



NORTH AMERICAN REGIONALS - **SPRING 2015**

Focusrite RedNet

Ted White

RedNet Product Specialist - Focusrite

Overview

REDNET

RedNet is Focusrite's flagship range of modular audio over IP interfaces that harnesses the power of the Dante digital audio networking protocol to bring studio quality sound to any modern audio application.

RedNet units can be combined to form scalable, near-zero latency audio distribution and recording systems, which allow you to send, receive and record extremely high quality audio over your existing network infrastructure via standard Cat5e or Cat6 Ethernet cables.

With RedNet the possibilities are endless.

RedNet 1 - 8 Analog I/O
RedNet 2 - 16 Analog I/O
RedNet 3 - 32 Digital I/O
RedNet 4 - 8 Mic/Line I/O
RedNet 5 HD Bridge - 32 I/O
RedNet 6 MAD1 Bridge - 64 I/O
RedNet D16 - 16 AES I/O
RedNet PCIe - 128 Ch I/O

RedNet MP8R - 8 Mic/Line
RedNet HD32R - HD Bridge
RedNet D64R - MAD1 Bridge
RedNet D16R - AES I/O

Global RedNet customers

- Microsoft Production Studios
- London College Music
- NBC NY & LA
- ABC NY
- Lillehammer University College
- Tromso Theatre Norway
- BBC @ Glastonbury
- FIFA World Cup Draw
- Clair Global / Usher
- U. Michigan – Duderstadt Center





The screenshot displays the Rednet Control software interface, which manages four different Rednet devices. Each device panel includes a name, ID, and various control elements:

- Red4-Track Fm1:** Features 8 channels (01-08) with gain knobs (e.g., 54dB, 53dB, 23dB, 23dB, 26dB, 27dB, 11dB, 14dB), 48V phantom power buttons, and MIC/LINE input selectors. Channel 1 is linked.
- Rednet3-020045:** A digital I/O device with 32 channels (1-32) and an ADAT/AES interface.
- Rednet2-020051:** A 16-channel AD-DA device with 16 inputs and 16 outputs, each with a gain knob (0dB, -6dB, -4.2dB).
- Rednet1-6:** An 8-channel AD-DA device with 8 inputs and 8 outputs, each with a gain knob (0dB, -6dB, -4.2dB).

REDNET®

Simple Recording Studio

48 Channel Pro Tools|HDX Workflow

The Problem

The customer wants an alternative to Avid HD I/O to interface with the analogue console, and is aware that audio-over-IP is the future of the audio industry

The Solution

RedNet's superior digital conversion provides a clean, excellent sound. Because RedNet uses Dante, the customer can integrate any other Dante hardware in future. Since the system is now audio-over-IP based, the customer can now move the noisy computer into the machine room, yet have minimal analogue cable runs to the console.

The Products

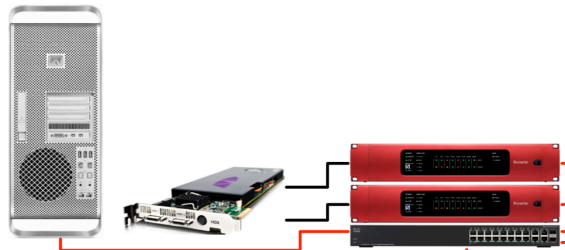
2x RedNet 5 – HD Bridge
3x RedNet 2 – Analogue I/O

Key

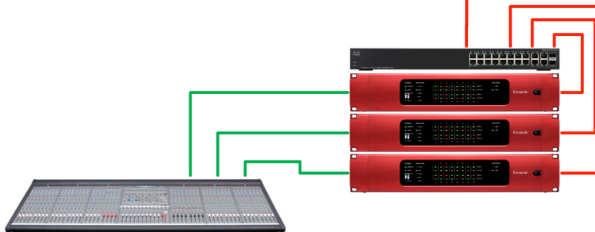
- ADAT
- AES/EBU
- Analogue Line
- Cat 6
- DigiLink
- Fibre (network)
- MADI (Coax or optical)

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Machine room with Pro Tools computer and 2x RedNet 5



Control room with analogue console and 3x RedNet 2



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Simple location recording setup

Using Dante Virtual Soundcard, a laptop and RedNet 4, a simple yet very effective location recording setup can be created

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The Problem

Customer needs a high-quality yet very portable recording system. Analogue multicore is too expensive, heavy and unreliable to continue using.

