

POE Keiga Audio Amplifiers

PoE / PoE+ / PoE++ • IEEE802.3at / af / bt • Up to 71W

25 Years of *Reliability*

 AUDIO AMPLIFIER & IoT DEVICE JDM / ODM / OEM
SOFTWARE / HARDWARE / MANUFACTURING

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Power Over Ethernet

POE

The Future Is Now...

Market Studies are on
PoE Products in general



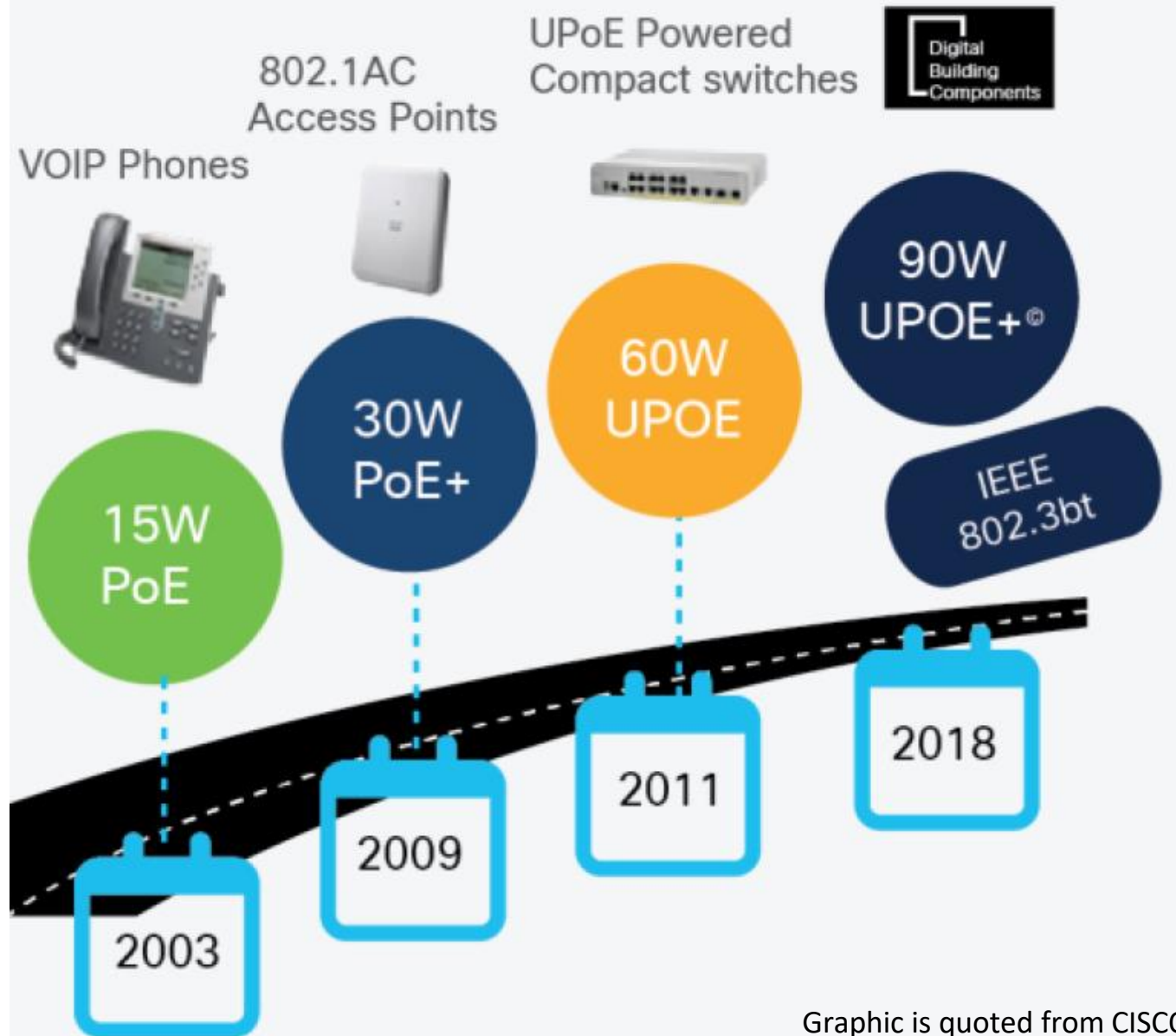
The Future Is Now...

IEEE Standard 30W, 60W and 90W PSE (Power Source Equipment) **are Available Now!**

Audio Amps become IoT Addressable Devices!

PoE Audio is the Profit Generator Today!

UPOE+ Standardization



Graphic is quoted from CISCO.



Standards up to 71W (PoE++ / IEEE802.3bt)

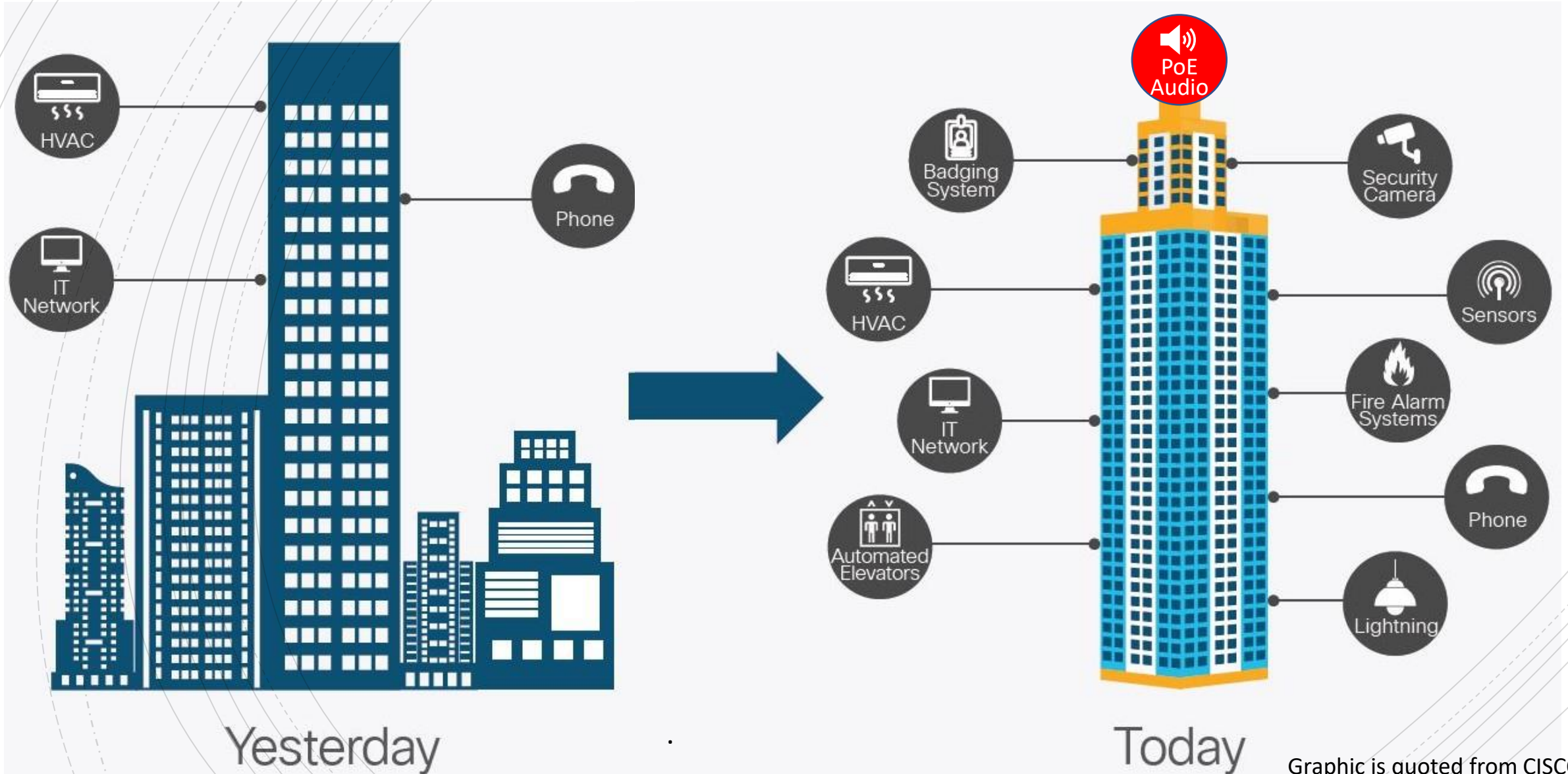
IEEE Standards	802.3af Type 1 PoE	802.3at Type 2 PoE+	802.3bt Type 3 PoE++	802.3bt Type 4 PoE++
PD Rated Power	12.95W	25.50W	51W	71W
PSE Max. Power	15.4W	30W	60W	100W
PSE Voltages	44 to 57V	50 to 57V		
PD Voltages	37 to 57V	42.5 to 57V		41.1 to 57V
Max. Current	350 mA	600 mA	600 mA per pair	960 mA per pair
Cable Supported	CAT3 and CAT5	CAT5		

