

NE4250  
NE8250



# NE SERIES MULTI-CHANNEL, NETWORK-ENABLED POWER AMPLIFIERS

Our multi-channel *ne* (Networked-Enabled) Series Amplifiers are uniquely designed around an energy efficient Class-D platform with a switching power supply.

Connecting and controlling an amplifier for networked systems has now been simplified with *ne* Amplifiers. This line offers ease of use, setup and control using standard 10/100 Ethernet protocol and *Protea™ ne Software*. No special outboard control units are needed.

Choose either the **ne4250** (4-channel) or **ne8250** (8-channel) packages rated at 250W per channel, with separate Hi-Z and Low-Z models. *ne* Series Amplifiers are offered in two separate platforms—the standard network amplifier or a network amplifier with an on-board *Protea™ DSP Processor*. Each can be customized for any installation by adding your choice of AES3 inputs, mic pre inputs, CobraNet® or Dante® modules.

ne4250 & ne8250 Features:

- 10/100 Ethernet comes standard for remote control and monitoring
- FIR Filter capable (with DSP)
- Low-Z, 25V, 70V, 100V models
- Protea DSP, AES3, CobraNet® and Dante® input options
- DC voltage remote gain control
- Switched-mode power supply, Class-D output
- Stepped, calibrated input attenuators
- Remote power standby
- Disable all front panel controls via software
- Temperature sensitive variable speed fan with side-to-front airflow
- Selectable HPF frequencies (80Hz, 400Hz, off) on 25V, 70V, and 100V models
- 4-stage level meters
- Output current and temp indicators
- Safety/Compliance:  $\tau$ TUV<sub>us</sub>, CE, FCC, RoHS

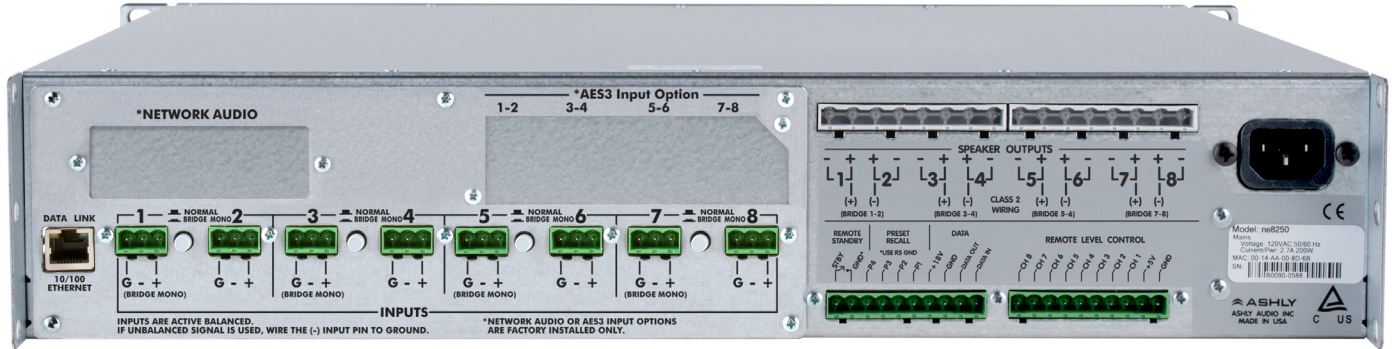
Front Panel		
Controls	Individual input attenuators, AC Power Switch	
Cooling	Temp dependent speed-controlled fan (Side-in, Front-out)	
LED Indicators: Unit Status		
POWER	Blue	Switch: On, Off
STANDBY	Yellow	Standby, flashing
PROTECT	Red	On, Off
DISABLE	Yellow	On, Off
COM	Green	On, for Ethernet data or Device ID
LED Indicators: Each Channel		
SIGNAL LEVEL	Red	Clip
	Yellow	-6dB
	Green	-18dB, -12dB
BRIDGE	Green	Per Channel Pair
TEMP	Yellow	Per Channel
CURRENT	Green	Per Channel: Proportional to output

