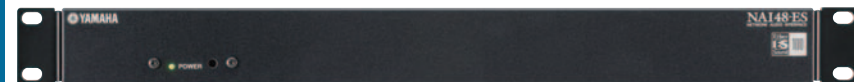


Network Audio Interface

# NAI48-ES



Front



Rear

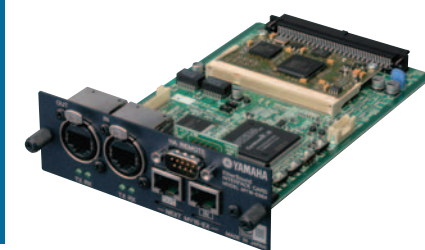
This interface lets you transfer up to 48 channels of digital audio between console and stage or any other location via a single Cat-5 Ethernet cable at sampling rates up to 96 kHz. 48 AES/EBU inputs and 48 AES/EBU outputs are provided via 25-pin D-sub connectors. The AES/EBU inputs and outputs can be directly connected to a wide variety of digital front-end devices such as Yamaha AD8HR 8-channel remote head amps for top-quality line or microphone input, as well as a range output gear.

### Specifications

	Connector	#	Note
<b>Audio Network</b>	EtherCon	2	EtherSound™
<b>AES/EBU</b>	D-sub 25 pin	6	
<b>Word Clock In</b>	BNC	1	
<b>Word Clock Out</b>	BNC	1	
<b>HA Remote</b>	D-sub 9 pin	1	AD8HR protocol
<b>AC Input</b>	3 pole receptacle	1	100V – 240V
<b>External DC Input</b>	XLR-4 pin	1	General DC input

64-channel Capable 16-channel  
EtherSound™ Interface Card

# MY16-ES64



16-channel Expansion Card

# MY16-EX



### Specifications

**MY16-ES64**

	Connector	#	Note
<b>Format</b>	-	-	EtherSound™
<b>Audio Network</b>	EtherCon	2	EtherSound™
<b>EXT. Connector (For MY16-EX)</b>	RJ-45	2	Cat 5
<b>HA Remote</b>	D-sub 9 pin	1	AD8HR Protocol

**MY16-EX**

	Connector	#	Note
<b>Format</b>	-	-	MY16-ES64, MY16-MD64
<b>EXT. Connector (Master)</b>	RJ-45	2	Cat 5
<b>EXT. Connector (For MY16-EX)</b>	RJ-45	2	Cat 5

With a single Yamaha MY16-ES64 card you can add 16 channels of bidirectional EtherSound™ connectivity to a range of Yamaha professional audio devices that accept mini-YGDAI expansion cards. Simply add one, two, or three MY16-EX expansion cards to the core MY16-ES64 card to increase the EtherSound™ channel capacity to 32, 48, or 64 channels.

Remotely Controllable 8-channel 24-bit Head Amp and AD Converter

# AD8HR



Front



Rear

The AD8HR combines unparalleled sound quality with a host of innovative functions in a compact 1U rack size unit. It is an ideal choice for use with Yamaha digital consoles, providing high-quality remote microphone preamps with analog circuitry derived from the extraordinary PM5000 analog console. The AD8HR provides digital audio output via high-performance 24-bit/96-kHz AD converters, and simple digital connection allows gain, filter, and phantom power control right from the console!

Power Amplifiers

# TXn Series



Front



Rear

\*Rear panel shown with optional expansion board installed.

These high-power amplifiers not only deliver extraordinary efficiency and stunning sound quality reliably into 2-ohm loads, but also offer sophisticated onboard DSP that minimizes or eliminates the need for external equalizers, delays, and speaker processors. All models feature both analog and direct digital inputs, and additional input capability can be added as required using optional plug-in interface cards. With the appropriate I/O cards these advanced amplifiers are fully compatible with CobraNet or EtherSound™ audio networks as well as a variety of digital audio formats. The built-in Ethernet port can be connected to a computer running Yamaha's NetworkAmp Manager II software for comprehensive remote control and monitoring of individual amplifiers or groups.

• Specifications and appearance subject to change without notice. • All trademarks and registered trademarks are property of their respective owners.