The Solution

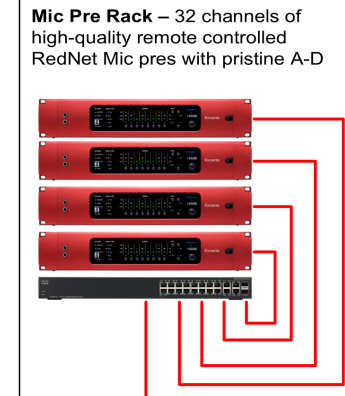
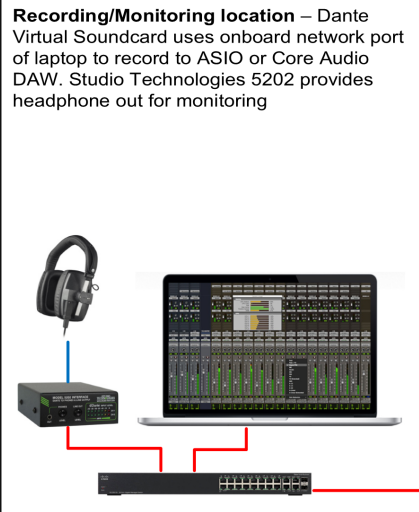
RedNet 4 provides superb quality microphone preamplification coupled with superb A-D conversion. A single Cat 6 cable links the mobile mic pre rack with the laptop which can be anywhere on site. The long Cat 6 could be replaced with fibre to create an even longer distance, and lighter system. Dante Virtual Soundcard allows the onboard Ethernet port of the laptop to act as an ASIO or Core Audio soundcard that connects to the network. A Studio Technologies 5202 gives a headphone output for monitoring.

The Products

- 4x RedNet 4 – Mic Pre
- 1x DVS – Virtual Soundcard (free with RedNet units)
- 1x Studio Technologies 5202

Key

- ADAT
- AES/EBU
- Analogue Line
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Composer workflow – Multiple DAWs

Cubase and Pro Tools|HD linked together with 64 tracks between each system

The Problem

The customer needed an elegant way of bringing a large number of stems from Cubase into Pro Tools in real time. Both systems need to be synchronised. An additional requirement was to be able to record from any room in the facility to either the Cubase or Pro Tools HD system.

The Solution

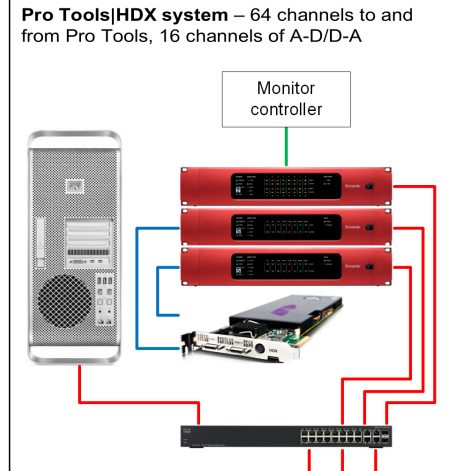
RedNet PCIe provides the Core Audio interface for Cubase, allowing up to 128 channels to be played out to the Dante network. With two RedNet 5s on the Pro Tools|HD system, up to 64 of those outputs can be brought into the mixdown DAW. RedNet 4 mic pres allow the customer to record anywhere in the building with added benefit of iPad control of mic pre levels using a MIDI controller app. RedNet 2 gives 16 channels of analogue I/O in the main control room.