PD (Powered Device, e.g., Audio Amplifiers)

PSE (Power Sourcing Equipment, e.g., Network PoE Switches)

The Future Is Now...

Every **IoT** device can be **remotely centralized, controlled and managed.**





A Keiga DSP Amplifier

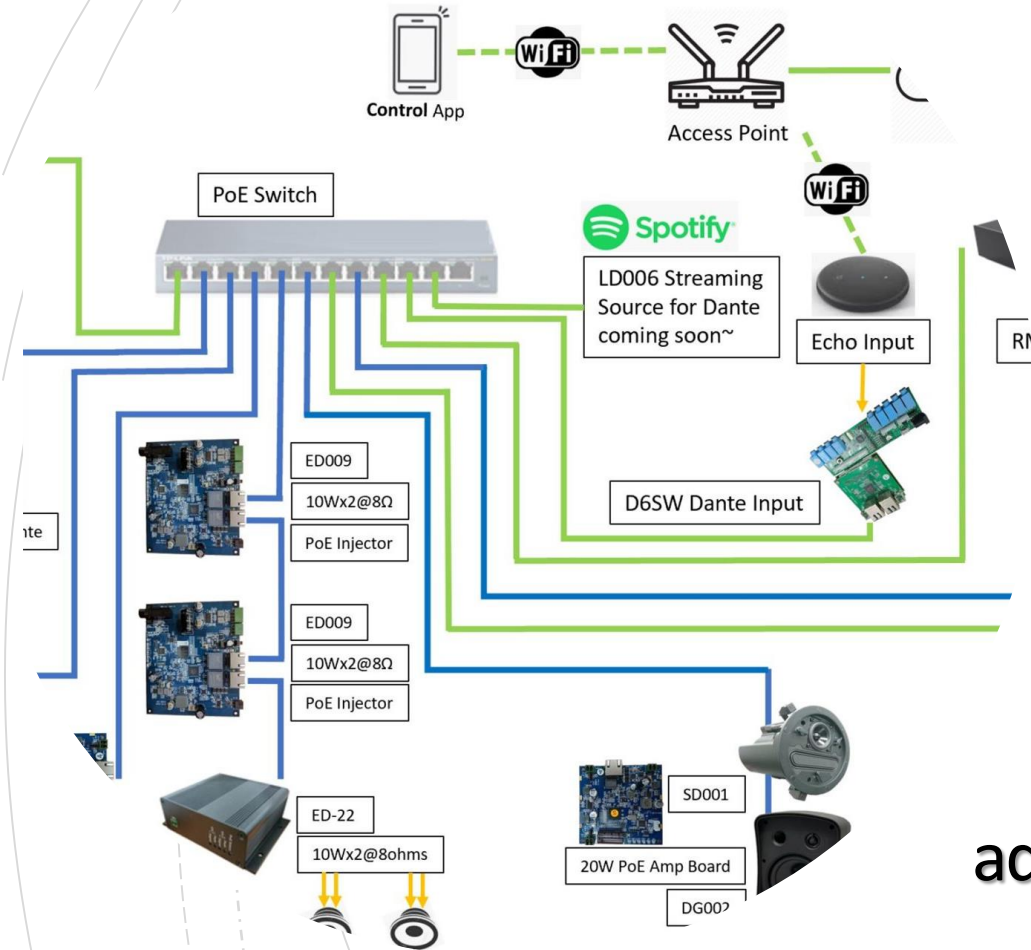
can drive **multiple speakers**

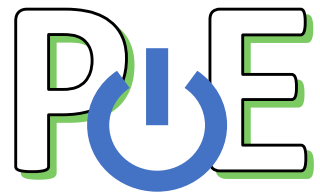
to deliver up to **71W** of sound

via one Ethernet cable, **no power cable,**

and each amplifier can be **remotely**

addressable, discoverable, profileable and controllable.





Amplifier Experience

- In 2017 CEDIA launched the industry's first **Amazon Echo Dot Distribution Amp*** via Keiga's proprietary balun over Cat5 cable to deliver both power and audio signals
- In 2018 CEDIA exhibited the industry's first **Amazon Echo Dot In-Wall 60-Watt Amp***
- In 2019 ISE announced the Industry's first IEEE standard **PoE++ built-in 60/100-Watt Ceiling Speaker***
- In 2020 released a line of IEEE standard **2ch and 4ch PoE/PoE+/PoE++ DSP Amplifiers**

*Products developed by Keiga for various 3rd parties.



