

# US DIGITAL DESIGNS

## Gateway Audio Radio Interface



The US Digital Designs Gateway Radio Interface (GaRI) provides an interface from the Communications Gateway to one or two customer voice radio channels for playing paging tones, alert tones and dispatch voice announcements over radio channels. The GaRI is a network device that receives streaming audio and control instructions from the Communications Gateway and outputs analog audio and control signals to detect radio channel busy signals, generate radio push-to-talk signals, and play the audio over the radio system.

### Integrated Network Switch

The GaRI has an integrated network switch which allows it to be connected directly to two Communications Gateways in a hot-standby configuration or to other network devices as necessary. In special applications the GaRI can be connected to a customer data network to allow the GaRI to be located distant from the Communications Gateways.

### Audio Output Channels

Each audio output channel has an analog audio output, a hardware channel busy input and push-to-talk output. Audio Output Channel 1 also has an adjustable sidetone output that mimics the main output. A system-selectable passthrough input can also be coupled to Output Channel 1 to provide switching between a customer-provided input source and the internal Channel 1 output for redundancy purposes. To ensure a failsafe operation, the passthrough input is coupled to Output Channel 1 when the TCP/IP connection to the GaRI is lost or when the GaRI is powered off.

### Auxiliary Inputs and Outputs

The GaRI has 2 normally-open auxiliary relay outputs and 2 auxiliary digital inputs that can be used internal by the system. The inputs are low-active with a provided ground reference.

### Indicators

The front panel has indicators showing activity on the two Audio Output Channels and the Auxiliary I/O. There is also a pass-through indicator that shows when the pass-through circuit is active.

### Specifications

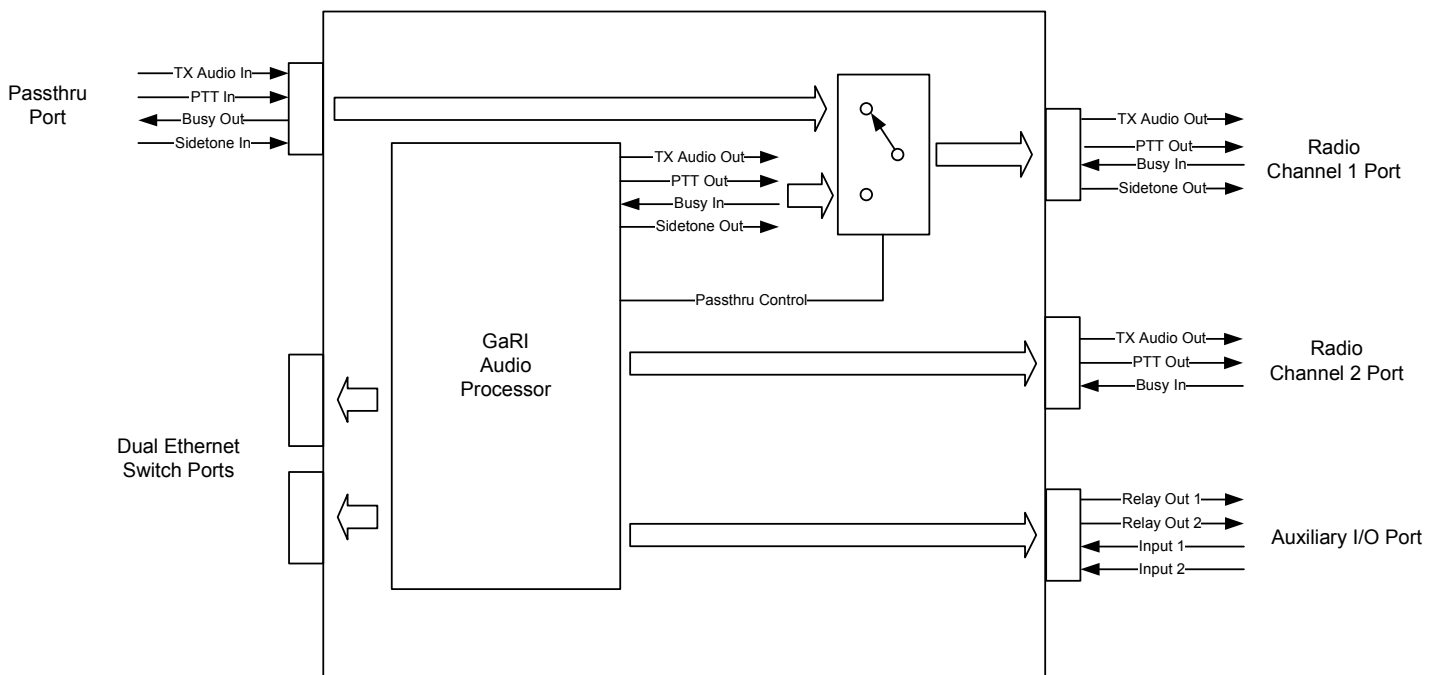
2 – Analog radio interface channels with Transmit Audio & PTT outputs, and Busy input per channel

