

RAVE

ROUTING AUDIO VIA ETHERNET

ADVANCED SYSTEMS PRODUCTS

RAVE™ is a revolutionary signal transport system that allows you to route multiple channels of audio over standard Ethernet hardware and cabling. A single RAVE network can now replace hundreds of audio cables, dramatically reducing installation time, effort and cabling costs while improving routing flexibility and audio performance. RAVE is the ideal audio transport system for arenas, theatres, broadcast facilities, and other applications requiring multiple channels routed over long distances free of noise and hum.



Easy Routing of Multiple Audio Channels

Large sound systems often require routing dozens of audio channels over long distances to multiple locations. Analog technology requires a separate line for each channel, leading to large cables and conduits, and time-intensive installations.

Analog cabling can be a nightmare—prone to errors and subject to interference and noise. It's also time consuming to design and install, as well as difficult to re-route and reconfigure. Cable, conduit, termination and labor costs can be the single largest expense of a system.

RAVE is a digital audio transport system employing CobraNet™ technology licensed from Peak Audio. This assures compatibility with all other CobraNet-licensed products—avoiding the limitations imposed by closed-end, proprietary network audio systems. RAVE transports audio signals over Fast Ethernet networking components in an uncompressed 48 kHz digital format in resolutions of 16-, 20- or 24-bit. Using standard network hardware and physical media, a RAVE system has a maximum capacity of 64 audio channels on a 100BASE-TX segment and the ability to support hundreds of audio channels on a switched Ethernet LAN (Local Area Network).

A RAVE device can be configured by either the front panel switches or via software. You can quickly design a RAVE network right out of the box by simple configuration via the front panel switches. In software mode, RAVE offers an even greater array of configuration options—accessible via SNMP (Simple Network Management Protocol). Such features include complex audio mapping, audio channel duplication, device timing prioritization, and more. Once the device is configured, parameters can be written into permanent memory.

RAVE can provide great economies over conventional wiring methods, yielding significant time and cost savings in the reduction of cabling infrastructure. With six models available, it is easy to interconnect a wide variety of analog and digital audio equipment. Finally, because it is Ethernet based, RAVE easily supports system reconfiguration and expansion with off-the-shelf networking components.

What are the Benefits of RAVE?

- Reduce installation costs—replace up to 64 analog lines, conduit, isolation transformers, and distribution amplifiers with a single CAT-5 cable or fiber
- Superior audio quality—up to 24-bit/48 kHz digital audio resolution system-wide, immune to ground loops or EMI
- Greater flexibility—expand the system or re-route signals without rewiring



Replace audio cable with a single CAT-5 network cable, or for longer distances (>328 feet or 100m), with fiber optic cables.

QSC™

A U D I O

Hear the Power of Technology.

1675 MacArthur Boulevard
Costa Mesa, CA 92626
Ph: 800/854-4079 or 714/957-7100
Fax: 714/754-6174
Web: www.qscaudio.com
Email: info@qscaudio.com

Building a RAVE Network

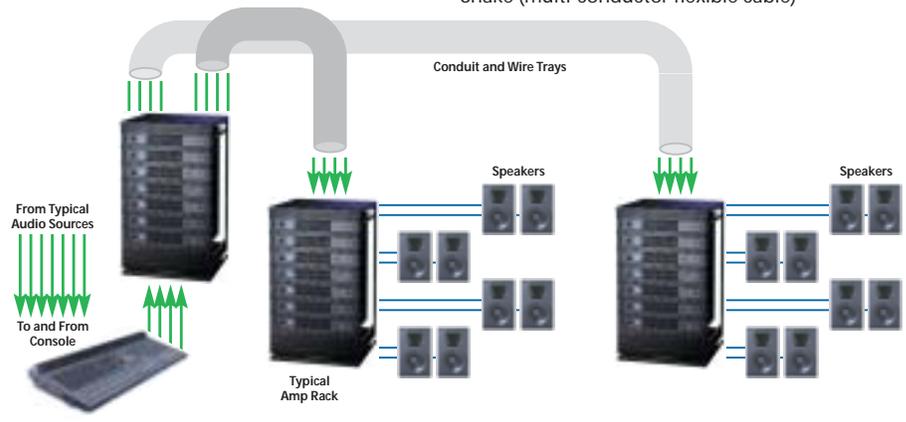
Building a RAVE Network

Each RAVE unit handles 16 audio channels—in either analog or digital AES/EBU format, depending on the model. More audio channels can be added to a network using additional RAVE units and inexpensive Fast Ethernet hardware such as switches, repeaters, and standard CAT-5 and fiber-optic cable (with the use of media converters).

RAVE devices route the audio signals over a standard Fast Ethernet network to the signal processors (such as the DSP-3 devices) and the amplifiers.