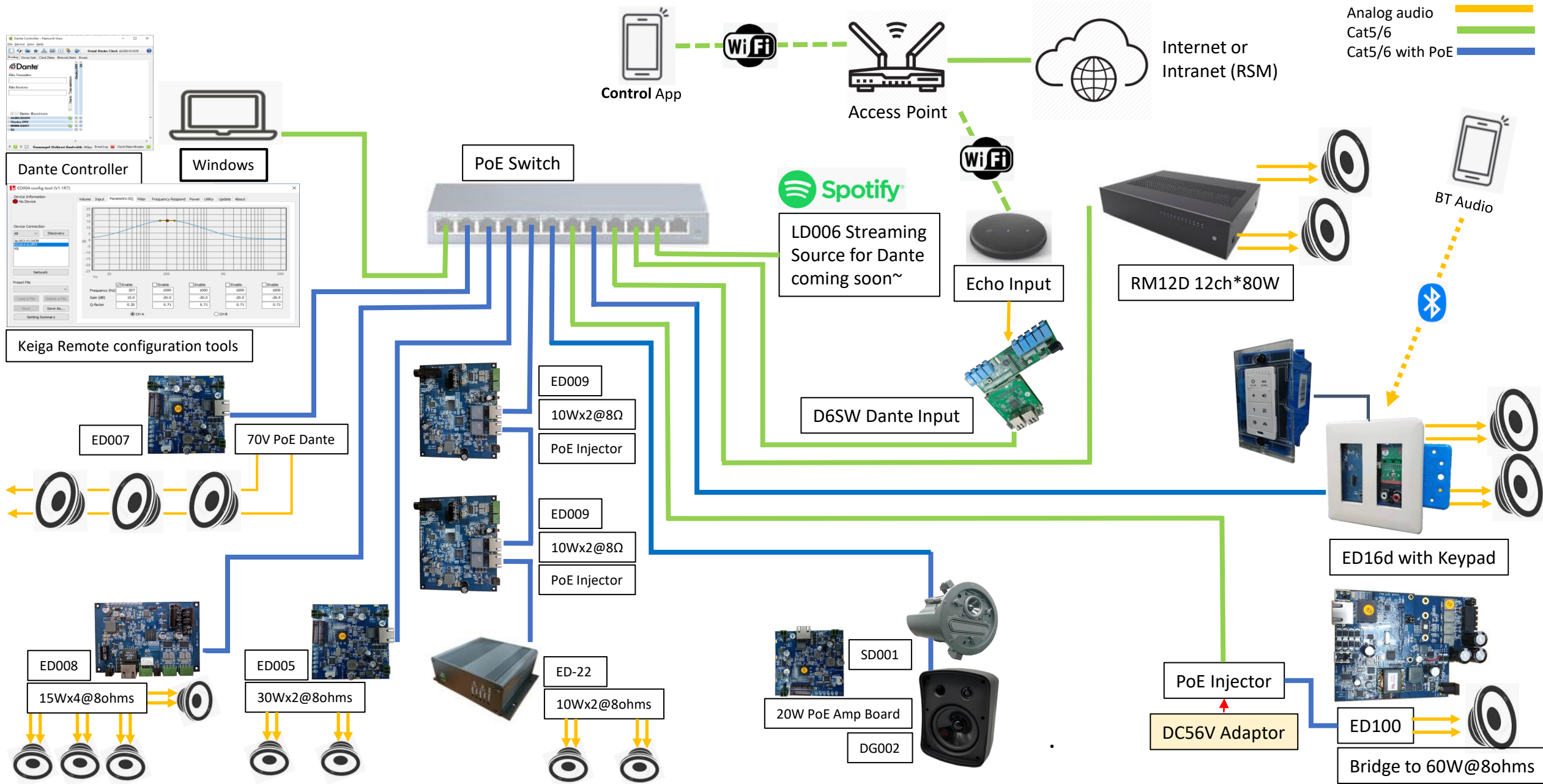
Power Over Ethernet

POE

Product Lines >>>

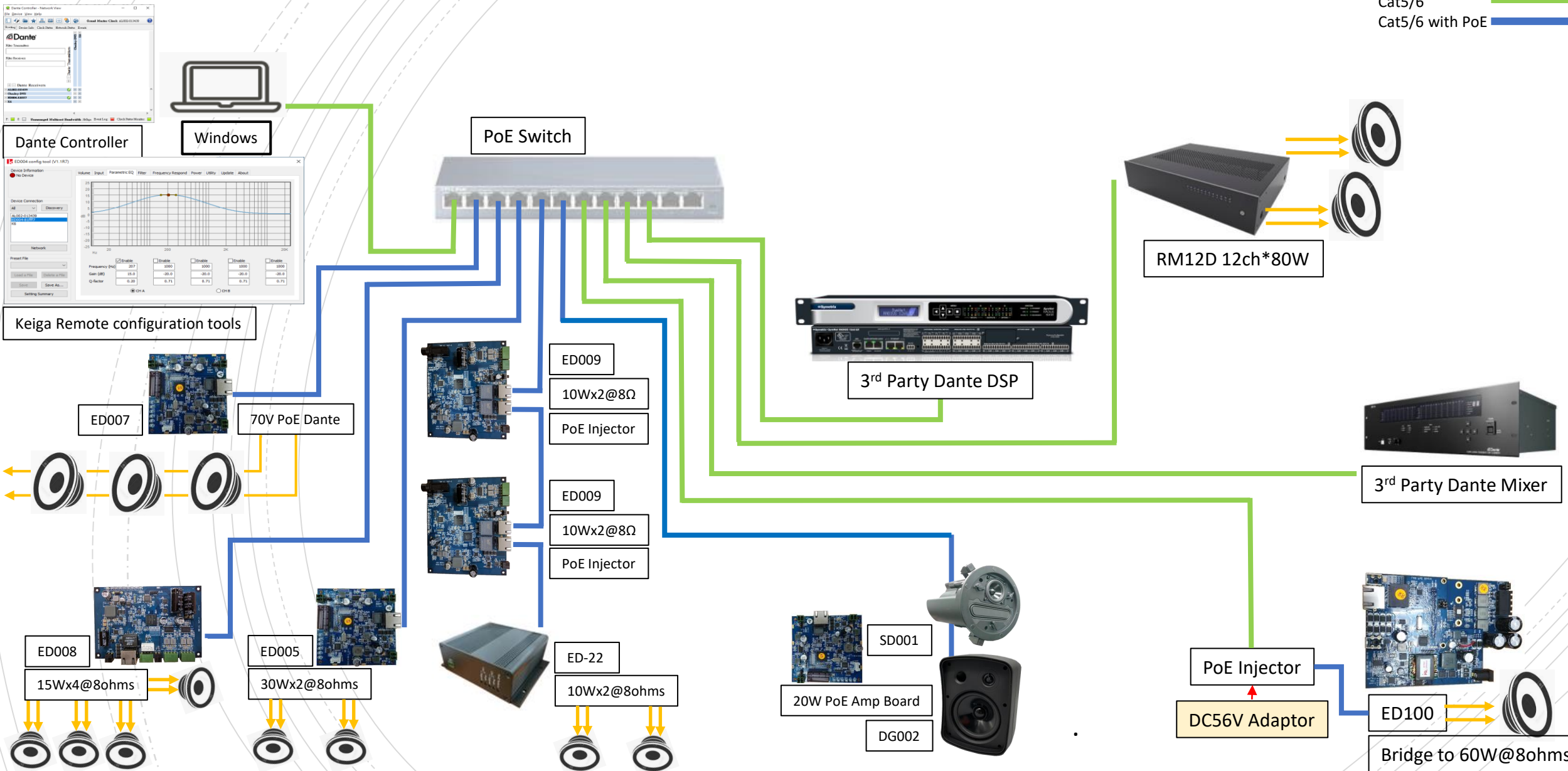
Hardware
Software
Ecosystem
Commercial
Residential