[www.yamahaproaudio.com](http://www.yamahaproaudio.com)

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# EtherSound™ Network Solution



Live Sound

Event PA



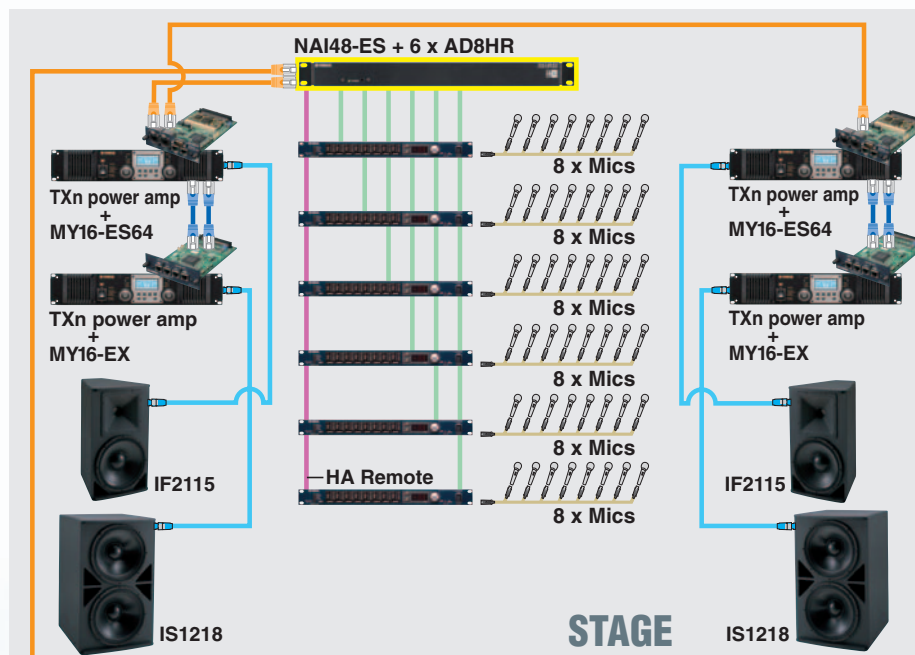
# Comprehensive Solutions for EtherSound™ Audio Networking

EtherSound™ is rapidly becoming the first choice for audio networking in live-sound applications because, while allowing high-quality bidirectional transfer of as many as 64-channels of 24-bit 48 kHz digital audio over a single Ethernet cable, it is easy to set up and offers extremely low latency. Yamaha offers a number of devices and interfaces that make setting up a high-performance EtherSound™ network fast and easy. The MY16-ES64 and MY16-EX plug-in interface cards add EtherSound™ connectivity to compatible Yamaha digital mixing consoles, digital mixing engines—DME Series—, power amplifiers and other devices, while the NAI48-ES Network Audio Interface is a convenient way to distribute up to 48 channels of audio transferred via EtherSound™ to digital audio devices with AES/EBU inputs and outputs. And because they're designed with Yamaha professional sound gear in mind you can rest assured that Yamaha EtherSound™ devices can be set up with minimum hassle and will operate trouble-free.

## EtherSound™ Advantages

This advanced, easy-to-manage protocol is designed to handle up to 64 channels of digital audio, and will easily transfer 48 channels of 24-bit 96-kHz audio in both directions over distances up to 100 meters with appropriate high-performance cables. With the appropriate interface cards installed you can, for example, simply connect a standard Cat-5 Ethernet cable between the console and NAI48-ES to transfer all audio channels plus remote control signals for compatible devices such as the AD8HR remote head amplifier. You can even use standard Ethernet hubs and routers to create any network configuration that suits your needs.

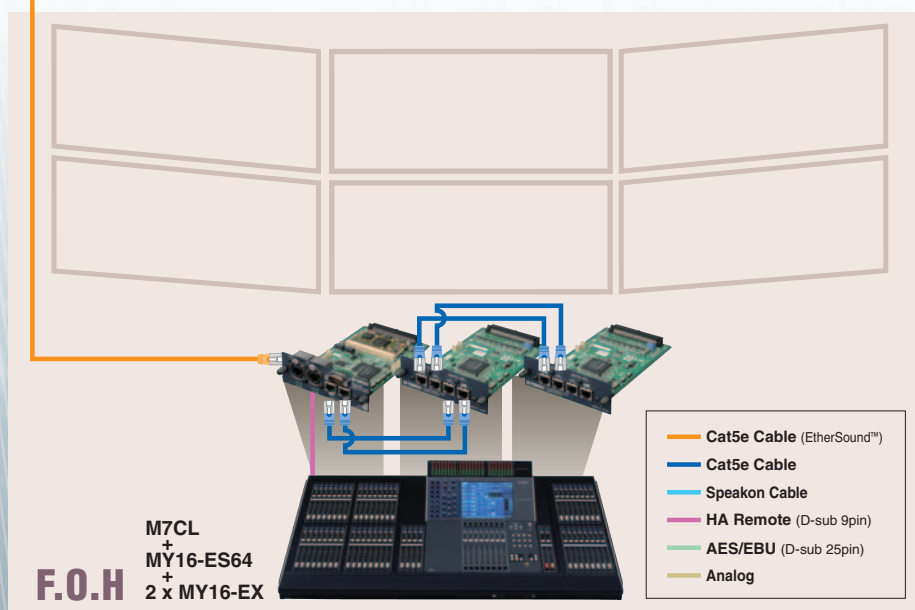
\* Refer to <http://www.ethersound.com/technology/compatibility.php>