The Products

- 1x RedNet PCIe – Sound Card
- 1x RedNet 2 – Analogue I/O
- 2x RedNet 4 – Mic pres
- 1x RedNet 5 – HD Bridge

Key

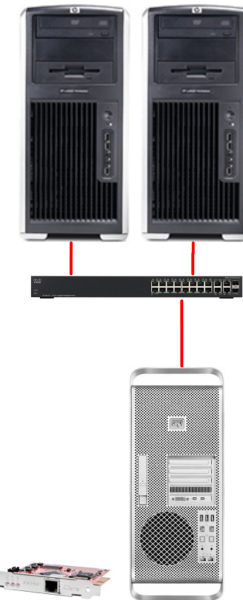
- ADAT
- AES/EBU
- Analogue Line
- Cat 6
- DigiLink
- Fibre (network)
- MADI (Coax or optical)



iPad controls RedNet 4 mic pres via MIDI control app



Cubase running on Mac Pro, with two PCs running sample libraries. RedNet PCIe gives up to 128 channels out of the Cubase rig



Mobile preamp rack – 16 channels of preamps can be moved to whichever room in facility they are needed in. Just plugged in with one Cat 6 cable each



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Long distance recording and broadcast

10km remote mixing for broadcast and recording to Pro Tools|HD

The Problem

The university needed to both mix for broadcast and record concerts in a local concert hall. Wanting to use their well-established and familiar recording studios, they needed a system which could traverse the 10km distance between the two locations.

The Solution

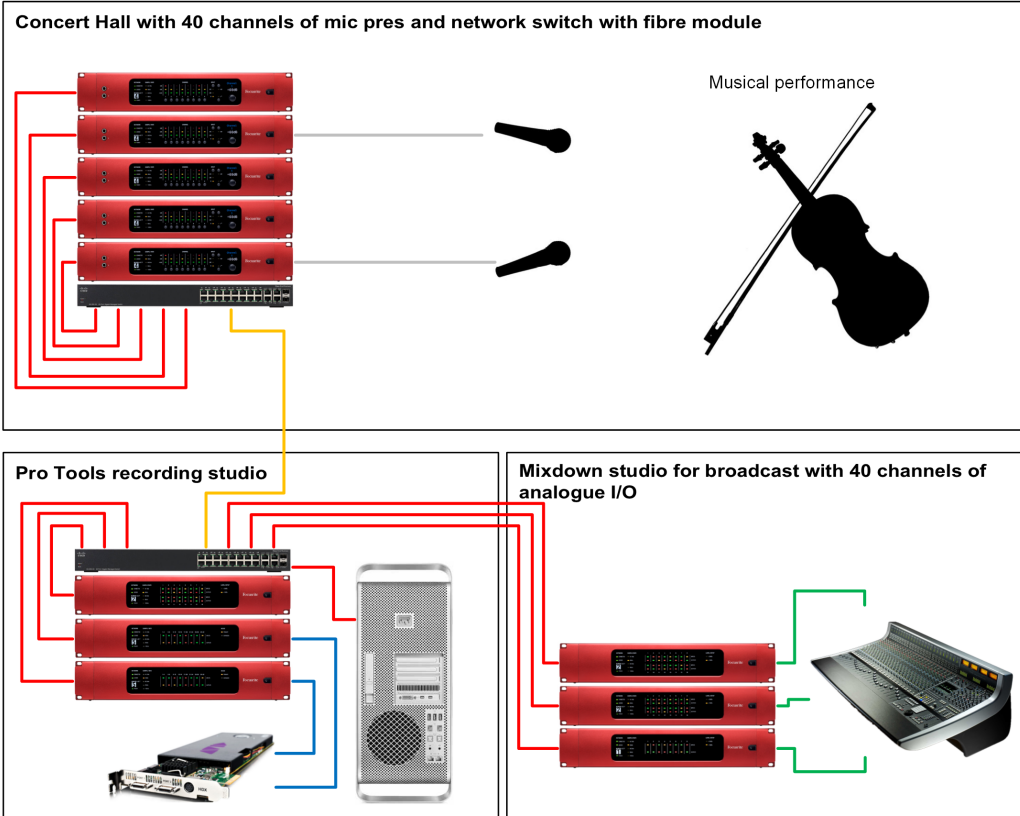
Since it uses standard IP hardware and interconnects, RedNet was able to provide a solution to the distance problem. A 10km single mode fibre connection was established between concert hall and studio. 40 channels of RedNet 4 mic pre provide pristine signal quality, whilst being entirely remote controlled. RedNet 5 bridges to Pro Tools|HD, and RedNet 2 and RedNet 1 give them the 40 analogue lines into the console.