Awaiting Your
Customization

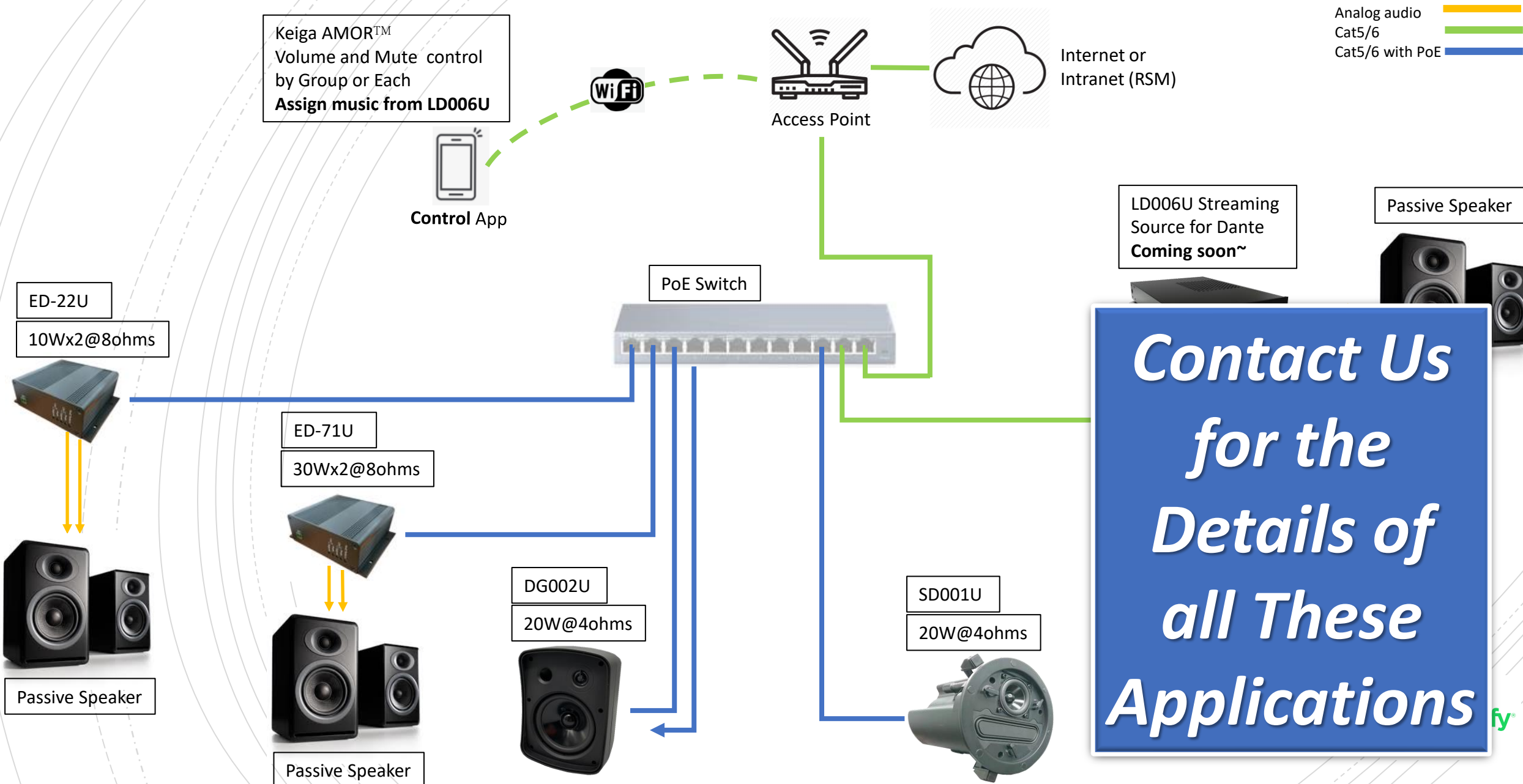


Keiga Dante PoE Commercial PA Applications

Analog audio —
 Cat5/6 —
 Cat5/6 with PoE —



Keiga Dante PoE Residential Applications



Keiga AMOR™
Volume and Mute control
by Group or Each
Assign music from LD006U



Internet or
Intranet (RSM)

- Analog audio
- Cat5/6
- Cat5/6 with PoE

ED-22U
10Wx2@8ohms



Passive Speaker

ED-71U
30Wx2@8ohms



Passive Speaker

DG002U
20W@4ohms



SD001U
20W@4ohms



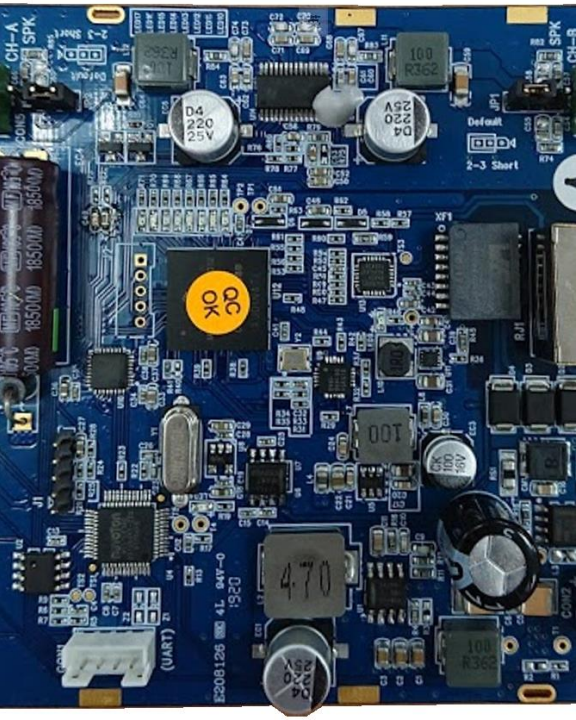
LD006U Streaming
Source for Dante
Coming soon~