## A Medium-scale Live Sound System

Although simple in appearance, this EtherSound™ based live sound system offers some sophisticated features in addition to professional performance and reliability. A Yamaha M7CL digital mixing console is equipped with an MY16-ES64 card and two MY16-EX cards to provide 48 channels of EtherSound™ input and output. The 48 input channels are fed by a bank of six 8-channel AD8HR Remote Head Amplifiers connected to the EtherSound™ network via an NAI48-ES Network Audio Interface. Power to the system's speakers is supplied by four advanced TXn series power amplifiers, one fitted with an MY16-ES64 card linked to MY16-EX cards installed in the remaining three amplifiers.

Where once you would have needed bulky analog multi-channel snakes that were not only time-consuming to install but also prone to poor connections and noise, you now have a single Cat-5 Ethernet cable connecting the mixing console to all of the front-end gear on stage.

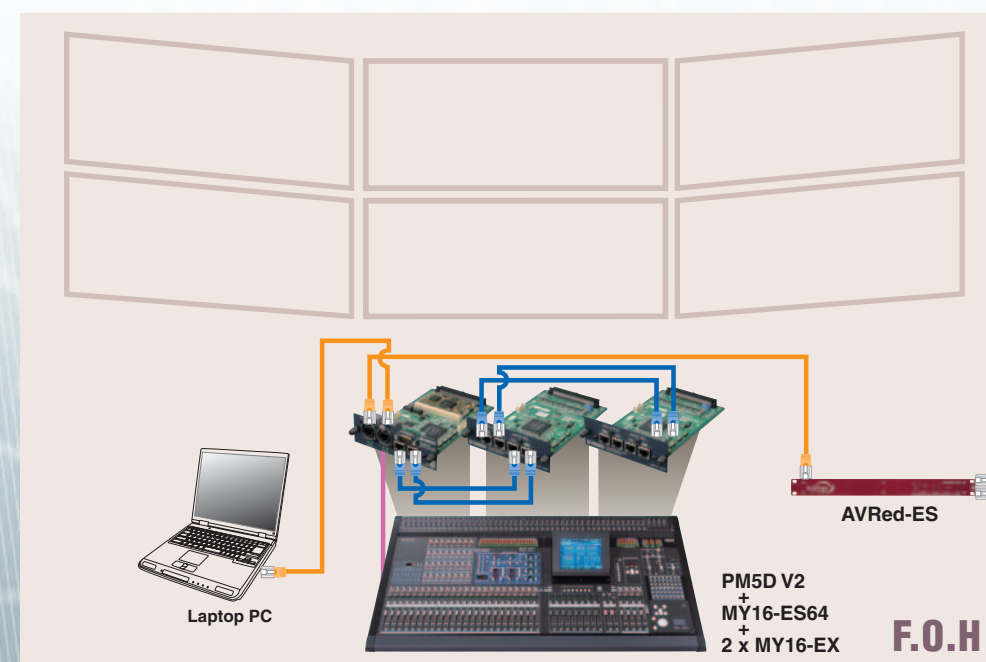
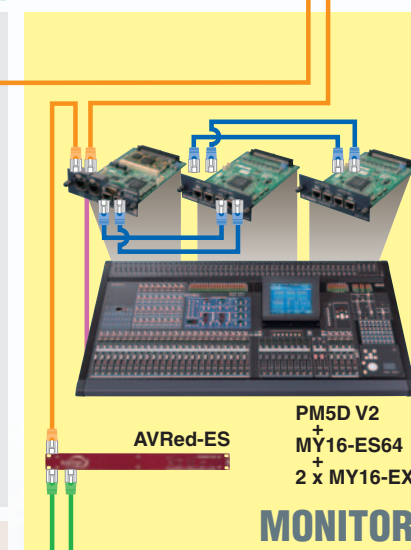
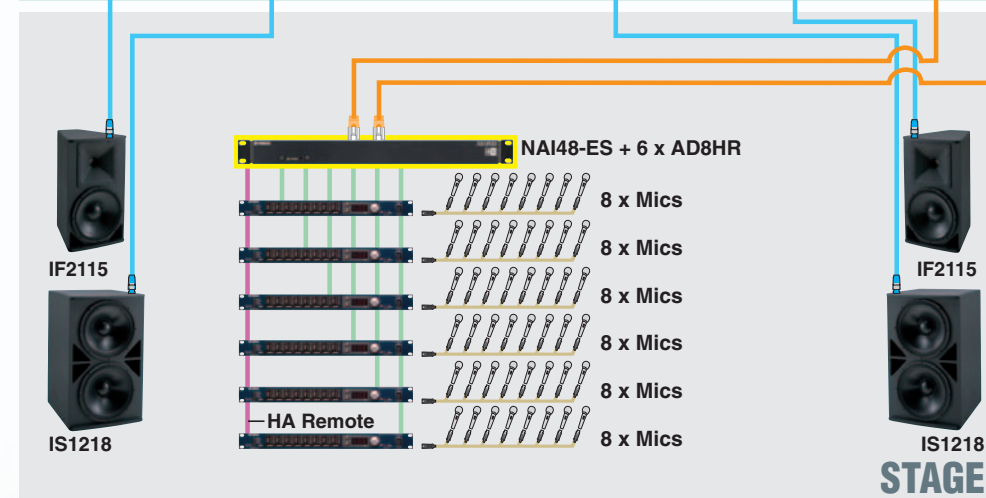
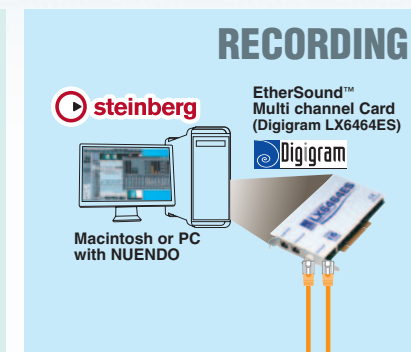
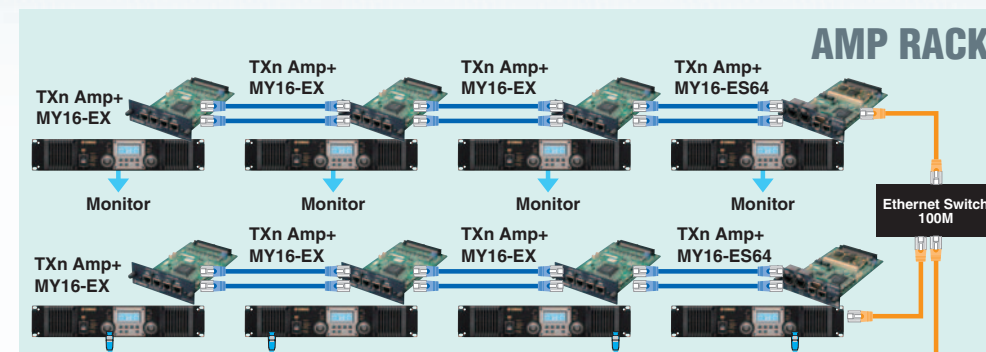


