RIO *Bravo!*
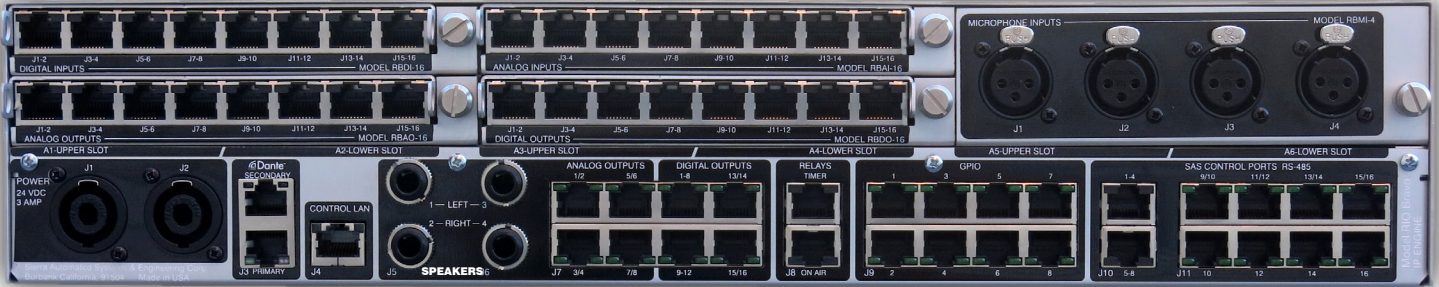## IP ENGINE

Audio over IP Networking

RIO IP Engine Overview:

The all new RIO BRAVO IP Engine is the latest fully integrated DSP based engine from SAS. The high capacity small footprint engine is designed to fit in any control room and provides all functions necessary for Radio Broadcast operations. Sporting very high density DSP mixing, EQ, and IO capabilities, the RIO BRAVO IP Engines are easily networked using a standard IP infrastructure and also interface with an SAS 32KD Network using AoIP. A wide variety of I/O options and console interfaces are designed to support a complete control room and studio, all self contained within a single 2 RU Chassis.

The RIO IP Engine Design:

The RIO Bravo IP Engine is designed with six slots for connecting a wide variety of hot-swappable I/O modules, such as Analog, AES, AAC Encoded AoIP and Microphone (input only) to give you up to 96 discrete channels of audio I/O. There are an additional 24 resident on board outputs for common studio needs such as monitor and cue speakers, headphones and metering as well as other general purpose system functions. Monitor Speaker outputs are conveniently accessed with Tip Ring Sleeve jacks. Microphone inputs are on standard XLR connectors while all other Analog and Digital I/O are connected using RJ-45 connectors and standard Cat5 cable. There are also Cat5 connected, low cost, rack mounted breakout panels with XLR or RJ-45 options.

The RIO Bravo IP Engine houses five high powered DSP processors that provide 64 mix busses, effects, equalization and dynamics processing for every channel, as well as Silence and Peak Detectors, all built in. The RIO Bravo IP Engine also provides a fully integrated automation system (State and Time Based automation events) and console show control.   All configuration parameters are conveniently stored in the front accessible SD card and are programmable using its built in Web Based User Interface to allow complete control and configuration of your entire system from any standard web browser. Simplified command menus with interactive GUI and help dialog boxes are built into each function and feature.

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Dante Spoken Here

The RIO IP Engine provides dual on-board Dante Audio over IP ports, a universally accepted platform. You can instantly connect with any Dante equipped product and, using DVS (Dante Virtual Soundcard), you can connect any automation system workstation. This also makes your RIO Bravo AES67 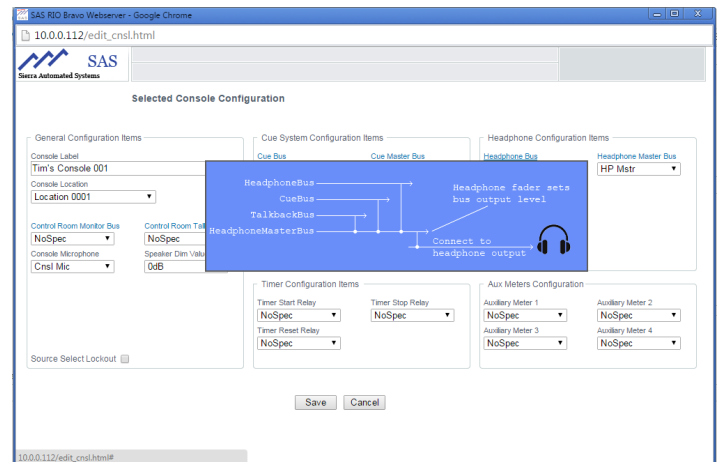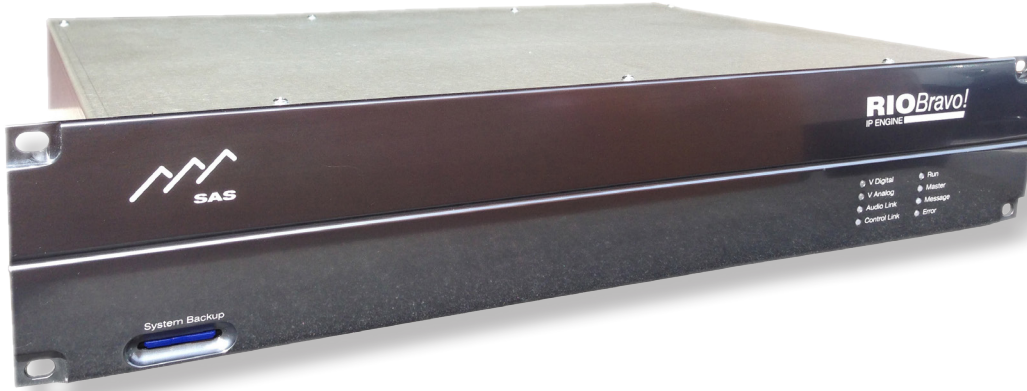compatible and ready for use with other AES67 compatible devices and signals as well as IEEE802.1 (AVB) compliant. The RIO Bravo IP Engine provides dual AoIP ports with a built in switch for redundancy against network switch lockup and failures. Additionally, Dante AoIP is capable of Long Distance Linear AoIP transport. Facility to facility interconnect is simple and easy using an MPLS or other guarantee of service provider. This allows complete facilities interconnect with Linear Audio.