Passive Speaker



Contact Us
for the
Details of
all These
Applications





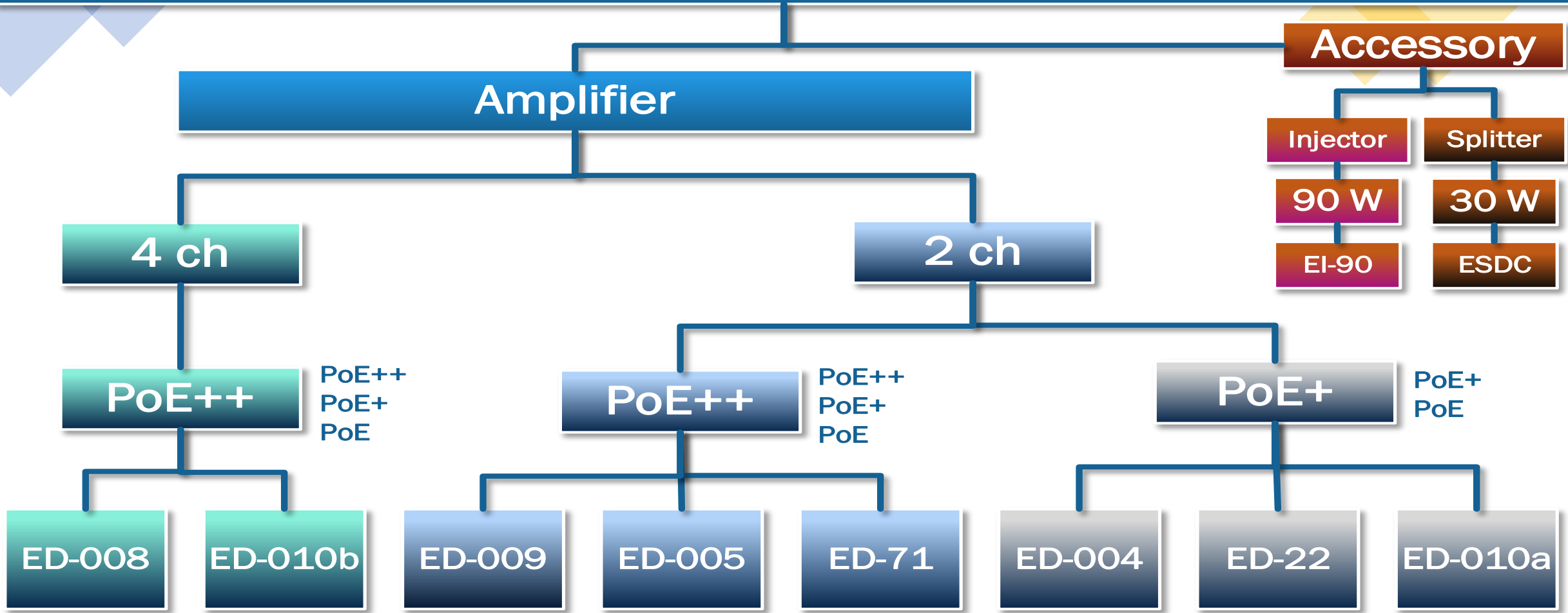
PoE Amps in Two Formats

An **End Device**
to be installed
near your regular speakers.

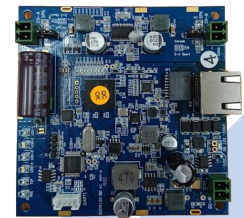
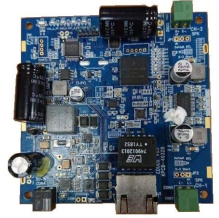
or

A **Board**
to be customized
into your speaker housing
to become your own
PoE Ready speaker





To Be Released Q2, 2021



To Be Released Q2, 2021

Model	ED-008	ED-010 b
PoE Chip	TI: PoE++, PoE+, PoE	
Audio Chip	Dante Ultimo	
Max. Power	PD: 71W	
KAP DSP	Yes	No
FQ Response	20Hz - 20KHz	
Signal Ratio	> 90dB	
FIND ME	Yes	No
Specials	GPIOx2	
Audio Amp RMS	15Wx4@8Ω 30Wx2@8Ω	
Audio Network	Dante/AES67	
Compliance	IEEE802.3at/af/bt	
Protection	OCP, OTP, OVP Auto Recovery Surge Protection	
DC Power	DC48V/1.6A, Optional	



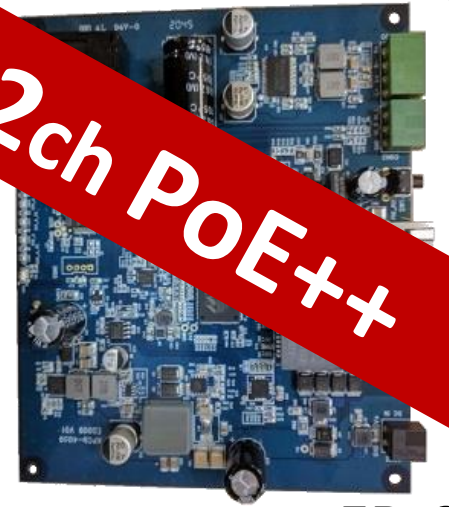
ED-008

ED-010 b

To Be Released
Q2, 2021

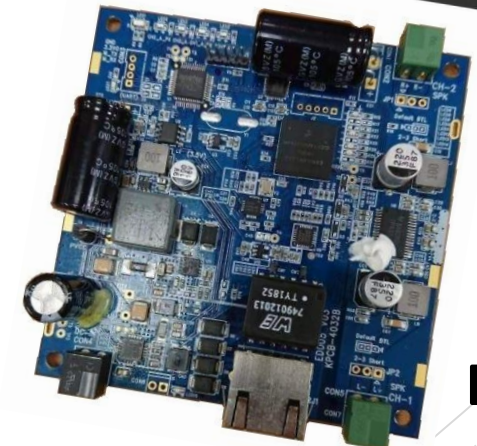
Model	ED-009	ED-71 / ED-005
PoE Chip	TI: PoE++, PoE+, PoE	
Audio Chip	Dante Ultimo	
Max. Power	PD: 71W; PSE: 90W	PD: 71W
KAP DSP	Yes	
FQ Response	20Hz - 20KHz	
Signal Ratio	> 90dB	
FIND ME	Yes	
Specials	MIC In/Line In PoE+ Daisy Chain	
Audio Amp RMS	10Wx2@8Ω 20W@4Ω PoE+ Extension w/o DC	35Wx2@8Ω 70W@4Ω
Audio Network	Dante/AES67	
Compliance	IEEE802.3at/af/bt	
Protection	OCP, OTP, OVP, Auto Recovery, Surge Protection	
DC Power	DC48V/1.6A, Optional	

2ch PoE++



ED-009

ED-071



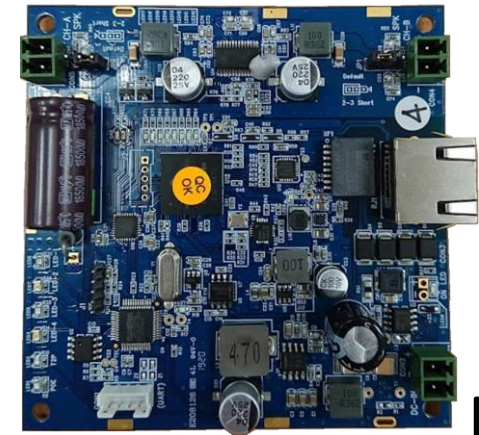
ED-005

*Specifications are subject to update without notification

Model	ED-22 / ED-004	ED-010 a
PoE Chip	TI: PoE+, PoE	
Audio Chip	Dante Ultimo	
Max. Power	PD: 22W	
KAP DSP	Yes	No
FQ Response	20Hz - 20KHz	
Signal Ratio	> 90dB	
FIND ME	Yes	No
Audio Amp RMS	10Wx2@8Ω 20W@4Ω	
Audio Network	Dante/AES67	
Compliance	IEEE802.3at, IEEE802.3af	
Protection	OCP, OTP, OVP, Auto Recovery Surge Protection	
DC Power	DC24V/2.5A, Optional	



