200 FEET / 61 METER IN LENGTH

LEGEND	
	SPEAKER (18 AWG W/M)
	POE
	USB
	HDMI
	P-LINK (CAT 6)
	NETWORK (CAT 6)
	MICROPHONE

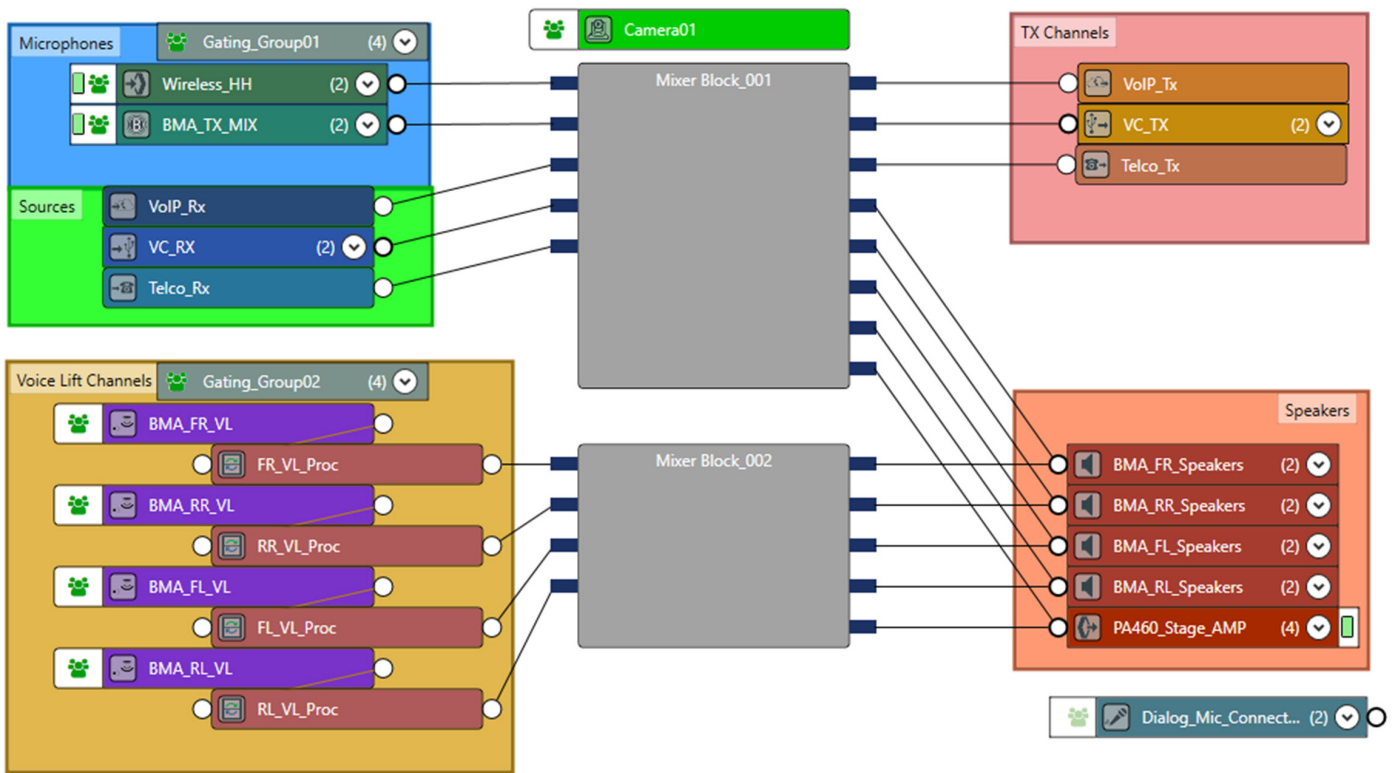
Equipment list:

Qty	Part Number	Product Name	Description
2	910-3200-208	BMA 360	BMA with 4 x 15 Watt Power Amplifiers. PoE Injector and CAT6 cables not included.
2	910-3200-209	90W PoE++ power supply kit for BMA	Includes 1 x 90 Watt PoE++ Injector, 2 x 25 ft CAT6 cables
1	910-6100-300	Dialog 20 USB Wireless Microphone	A flexible, high quality, 2-channel wireless microphone solution with less than 4 milliseconds of audio latency that enables hybrid meetings with simultaneous local sound reinforcement.
2	910-6103-001	DIALOG Handheld Transmitter H18	Wireless Handheld with H18, Condenser, Cardioid Microphone capsule with 2.4 GHz RF band
6	910-151-001-01-1	Ceiling Speakers	Includes 2 x LS7CT ceiling speakers with 8 ohm and 70V/100V transformer taps and ceiling tile bridges.
1	910-3200-202	36W PoE+ power supply kit for BMA	Includes 1 x 36 Watt PoE+ Injector, 2 x 25 ft CAT6 cables
1	910-2100-018	UNITE 260 PTZ Camera	PTZ camera with 20x optical zoom, 4Kp30 UHD, USB, HDMI, IP connections, AI smart face tracking, and auto framing.
1	910-3200-302	USB Expander for CONVERGE Pro 2	Includes 6 ft USB cable
1	910-6105-021	DIALOG Antenna Kit 25 Ft	Di-pole Antenna extension kit with pair of 25 Ft RG8 Plenum cables tuned for 2.4 GHz RF band, includes pair of mounting brackets. Antennas not included..
1	910-3200-401	CONVERGE PA 460	4 Ch x 60 Watts Class-D audio power amplifier. Half rack size. Rack-mount kit not included.
1	910-3200-006	Converge Pro 2 128VT	DSP Mixer with 12 Mic/Line AEC Inputs, 8 Mic/Line Outputs, USB Audio, VoIP, Telephone Interface.

Note:

*Additional 3rd party equipment may be needed and may not be reflected in this equipment list.

Flow View Diagram:



Included Macros:

- SPKR_UP: Increase speakers by 3 dB.
- SPKR_DOWN : Decrease speakers by 3dB.
- Audience_Lift_OFF: Mute all local Audience Lift routing
- Audience_Lift_ON: Unmute all local Audience Lift routing
- Mic_Mute_ALL: Mute all microphones
- Mic_Unmute_ALL: Unmute all microphones
- Mic_Mute_Wireless: Mute Dialog 20 wireless channels.
- Mic_Unmute_Wireless: Unmute Dialog 20 wireless channels.
- Mic_Mute_Class: Mute all Audience BMA 360 microphones.
- Mic_Unmute_Class: Unmute all Class BMA 360 microphones.

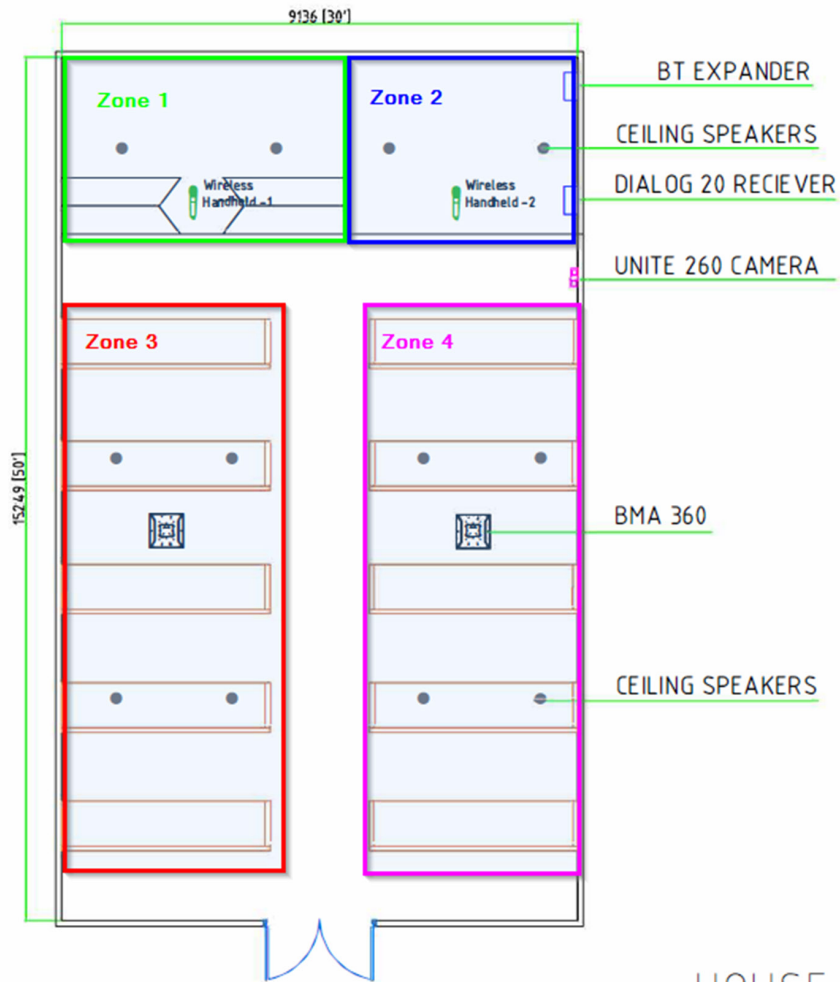
Note:

*Macros can be executed via Telnet or serial communications. Refer to the Converge Pro 2 Serial Command Reference Manual for details.