The Products

- 1x RedNet 1 – Analogue I/O
- 3x RedNet 2 – Analogue I/O
- 5x RedNet 4 – Mic pre
- 2x RedNet 5 – HD Bridge

Key

- ADAT
- AES/EBU
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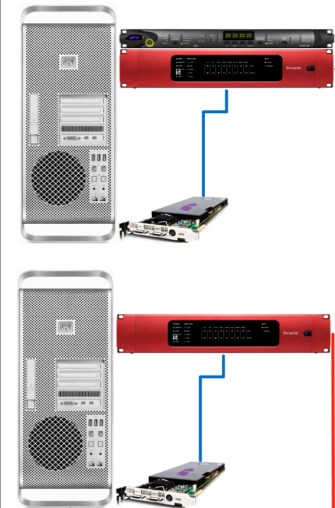
Post production theatres

Linking together multiple Pro Tools systems with RedNet 4 mic pre control from D-Control

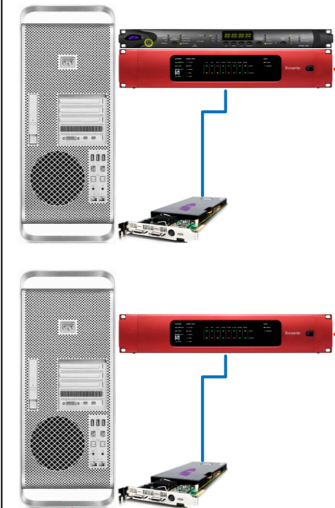
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Central machine room

Theatre One Pro Tools systems –
Sync HD and RedNet 5 connected to
Pro Tools|HDX card



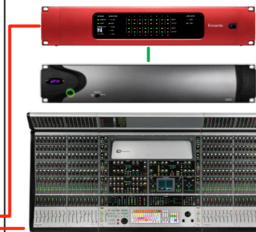
Theatre Two Pro Tools systems –
Sync HD and RedNet 5 connected to
Pro Tools|HDX card



ADR Theatre – Line I/O for
extra ins, or headphone amp
sends. Mic pres controlled
from either D-Control



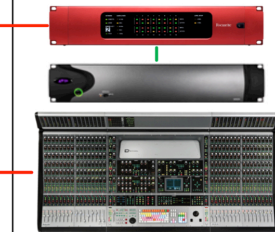
Theatre One – D-Control,
Line I/O from RedNet 2
feeding Xmon



Key

- ADAT
- AES/EBU
- Analogue Line
- Cat 6
- DigiLink
- Fibre (network)
- MADI (Coax or optical)
- Word Clock