ED-022



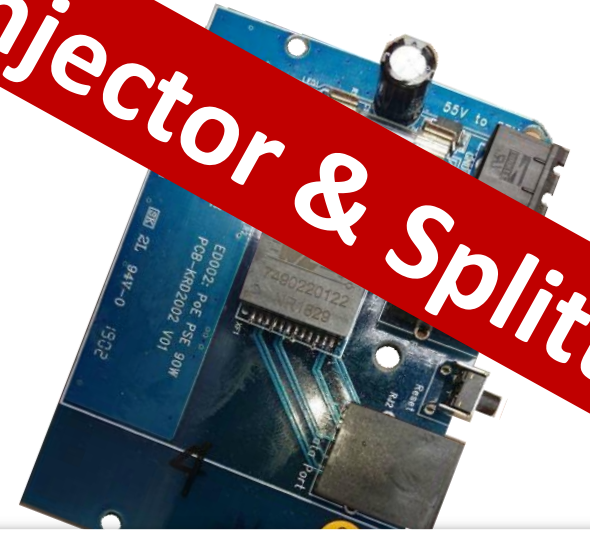
ED-004

To Be Released
Q2, 2021

ED-010 a

Model	EI-90	ESDC
PoE Chip	LTC: PoE++	TI: PoE+, PoE
Audio Chip	N/A	
Max. Power	PSE: 90W	PD: 30W
KAP DSP	N/A	
FQ Response	N/A	
Signal Ratio	N/A	
FIND ME	N/A	
Product Type	PoE Injector	PoE Splitter for DC5/12V
Audio Network	N/A	
Compliance	IEEE802.3bt	IEEE802.3at / af
Protection	SCP, OTP Surge Protection	OTP, OVP, OCP, SCP, Surge Protection
DC Power	DC56V/2A, Optional	DC5V/12V Output

Injector & Splitter



All Boards can be Customized to Your Own Shapes and Sizes.

*Specifications are subject to update without notification



Exclusive

Power Over Ethernet

DSP Configuration Software

POE KEIPATM

KEIGA

AUDIO

PERFORMANCE

- Auto discovers Dante devices and saves speaker profiles
- Input Sensitivity Selection to match full-scale RMS
- Input Limit configuration to avoid input clipping
- Output Volume to adjust and mute output

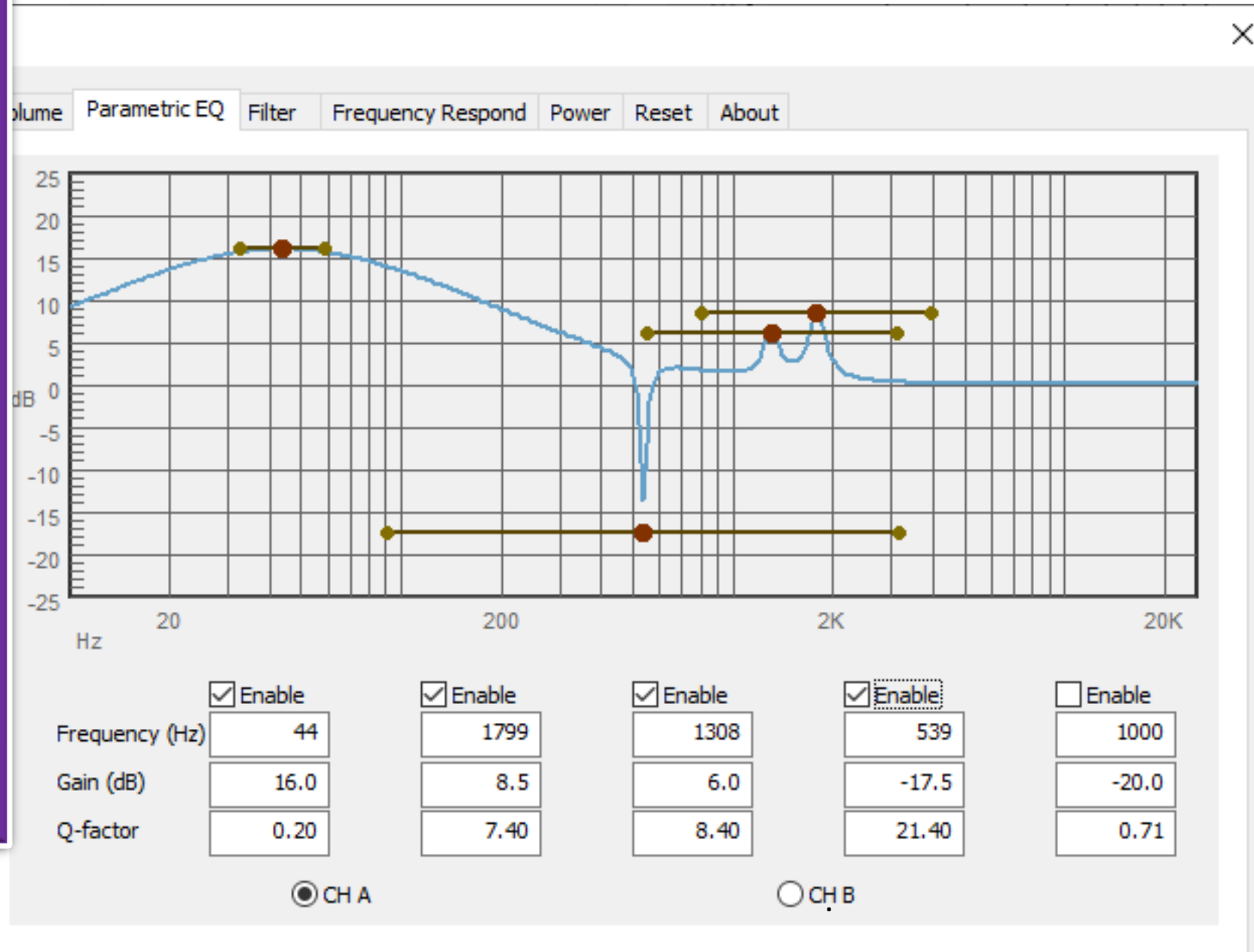
The screenshot displays the Keiga KAP software interface with the following settings:

- Volume** (selected tab): Parametric EQ, Filter, Frequency Respond, Power, Reset, About
- Sensitivity**:
 - CH A: 0dB, +2dB, +4dB, +6dB, +10.5dB
 - CH B: 0dB, +2dB, +4dB, +6dB, +10.5dB
- Input Limit**:

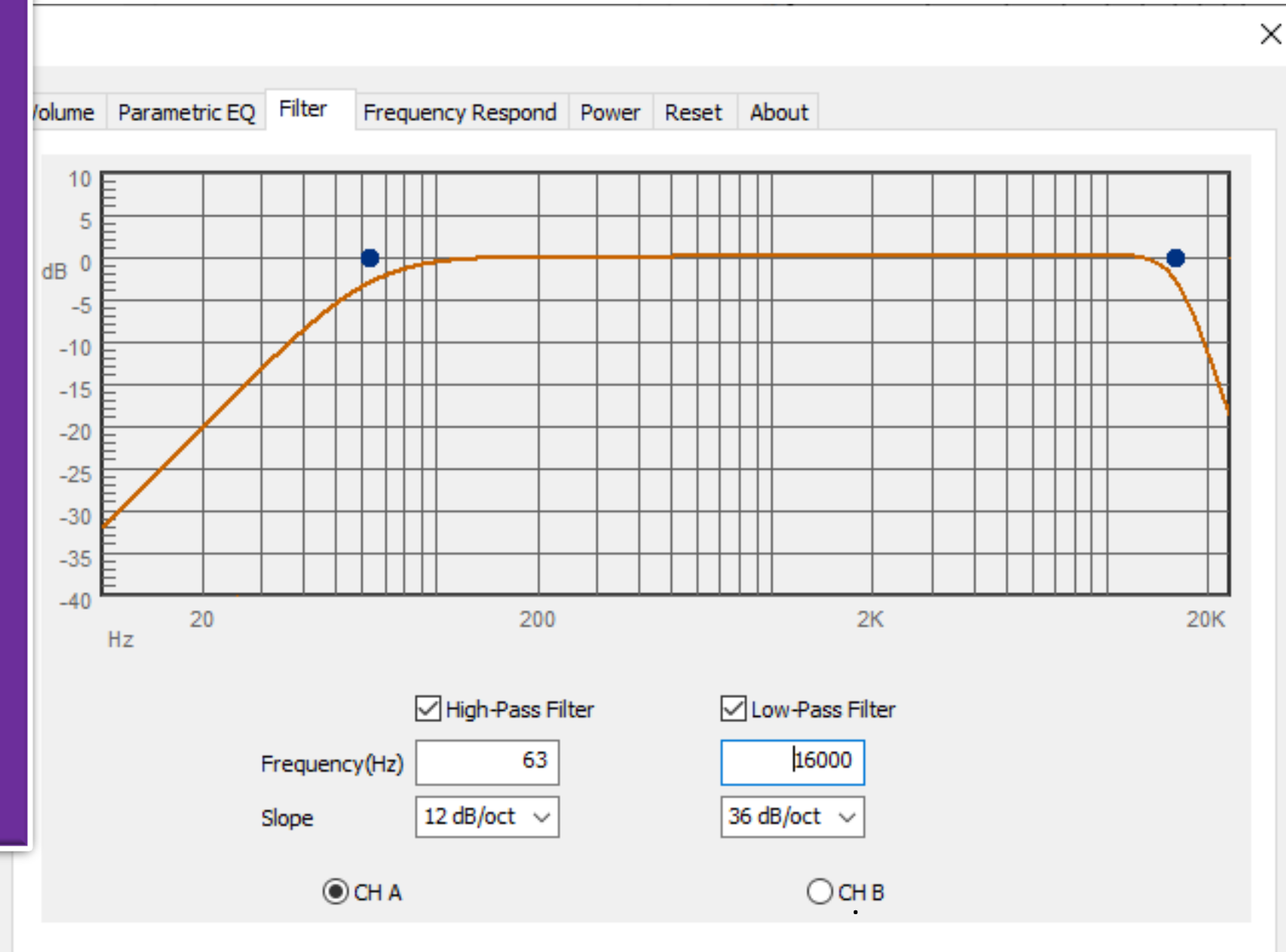
CH A	Threshold(dB)	CH B
-90		-90
0.00	Ratio(1 : X)	0.00
0	Knee	0
0	Attack Time(ms)	0
0	Hold Time(ms)	0
0	Release Time(ms)	0
- Output Volume**:
 - Master: 74% (indicated by a black bar on a vertical slider)
 - CH A: -6 dB (indicated by a blue bar on a vertical slider)
 - CH B: -5 dB (indicated by a blue bar on a vertical slider)
 - Mute:

At the bottom of the interface, there are buttons for **Save**, **Save As...**, and **Preset Status**.

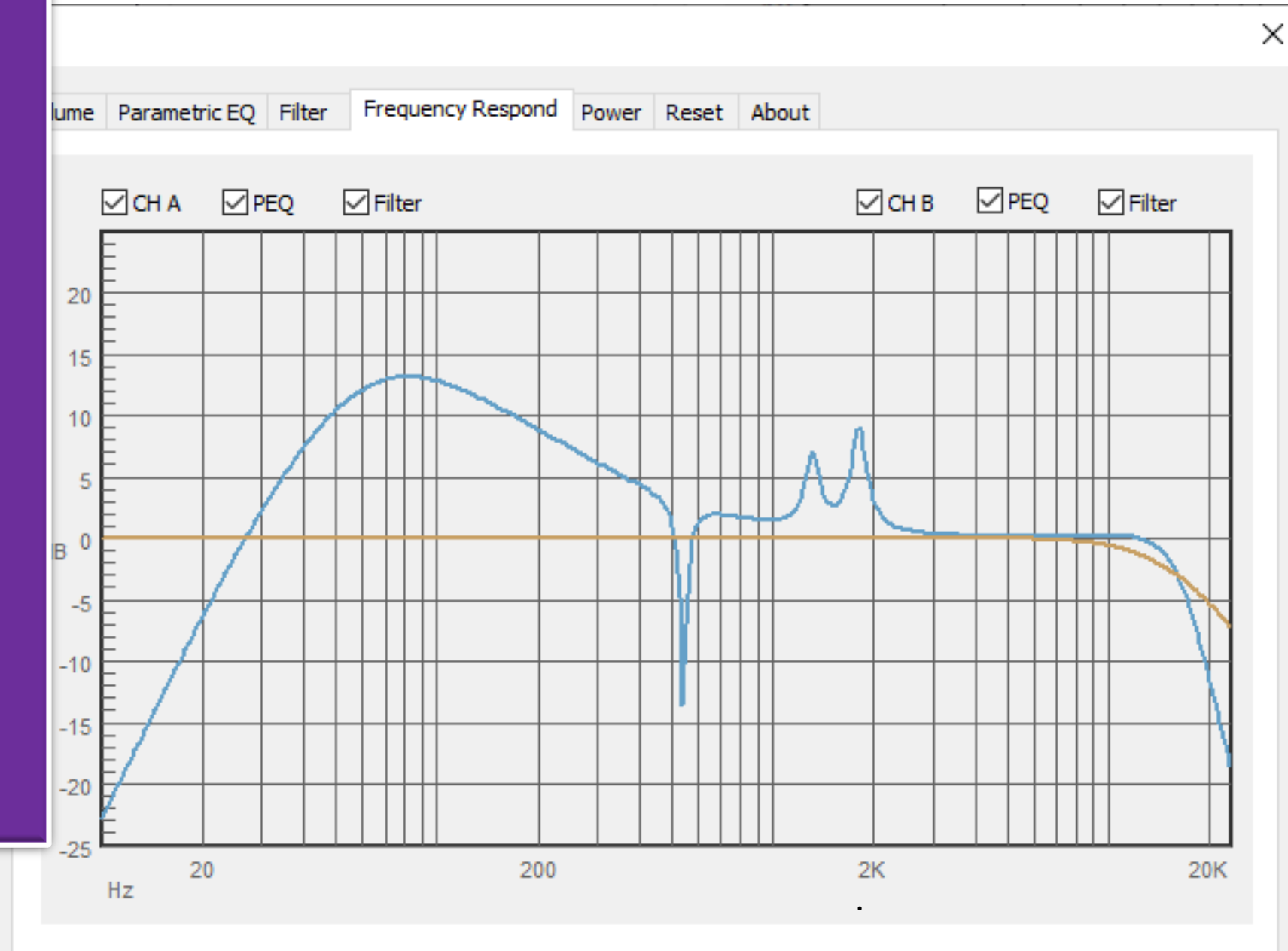
- Up to 5 sets of PEQ for each Ch A and Ch B
- Uses number key to input values or mouse to move the curve to match speaker's characteristics