Camera Tracking:

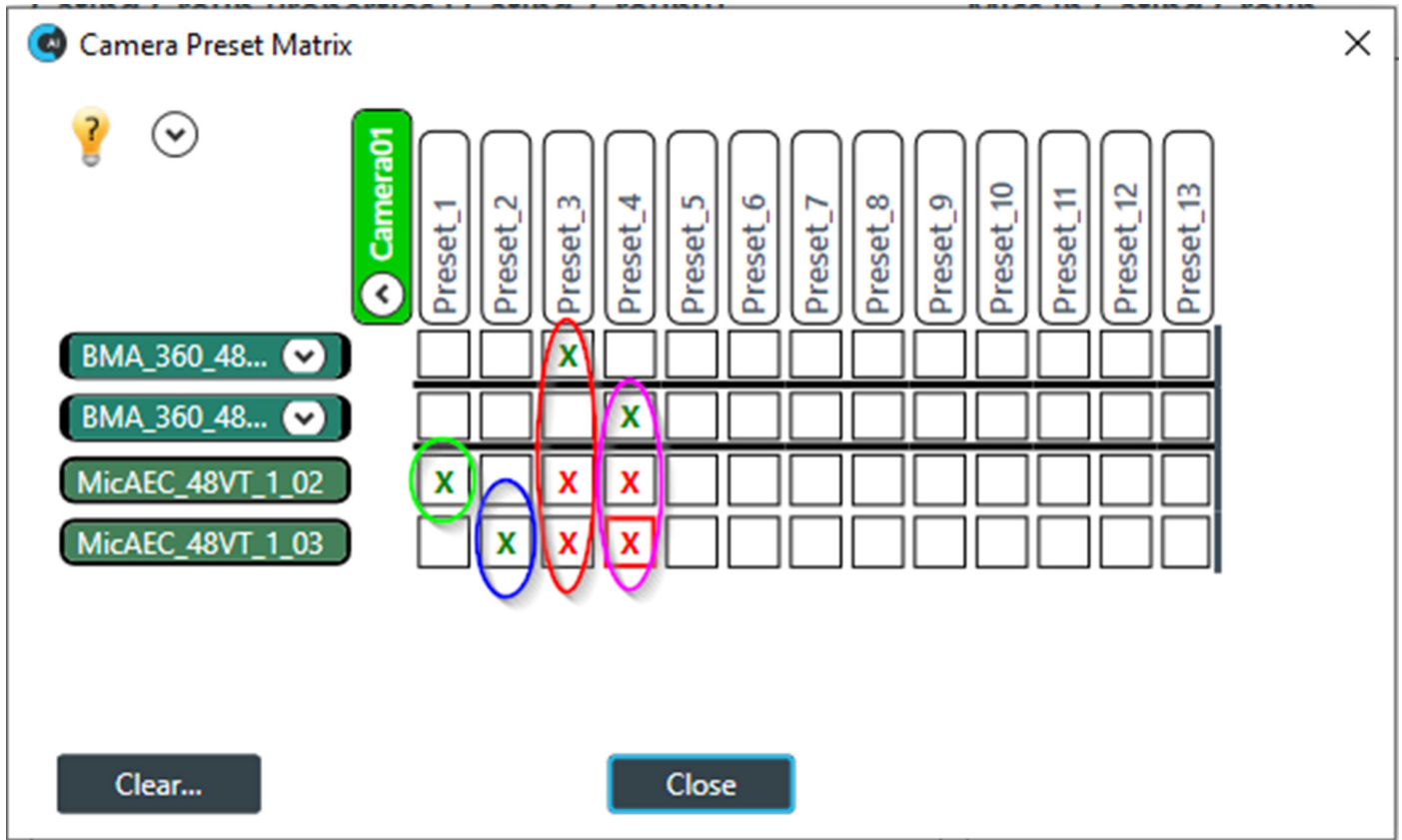
Converge Pro 2 audio processors support both IP and VISCA direct camera control to focus on speaking room participants. This design includes a preliminary configuration for tracking.

Camera coverage zones-



HOUSE OF WORSHIP

Active Microphone assignments to Camera Presets-



[Download the House of Worship files:](#)

- Example Console Configuration File | [Download](#)
- DWG Wiring Diagram | [Download](#)
- Stardraw Wiring Diagram | [Download](#)

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