

## Product Information

Crest Audio's Ethernet NexSys Gateway is the easy way to incorporate computer control into your existing Ethernet network.

The figure below shows a typical NexSys network using 2 Gateways for controlling more than 32 amplifiers. The ethernet interface speed is 10Mbit and uses standard CAT5 cable. Systems can contain up to 240 Gateways.

The maximum number of amplifiers connected to one NexSys bus is limited by the NexSys Network's adherence to the "ANSI TIA/EIA-485" recommended standard. A NexSys bus, which consists of multiple amps connected by a length of twisted-pair cable with two terminating resistors, is limited by RS-485 to a maximum of 32 amplifiers. The recommended twisted-pair cable for this bus is Belden 8442. The maximum length of this bus is 4000 feet.

The gateway can take advantage of existing network cabling with no need to install separate cabling just for amplifier control. A real cost savings in large installations.

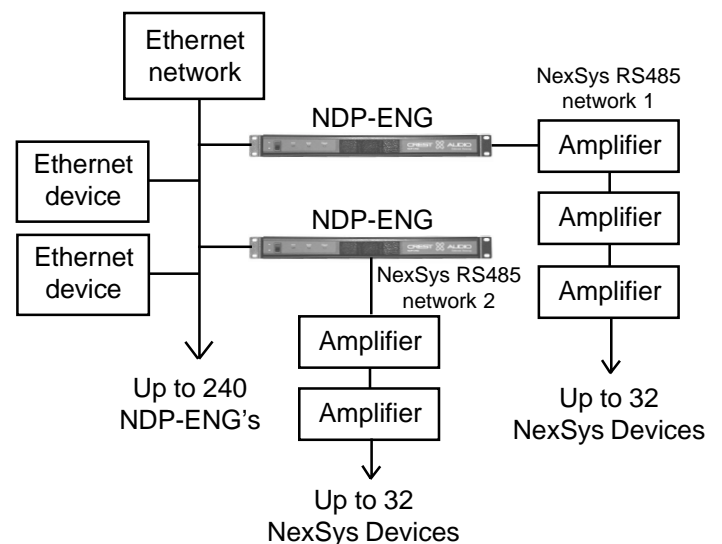
### Programmable Control I/O

Eight programmable control ports are available on the gateway. They can serve as either inputs or outputs. When configured as an input, the gateway can sense a switch closure, a variable DC voltage, or a 3-contact potentiometer. When configured as an output, the gateway can drive a TTL level signal. NexSys contains a utility called Event Scheduler that allows the NexSys software to react to and generate control for external devices. This utility is very comprehensive, easy to use, and extremely powerful.

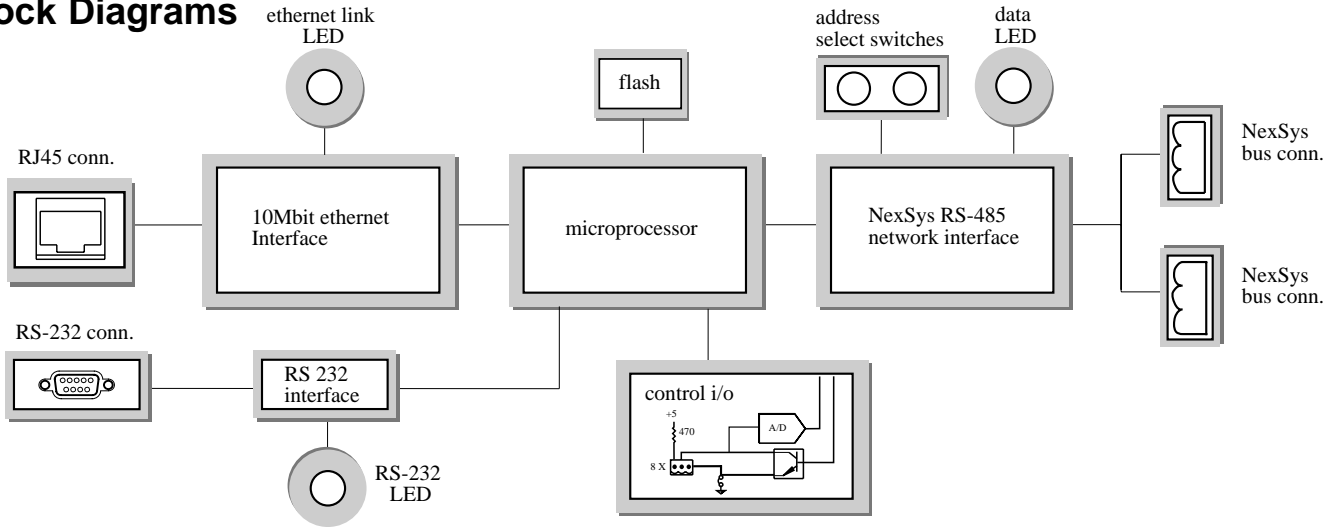
Crest Audio Ethernet NexSys Gateways are manufactured in the United States, using only the highest quality selected components