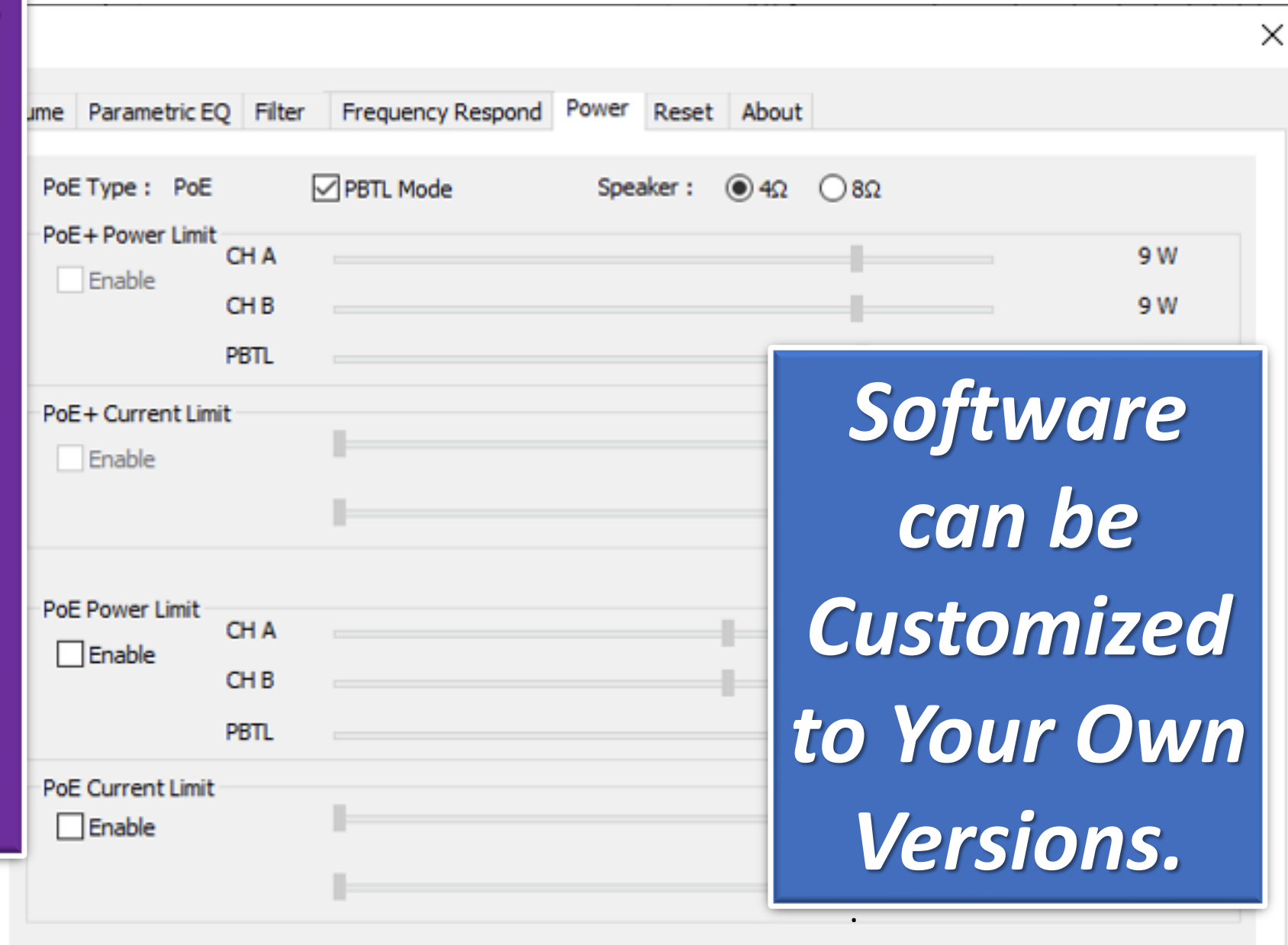
- High-pass filter and Low-pass filter to match the speaker specifications
- Supports stereo or two-way speaker configuration



- Summary of a frequency response emulation; **easy** for installers to have a view of the whole scope of the configuration



- Shows PoE connections **status**
- Provides setting for power limiter to **keep system stable**
- Selects the mode for **stereo or bridge** to mono and speaker parameters



*Software
can be
Customized
to Your Own
Versions.*

A close-up, slightly blurred photograph of a network switch rack. The focus is on the front panel where numerous white RJ45 ports are visible. Many of these ports have red PoE injectors or adapters plugged into them. The red color of the injectors contrasts sharply with the white ports and the grey metal of the rack. The background shows more of the rack, receding into a soft focus.

Our **PoE** Amps
and Software
are **Ready** for
your brands **Now!**

WE LOVE TO

JDM / ODM /

YOUR PRODUCTS

**HIGH QUALITY
PRODUCTION FACILITIES
IN TAIWAN and CHINA**

keiga

Custom Installation S models

PRODUCT DESCRIPTION: Final Custom Installation
 Switch-mode Power Supply
 Multichannel Class-D Amplifiers

TYPE: Design only JDM ODM OEM

KEIGA'S CONTRIBUTIONS IN DESIGN & DEVELOPMENT

CD
Concept Design

ID EE ME SE Features GUI

EE
Electronic and Electrical Engineering

AC Power Unit DC Power Unit AC/DC Power Unit
 Select Key Components I/O PCBA Circuitry
 Customized Layout RF Bluetooth Infrared Wi-Fi
 DECT UART USB I2C RS-232

ME
Mechanical and Heat Engineering

Chassis Industry Design Cables & Wires Connectors
 Heat Dissipation Tooling Metal Plastic Packaging
 User Manual

SE
Software & Firmware Engineering

GUI System DSP Firmware

CE
Compliance and Certification Engineering

EMI FCC/IC CE UL ETL RoHS

PE
Purchasing & Production Engineering

Key Component Purchasing Long Lead-Time Component Purchasing
 Engineering Sample Engineering Transfer

THANK YOU!

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