Channel 1 also has a sidetone output with independent level adjustment

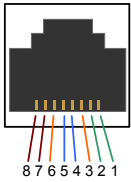
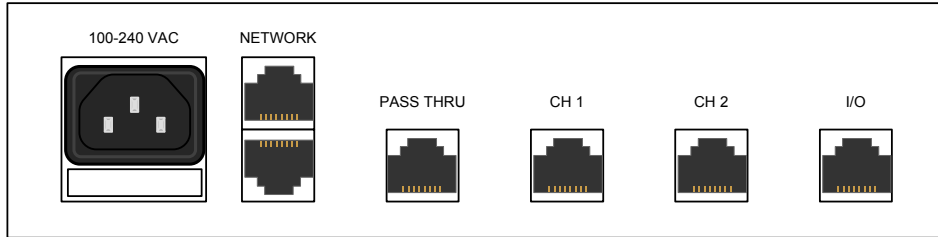
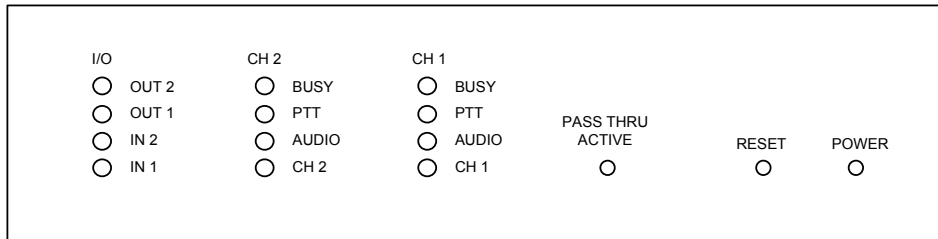
1 – Auxiliary I/O port with 2 Relay Outputs and 2 active-low Inputs

1 – Passthru port allows connection of customer equipment to Channel 1 output port when GaRI is not active

2 – Ethernet ports with integrated internal switch



Block Diagram



CH 1 & CH 2
1&2 – PTT Out
3&6 – TX Audio Out
4&5 – Sidetone Out
7 - /Busy In
8 – Logic Ground

Pass Thru
1&2 – PTT In
3&6 – TX Audio In
4&5 – Sidetone In
7 - /Busy In
8 – Logic Ground In

I/O
1&2 – NO Relay 1
3&4 – NO Relay 2
5 – /Input 1
6 – Ground
7 - /Input 2
8 – Ground

Pins	Adapter Terminals
1&2	Pair 2 +/-
3&6	Pair 3 +/-
4&5	Pair 1 -/+
7&8	Pair 4 +/-

One screw-terminal to 8-pin modular adapter is included with the above terminal mapping.



### Initial Connection and Configuration

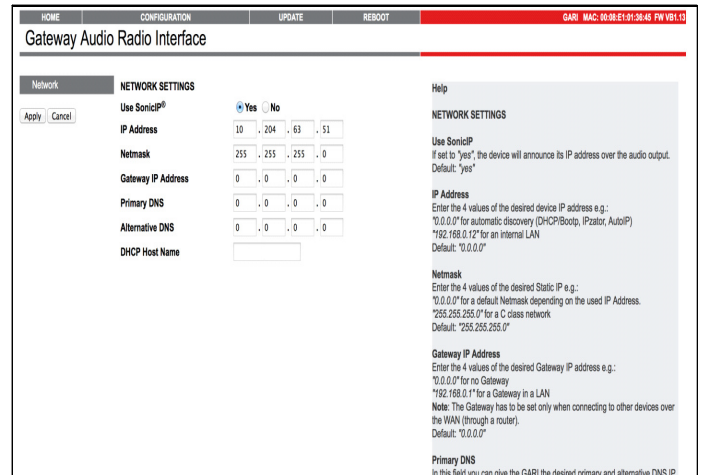
The GaRI network interface is designed to connect to the private network configured on the Communications Gateways. This interface has a network address of 10.204.63.0/24 and each GaRI is pre-configured with the IP address of 10.204.63.51 during manufacturing. If more than one GaRI is present in the system, or if the GaRI must be located on another network (per designs done by US Digital Designs) the IP address of the GaRI can be changed.

When installing a GaRI, and especially when changing the IP address, it is helpful to have an amplified speaker connected to Output Channel 2. With a speaker connected to Output Channel 2, when power is connected to the GaRI and it starts up the GaRI will play a spoken version of the configured IP address through the speaker. This makes it simple to confirm the configured address.

To change the IP address and other IP parameters, connect a computer to one of the Ethernet interfaces and set the computer's network interface parameters to allow the computer to communicate with the currently set IP address. Using a web browser connect to the GaRI's configured IP address using HTTP. The GaRI will display a configuration page.

Click on [CONFIGURATION] to bring up the configuration page.

Click the [Advanced Settings] button to display the settings for the network interface.



Edit the IP Address, Netmask and Gateway IP Address fields as necessary. Do not change the Use SonicIP selection or make entries in the Primary and Alternative DNS or the DHCP Host Name fields.

Once all entries have been completed, click the [APPLY] button to make the changes permanent and reboot the GaRI.

After reboot the GaRI will speak the configured IP address and will be ready for operation with the new address.

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