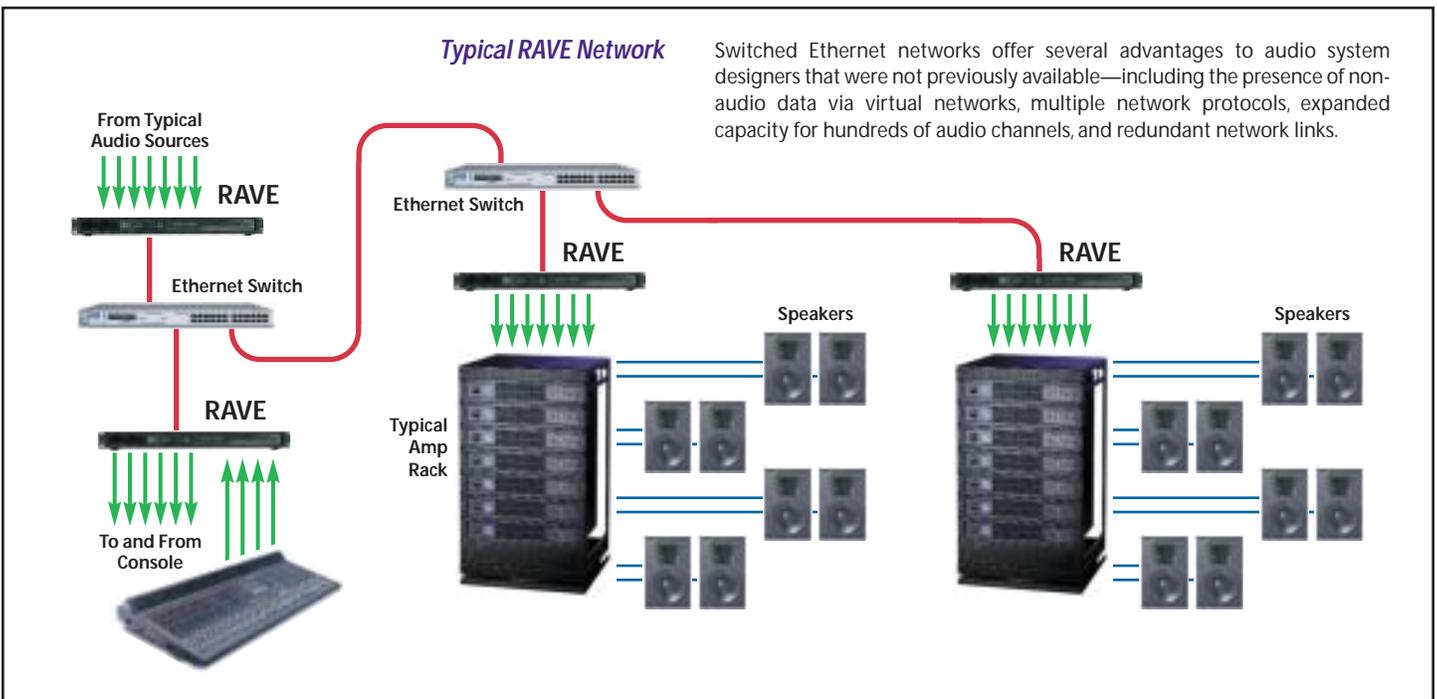
Standard Analog Approach

- Individual cables, wires
- Lots of BIG conduit
- Snake (multi-conductor flexible cable)



Typical RAVE Network

Switched Ethernet networks offer several advantages to audio system designers that were not previously available—including the presence of non-audio data via virtual networks, multiple network protocols, expanded capacity for hundreds of audio channels, and redundant network links.



Specifications

Analog Inputs:	16, 20, 24-bit (software configurable); 48 kHz
Analog Outputs:	16, 20, or 24-bit (auto-configuring); 48 kHz
Digital Inputs:	20-bit AES/EBU (sample rate conversion)
Digital Outputs:	16, 20, 24-bit AES/EBU (auto-configuring)
Distortion:	0.001% typical @ 1kHz for analog models
Latency:	5.33ms buffer delay
Audio Connections:	Analog: 3-pin Phoenix, Digital: XLR
Serial Data Connections:	RS232
Ethernet Connections:	100Base-TX, single RJ45 for CAT-5 UTP cable
Analog Input Sensitivity:	+12 dBu, +18 dBu, +24 dBu, jumper selectable
Output Level :	+6 dBu, +12 dBu, +18 dBu, +24 dBu jumper selectable
Dimensions:	Width: 19", Depth: 13.375", Height: 1.75" (1RU)
Weight:	15 lbs. (shipping)

MODEL	No. of Outputs	No. of Inputs	I/O Connector
<i>RAVE 160s-24</i>	16 analog		Terminal block x 16
<i>RAVE 161s-24</i>		16 analog	Terminal block x 16
<i>RAVE 188s-24</i>	8 analog	8 analog	Terminal block x 16
<i>RAVE 80s</i>	16 digital		XLR (AES3) x 8
<i>RAVE 81s</i>		16 digital	XLR (AES3) x 8
<i>RAVE 88s</i>	8 digital	8 digital	XLR (AES3) x 8

Specifications subject to change without notice.