Web Based User Interface

Intuitive Graphic User Interface for Easy Installation and Configuration

SIERRA AUTOMATED SYSTEMS

RIO Bravo!
IP ENGINE

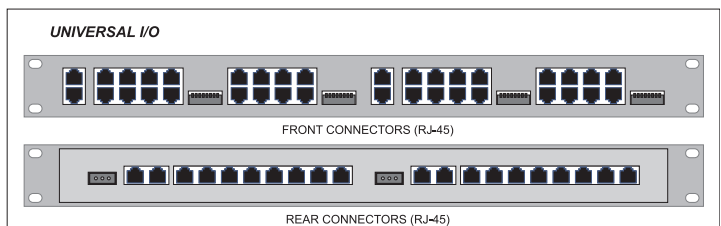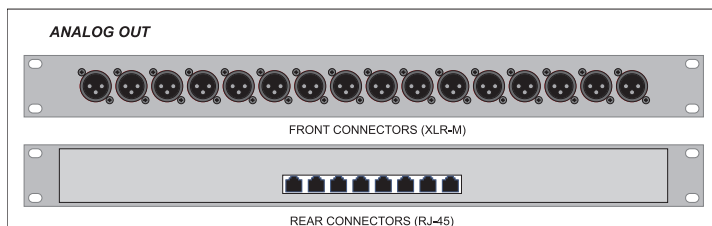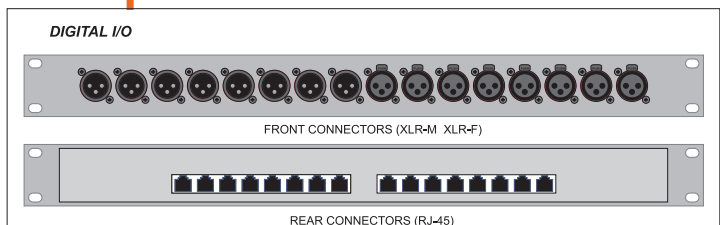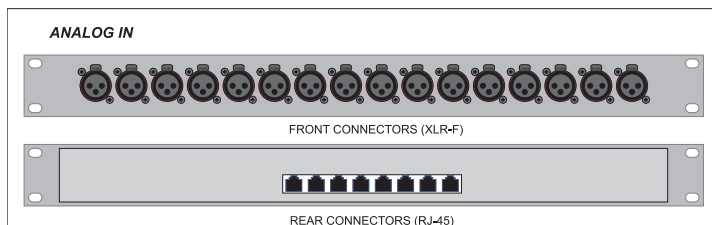### It's the Complete Package!

The RIO Bravo IP Engine operates as a complete stand alone console/engine and utilizes an IP network infrastructure to interconnect and interoperate Control Rooms, Consoles and Engines. Additionally, interconnection to the SAS32KD is simply accomplished using the same AoIP Network where high demand I/O capacity is required.

Let the RIO Bravo IP power your facility along with outstanding SAS consoles such as Rubicon, iSL, SL, and MClass and many other controllers. Give SAS your studio application targets and we'll hit every one!

Features

- 256 Channel Fully Integrated DSP Mixing IP Engine.
- Powered by 5 on board DSP Processors.
- Networked by Dante AoIP, AoE (AVB) and AES-67 topologies.
- Dual AoIP ports with built in switch for network redundancy
- Microphone Inputs with XLR Connectors, EQ and Dynamics
- Tip, ring sleeve jacks for monitor and cue speakers and Headphones
- Ingest Audio from DAW's, Playback Automation over IP, drivers included
- TCP/UDP LAN port for Control from Automation
- Fully Integrated Time Based Automation and Show Control
- Integrated Web Browser Interface
- Simple IP Network Setup, no special QoS settings required
- Connect with High Density SAS32KD Networks using AoIP
- Connect to any Dante AoIP devices such as Focusrite, ProTools, Wide Orbit, Aviom, Yamaha, and more
- System backup and configuration saved on Front accessible SD memory Card
- Program the SD memory card on any PC for complete offline configuration.
- EQ and Dynamics available for every Channel
- Silence Detect, Peak Detect and Metering information for every channel

Breakout Panel Options

ANALOG IN

FRONT CONNECTORS (XLR-F)

REAR CONNECTORS (RJ-45)

DIGITAL I/O

FRONT CONNECTORS (XLR-M XLR-F)

REAR CONNECTORS (RJ-45)

ANALOG OUT

FRONT CONNECTORS (XLR-M)

REAR CONNECTORS (RJ-45)

UNIVERSAL I/O

FRONT CONNECTORS (RJ-45)

REAR CONNECTORS (RJ-45)

SIERRA AUTOMATED SYSTEMS