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Tesira®

Tesira Logic Expander (EX-LOGIC) OPERATION MANUAL

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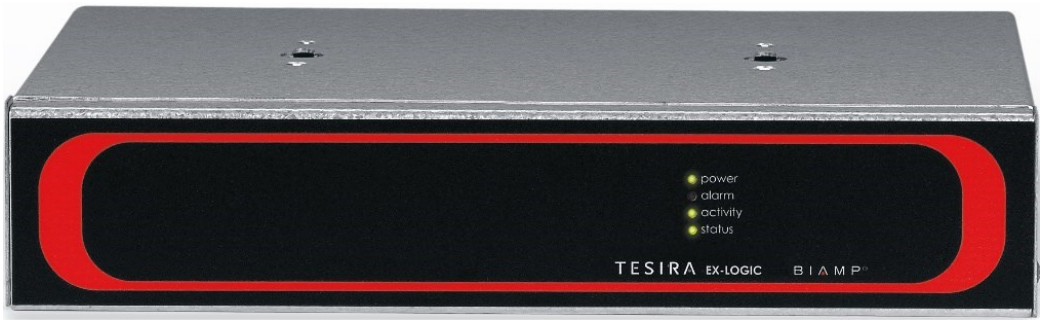
BIAMP SYSTEMS 9300 SW GEMINI DRIVE, BEAVERTON, OREGON 97008 U.S.A. 503.641.7287 BIAMP.COM

The Tesira® EX-LOGIC is a half-rack logic box for use with Tesira SERVER and SERVER-IO devices. The EX-LOGIC provides both logic inputs and outputs and, through software, can be configured as a control interface. There are 16 total connections that can be used as inputs or outputs. 12 of the connections are designed as logic connections only and will accept contact closure or 5V TTL when used for logic or sink a maximum of 40V/300mA per output. The remaining four connections can also be used for logic connections or as variable voltage control inputs (e.g. interface to a potentiometer). Additionally, any of the 16 connections can be configured for direct LED driver capability. The EX-LOGIC also provides a serial port for the output of command strings that can be used to send action commands to other equipment in the system. The EX-LOGIC communicates with the Tesira network for data transmission, configuration and control, and is powered by PoE.

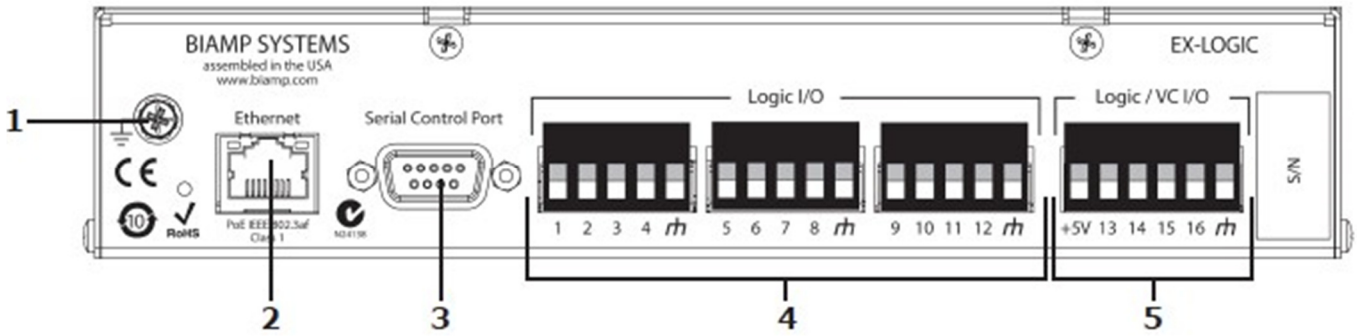


Setup and Use
The Tesira software provides an intuitive interface for setup and programming of the EX-LOGIC. The information supplied by this manual relates to physical connections and device setup. For more details on software setup, please consult the Tesira Help File.

LED Status Indicators
Four multi-color LEDs on the front panel of the device provide information about the status of the device and the greater Tesira system.

- Power – Reports power of the host device and Front Panel Display.
- Alarm – Reports abnormal conditions local to the host device.
- Activity – Reports the activity of host device within the greater system.
- Status – Reports the status of host device.

LED	Off	Green	Yellow	Red
Power	Unit is not powered	Unit is powered	Not applicable	Not applicable
Alarm	No fault is active in the device	Not applicable	Minor fault is active in the device	Major fault is active in the device
Activity	Not applicable	The host device is an active part of an active system	Not applicable	The host device is part of an inactive system (Audio is stopped) or host device is not part of a system
Status	Not applicable	Device has received its configuration and is ready to participate in the system	Device is ready and waiting to receive a configuration	Device is not ready to receive its configuration



Connectors

1. Grounding pin

This pin is for grounding the chassis of the expander

2. Ethernet data connection

A standard RJ-45 connector for use with CAT-5, CAT-5e, CAT-6 or CAT-7 cabling. The maximum distance between any unit and an Ethernet switch is 328 feet (100 meters). The expander must receive PoE (IEEE 802.3af) power on this connector in order for proper operation.

This connection is for sending and receiving control data with the Tesira server. The expander will not operate if it is not on a network that includes a Server-Class Tesira device.

3. Serial Control port

The serial port can be utilized to send a control string to another device.

4. Connections 1-to-12

These GPIO connections can be used as either inputs or outputs. They can be assigned to actions within the software using Logic Input and Logic Output blocks. When configured as logic output, each of the 16 GPIO pins can be configured to enable a current source capable of driving an LED. The current source is enabled depending on the state of the logic output block.

5. Connections 13-to-16

These connections can function in the same way as connections 1-12 for digital GPIO. But they can also be assigned as variable voltage input controls to allow analog control within the Tesira system by connection to a potentiometer.

GPIO pins 13–16 can be configured individually by the Control Voltage block in the software. If any one of these is configured for voltage control, then the logic expander will turn on the 5V potentiometer power.

Voltage Control Calibration
The four analog GPIO pins support voltage control calibration because a potentiometer may not be able to achieve the full range of voltage expected by the internal analog/digital convertors. When calibrated, the logic expander records both the minimum and maximum voltage levels caused by the potentiometer to achieve the full range of voltage. A 10K Linear Potentiometer or similar value is suggested.