Theatre Two – D-Control,
Line I/O from RedNet 2
feeding Xmon



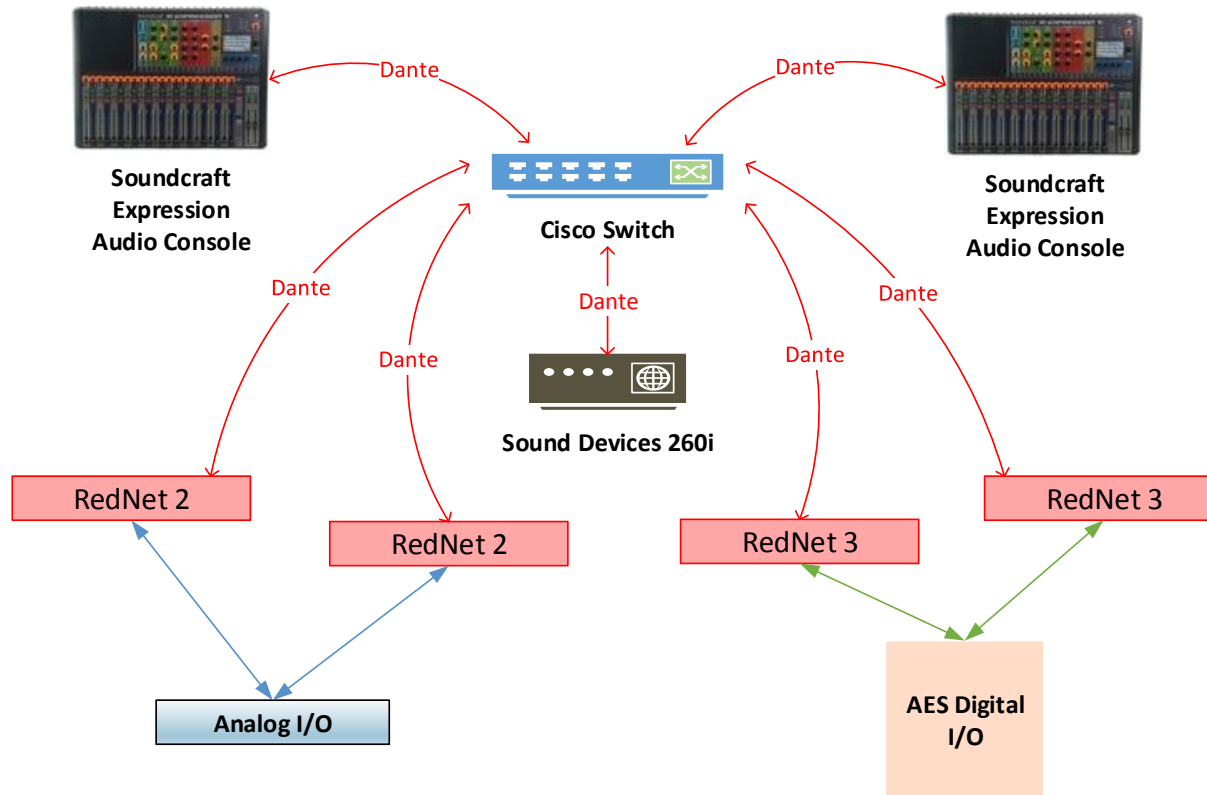
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Fifth Third Field – Dayton, OH

In House Video

Broadcast Feed



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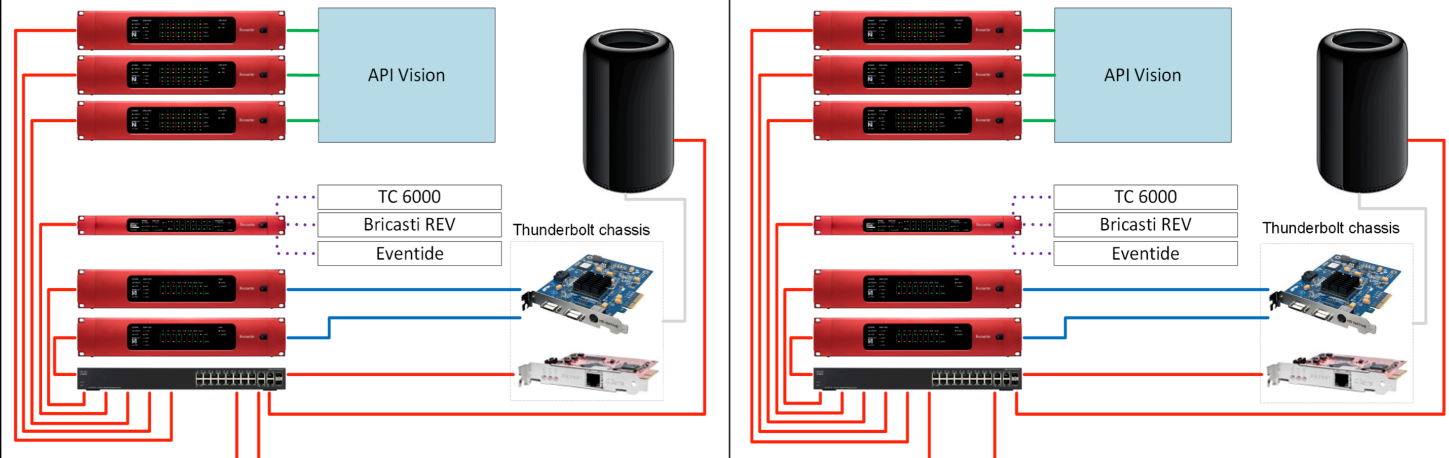
University of Michigan

