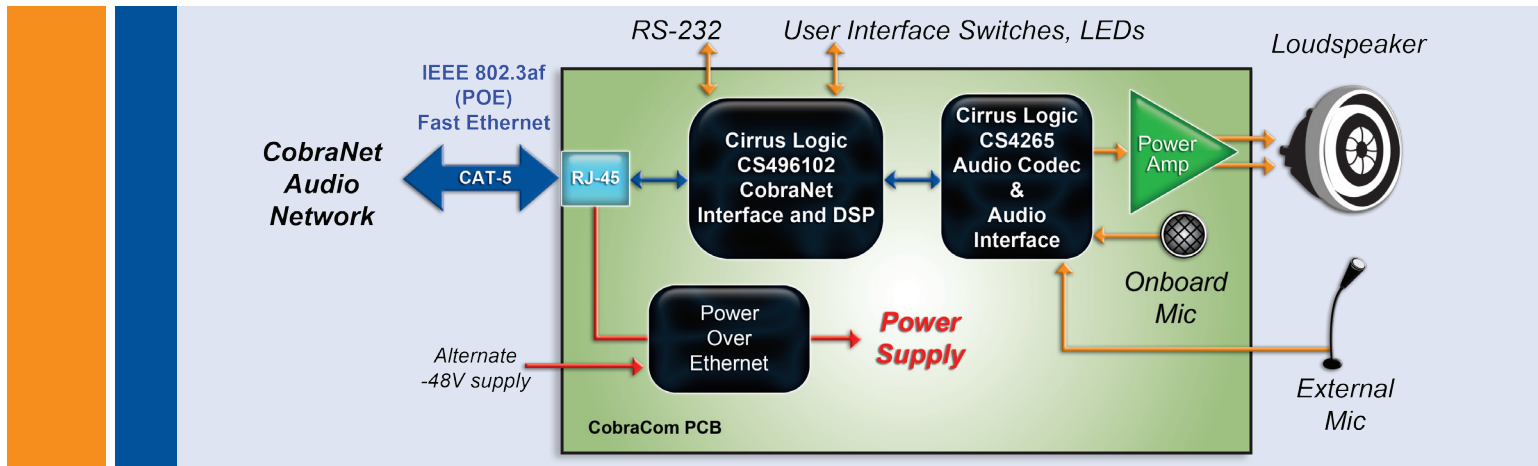


CobraCom™ Network-Powered CobraNet® Reference Platform



CobraCom™ reference Platform Based on CS4961xx CobraNet® interface and DSP

Key specifications for CobraCom™

- Two pro quality, uncompressed digital audio channels in, two channels out (2x2)
 - Optional upgrade to 8x8 and 16x16 channel support.
- Configurable 16, 20 and 24-bit digital audio resolutions at 48 and 96-kHz audio sample rates.
- Local 32-bit audio DSP processing
 - DSP Conductor™ graphical audio signal processing development tool.
- IEEE 802.3af Power-over-Ethernet (PoE) delivers 15.4 W of total power at 100 m.
 - Use CobraCom™ with standard, off-the-shelf PoE Ethernet switches.
 - No need for custom, zone-limited matrix amplifiers.
 - Higher power possible at shorter distance.
- Class AB loudspeaker power amplifier delivers 6 W average, 15 W peak into 8 Ω.
- Popguard® technology reduces loudspeaker output clicks and pops.
- Dual, board-level electret and external mics.
- 2x2 GPIO for simple user interface.
- RS-232 for serial communication.
- 2-layer PCB measuring 5.4"x4".
- Optional external -48 V network power.

Platform Overview

The CobraCom™ Reference Platform provides a complete, board-level design kit demonstrating the simplicity of implementing network-powered CobraNet® digital audio devices. Through real-time transport of uncompressed digital audio over ubiquitous Ethernet, CobraNet® combines the routing flexibility of a network with pro quality, multi-channel audio. By providing one channel of speaker level audio output, one channel of microphone input, 32-bit audio DSP, GPIO for a simple user interface, RS-232 and standard Power-over-Ethernet (PoE) power conditioning, many different networked products can be developed.

For example, CobraCom™ can be used to create an integrated, multi-zone, high fidelity music, intercom and audio surveillance system running over standard Ethernet infrastructure, perhaps sharing the network with IP cameras. Local audio DSP can be applied to such tasks as automated background music ducking, zone equalization, hands-free intercom, ambient audio-driven security system triggering, to name only a few. Cirrus Logic's DSP Conductor software makes DSP function design a snap, with no programming required.