## Features

- One RJ45 connector for 10Mbit Ethernet connectivity of NexSys network with up to 240 Gateways allowed in a system.
- Electrically isolated RS-485 NexSys bus supporting up to 32 NexSys devices.
- Eight user-programmable control I/O ports.
- Front panel power switch, Ethernet link, NexSys data and power status indicators.
- Rear panel indicators for NexSys data and Ethernet link status
- IEC power receptacle
- 1 rack unit high; width and depth are the same as Crest Audio's CK family of Power Processing amplifiers
- Easy to configure using NexSys software
- Five year warranty



### Block Diagrams



### Electrical Specifications

<b>AC Line Current</b>	AG Maximum:	165 mA., @ 120V
	AG Typically:	65 mA., @ 120V
	EW Maximum:	100 mA., @ 240V
	EW Typically:	40 mA., @ 240V

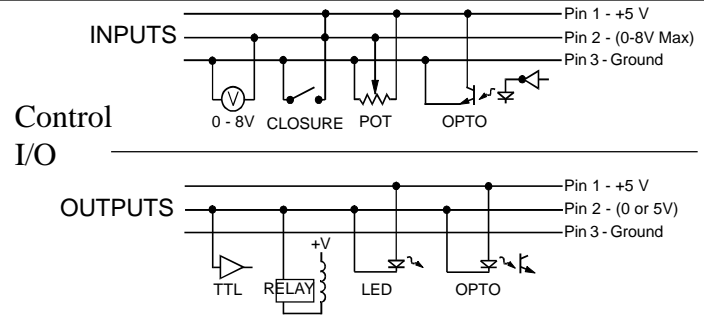
<b>NexSys Interface</b>	One pair NexSys bus connectors, electrically isolated, on standard two wire RS-485, single unshielded twisted pair, RJ45 Ethernet network connector, DB-9 RS-232 connector
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<b>I/O Connector Function</b>	pin 1: 470 Ohm pullup to +5V pin 2: I/O pin 3: selectable reference-circuit ground (factory); or user reference (pin 3 ground selection globally configures all 8 control I/O ports)
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**I/O Input Voltage Range** 0 to 8 V

**I/O Max Sink Current** 80 mA per output, 500 mA total

**I/O Breakdown Voltage** 40V  
No internal clamp diodes provided on I/O



#### Architect's & Engineer's Specification NDP-ENG

The network gateway shall contain one RJ-45 Ethernet network connection and one electrically isolated Crest Audio NexSys bus. Primary communications to the computer shall be through standard CAT5 Ethernet cabling. The NexSys bus shall provide access to as many as 32 additional NexSys network nodes. Any node on the NexSys network shall be accessible to the controlling computer through the gateway. Each NexSys bus shall conform with RS485 electrical serial protocol.

The gateway shall poll the status of each node on the NexSys network independently from the controlling computer. The gateway shall also send commands to nodes on the NexSys network as dictated by the controlling computer system.

The network gateway shall contain eight programmable control ports to accommodate external inputs to NexSys via switch closure, variable DC voltage, or 3-contact potentiometers. The control ports shall also have TTL outputs and relay-driving outputs available to control external devices from NexSys.

The front panel shall include an on/off power switch and LEDs to indicate power (active), NexSys data (present), and EtherNet link (present). The rear panel shall be fitted with three rotary switches, two with the purpose of setting NexSys data bus addresses to the gateway, the remaining switch sets the mode and baud rate of the serial connection. The serial connection shall be present on a female DB-9 connector and NexSys network access shall be through two 5mm, 3-pin, Phoenix COMBICON connectors. Programmable control I/O shall be on eight similar connectors. There shall be three LEDs present on the rear of the unit, these indicate NexSys data, serial data, and Ethernet link.

An IEC AC mains socket shall be provided on the rear panel. 120V and 220V versions shall be available. A single AC mains cord having an appropriate plug for the intended operating voltage shall be provided. Dimensions shall be 19" (483mm) wide, 1.75" (44mm) high, and 17.13" (435mm) deep. The network gateway shall be designated the Crest Audio model NDP-ENG.