Large educational recording facility with hugely-flexible routing

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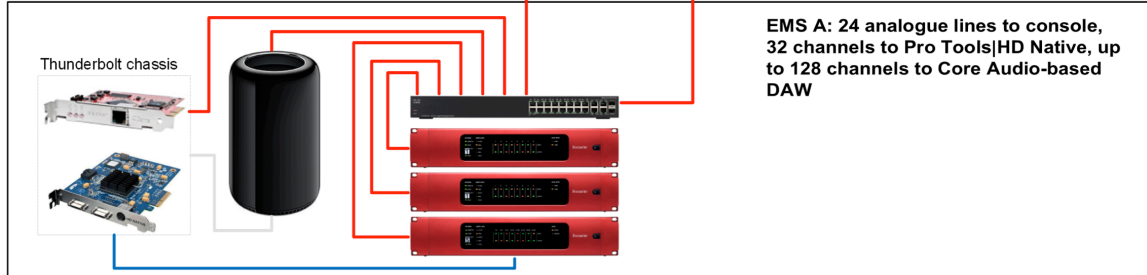
Audio Studio: 48 analogue lines to console, 64 channels to Pro Tools|HD Native, outboard connected via AES3, up to 128 channels to Core Audio-based DAW

EMS B: 48 analogue lines to console, 64 channels to Pro Tools|HD Native, outboard connected via AES3, up to 128 channels to Core Audio-based DAW



Key

- ADAT
- AES/EBU
- Analogue Line
- Cat 6
- DigiLink
- Fibre (network)
- MADI (Coax or optical)



EMS A: 24 analogue lines to console, 32 channels to Pro Tools|HD Native, up to 128 channels to Core Audio-based DAW

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Live Sound – Touring Setup

96 channels of mic pres feeding Front of House console and two recording rigs at 96kHz

The Problem

Front of house engineer for a major recording artist needed 96 mic inputs at 96kHz capable of being distributed to FOH, Pro Tools|HD multitrack recording system and a backup multitrack recording system. They wanted a higher quality mic amp and the cleanest signal path possible.

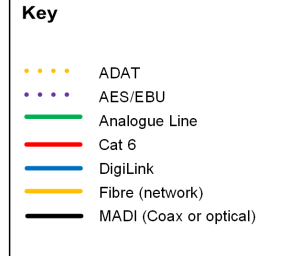
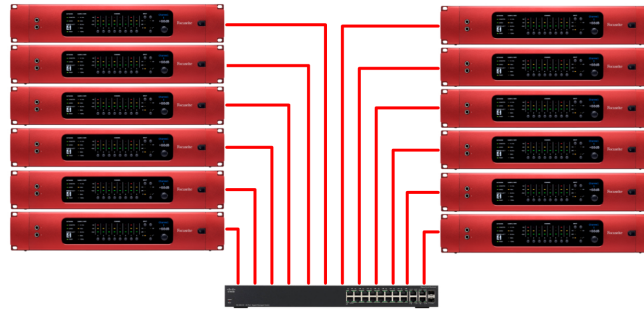
The Solution