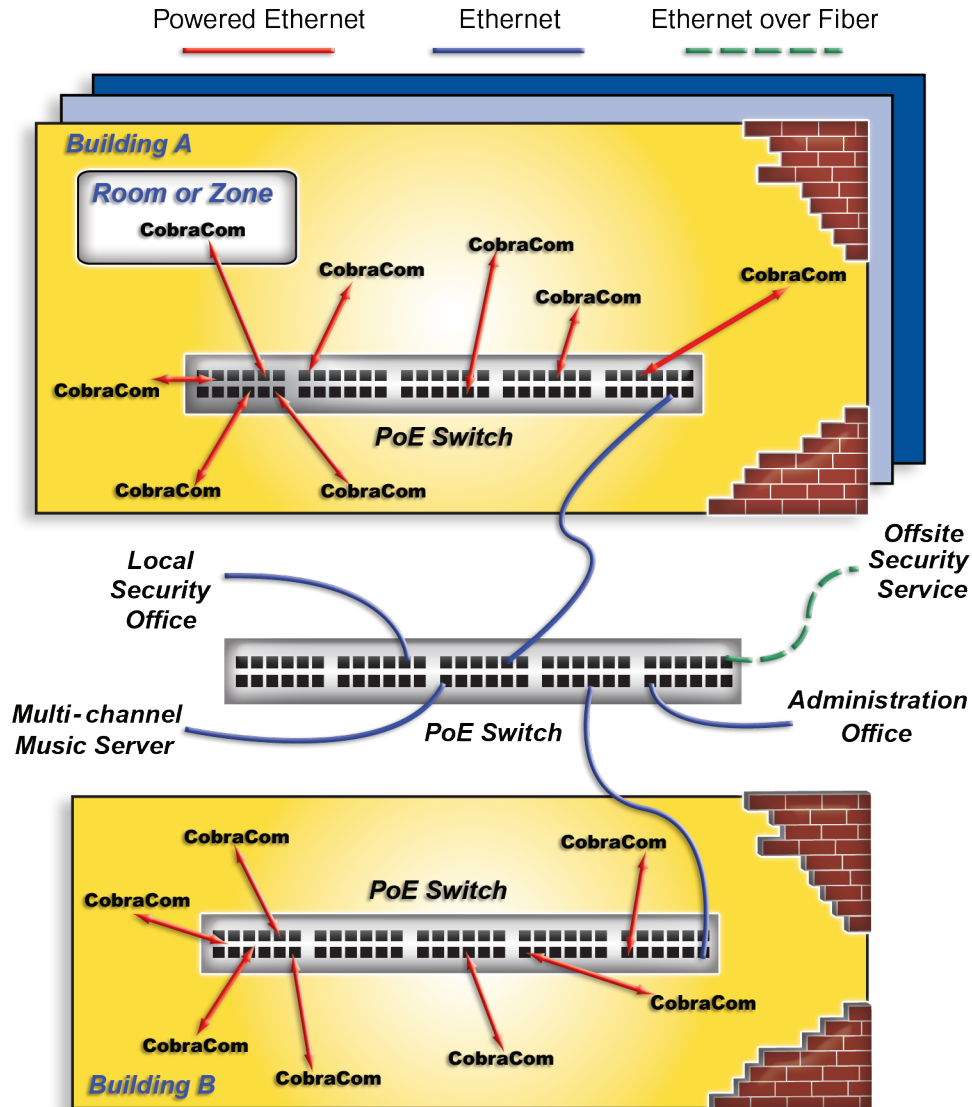
Example product applications

- Self-powered, networked in-wall and ceiling loudspeakers.
- Paging stations.
- Desktop conference stations for judicial and legislative audio networks.
- Converged intercom, music and surveillance systems for commercial and residential applications.
- Residential multi-room digital audio wall panels with integrated amplification.

Reference contents

- Sample PCBs, schematics, design files and bill of materials.
- Cirrus Logic DSP Conductor™ graphical audio signal processing development tools.
- Customization services available from Cirrus Logic third party developer Attero Tech at www.atterotech.com.

Info and support at www.cobranet.info, www.cirrus.com.



Example installed system leveraging CobraCom™

This generic installation example illustrates a digital audio network of rooms, or zones, distributed throughout a building or campus and easily scalable or modified as requirements change. Such an installation could be readily deployed today in hospitals, schools, justice centers, conference centers, multi-tenant retail centers, houses of worship, sports venues, and casinos. Commercially available Power-over-Ethernet-enabled switches provide both digital audio transport and power over a single CAT-5 cable to CobraCom™-derived stations or wall panels in each zone, eliminating the need for high-voltage wiring. Wings of the building and other offices are connected through a standard, non-PoE

Ethernet switch. A multi-channel music server within the network provides any number of audio channels on demand to the zones. An Administration Office has access to the network for music, paging, security and master control. An on-site Security Office has access for emergency communication and audio surveillance. An off-site Security Service has access to the network through an Ethernet fiber link to provide back-up security and to record surveillance audio in the off-hours. This is but one scenario that leverages CobraNet® and CobraCom™ for audio system convergence.

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