## A Larger Dual-console Live Sound System

This complex system is based on two PM5D digital mixing consoles – one for FOH and one for monitoring – and is entirely tied together via an EtherSound network. 48 microphone input channels are provided on stage by six remotely controllable AD8HR Remote Head Amplifiers connected to the network via an NAI48-ES Network Audio Interface. On-stage monitoring is powered by a pair of TXn Series power amplifiers equipped with EtherSound interface cards. The main amp rack is loaded with eight TXn Series power amplifiers with network I/O brought together at a high-speed Ethernet switcher.

The on-stage I/O gear and amplifiers can all be controlled and monitored from a laptop computer located near the FOH console, and the AD8HR remote head amplifiers will also respond to scene changes from the main PM5D console. A DAW system connected to the network via a second NAI48-ES Network Audio Interface is included for high quality live recording.

Note that all major signal and control signal runs are handled via single Ethernet cables, for a dramatic reduction in wiring complexity, cost, and setup time.



- Cat5e Cable (EtherSound™)
- AuviTran AVRed-ES Opto Fiber redundant
- Cat5e Cable
- Speakon Cable
- HA Remote (D-sub 9pin)
- AES/EBU (D-sub 25pin)
- Analog

• EtherSound™ and LX6464ES are a trademark of Digigram.  
• AVRed-ES is a trademark of AuviTran.