RedNet's superior mic pre quality, with low noise, coupled with extremely simple-to-use and effective bridging interfaces

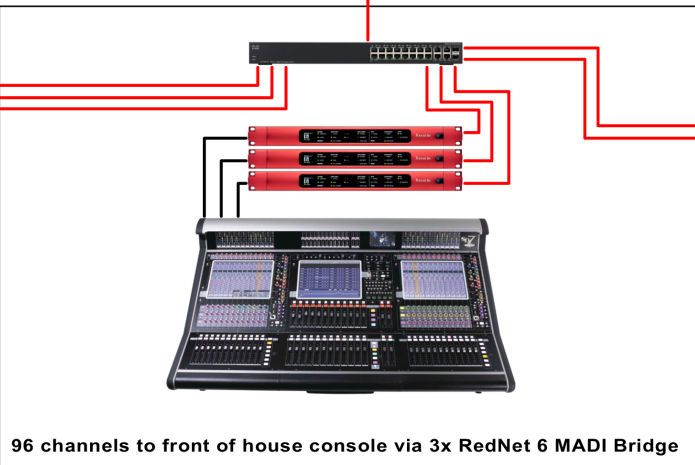
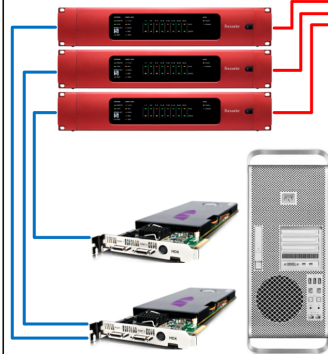
The Products

- 12x RedNet 4 – Mic Pre
- 3x RedNet 5 – HD Bridge
- 3x RedNet 6 – MADI Bridge
- 1x RedNet PCIe – Sound Card

Stage Rack – 96 channels of RedNet 4 mic pres at 96kHz



96 channels recording to Pro Tools|HDX via 3x RedNet 5



96 channels to front of house console via 3x RedNet 6 MADI Bridge

96 channel backup recording to Reaper via RedNet PCIe



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Zero Seconds | Zero Samples

Powered by Dante™

The latest additions to the RedNet line include Ethernet networking and power supply redundancy: instant, uninterrupted, and glitch-free failover. Zero seconds and zero samples lost.



**REDNET
D16R**
AES

16-channel AES3 I/O for Dante audio over IP networks

**REDNET
D64R**
MADI BRIDGE

64-channel bridge between MADI and Dante Networks

**REDNET
HD32R**
HD BRIDGE

32-channel bridge between Pro Tools|HD and Dante Networks

**REDNET
MP8R**
MIC PRE

8-channel remote-controlled mic pre and A/D for Dante networks

LIVE SOUND • BROADCAST • TOURING • FIXED INSTALLATION • HOUSE OF WORSHIP

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MP8R RedNet 2015



- 1U chassis
- Redundant power
- Redundant networking
- Ethercon
- Neutrik XLR
- Gain tracking
- \$2999
- Phase invert & 20db Pad
- Impedance switch – 10k & 2.4k
- Builds on sonic quality of RedNet 4 w/ improvements
- Tailored for Live Sound, critical path use
- Honed with leading touring sound cos.

D16R RedNet 2015



- Redundant power
- Redundant networking
- Ethercon
- Input SRC
- DARS input
- \$1,999
- More attractive proposition in critical path applications

HD32R RedNet 2015



- 1U chassis
- Redundant power
- Redundant networking
- Mini DigiLink
- Ethercon
- \$1,499
- More attractive proposition in critical path applications
- Greater compatibility with other Dante workflows

D64R RedNet 2015



- Redundant power
- Redundant networking
- Ethercon
- Optical and Coaxial MADI
- SRC on input and output
- \$2,499
- More attractive proposition in critical path applications
- Greater compatibility with other Dante workflows

Thank You!