Remote Accessories	
WR-1	2-Channel Level Control
WR-1.5	Level and Preset Recall
WR-2	Four-Position Switch
WR-5*	Programmable Button Controller
neWR-5*	Programmable Network Remote
FR-8*	8-Channel Network Fader Remote
FR-16*	16-Channel Network Fader Remote
RD/RW-8C*	Serial Data Fader Remote
Ashly Remote*	Remote Control Application for Apple® iPad®

ne Models	ne4250	ne8250
Channels	4	8
<i>Continuous Average Power Output: Per Channel, Low Z models, Stereo Mode, All Channels Driven</i>		
8 Ohms	150W	150W
4 Ohms	250W	250W
<i>Low Z Output: Bridge Mode, All Channels Driven</i>		
8 Ohms	500W	500W
<i>25V, 70V, 100V Distributed Output Models: 20Hz–20kHz 1% THD</i>		
25V (per channel)	250W	250W
70V (per channel)	250W	250W
100V (per channel)	250W	250W
<i>Line Current Draw: 120VAC Mains (divide in half for 230V)</i>		
Standby Mode	190mA	290mA
Idle (no signal)	540mA	565mA
Typical (1/8 power pink noise)	2.85A	5.00A
Maximum (1/3 power pink noise)	6.00A	11.0A
<i>Thermal Dissipation: BTU/hr, All Channels Driven</i>		
Standby mode	46.7	63.8
Idle (no signal)	123	187
Typical (1/8 power pink noise)	341	700
Maximum (1/3 power pink noise)	378	775



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ne8250 Rear Panel

# NE SERIES MULTI-CHANNEL, NETWORK-ENABLED POWER AMPLIFIERS

Specifications	Note: 0dBu = 0.775 VRMS
Frequency Response	20Hz–20kHz, (unweighted) ±1dB
Input Impedance	20k Ohms, Balanced
Voltage Gain	26dB (Low-Z), 32dB (70V), 35dB (100V)
Input Sensitivity	6.2dBu (Low-Z), 4.2dBu (25V), 7.2dBu (70V), 7.2dBu (100V)
Maximum Input Level	+21dBu
Software Contolled Internal HPF (25V, 70V, 100V models)	80Hz (12dB/oct), 400Hz (6dB oct), OFF
Signal to Noise (20-20k, Unweighted)	>107db (2450) >107dB (8250)
Distortion (8 Ohm load)	* (SMPTE) <0.5% typical Δ (THD-N) <0.5% typical (20Hz-20kHz)
Damping Factor (8 Ohms, 1kHz)	>250
Output Circuitry	Class D
Amplifier/Load Protection	Output Overcurrent, Main Supply Rail Overvoltage, Chassis Temperature, Inrush Limiting, Mains Fuse

Rear Panel	
Controls	Ethernet, Channel bridge switch (Low-Z only), Remote standby, Preset recall (4), Remote Level (8), Remote Data
Connectors (each channel)	Input: Euroblock Output: Euroblock

Power Requirements	
AC Main	120VAC or 240VAC ±10% (factory set), 50–60Hz
Power Cable Connector	15A Edison, 3-Prong IEC

Weights and Dimensions	
Dimensions	19" W x 3.50" H x 16.84" D (483mm x 89mm x 428mm)
Airflow	IN through sides, OUT through front
Unit Weight	4250: 23 lbs (10.4 kg) 8250: 24.7 lbs (11.2 kg)
Shipping Weight	4250: 29.1 lbs (13.2 kg) 8250: 30.8 lbs (13.9 kg)
Environmental	40-120° F, (4-49° C) noncondensing
Safety/Compliance	cTUVus, CE, FCC, RoHS

\* 8 Ohm load, 10dB below rated power. Δ 8 Ohm load, 10dB below rated power, 20Hz–20kHz. ©2015 All features, specifications and graphical representations are subject to change without notice.



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# Protēa™

## DIGITAL SIGNAL PROCESSING FOR NE MULTI-CHANNEL

Protea is compatible with Microsoft® Windows 8, 7 (Vista/XP) 32 & 64 bit systems.

Audio professionals find our *Protea™* DSP to be very intuitive and easy to navigate—and you will too. No need to attend a one-week training class away from home to learn our software. Common sense layout of controls and features, on-line help, or a visit to the Technical Support page on our website provides answers to all of your questions.



Protēa™ DSP Specifications	
<i>All DSP functions can be linked to 1 of 16 link groups</i>	
Input Source Selection	
Input Source Select Options	Analog, Auto (Net, AES3, Analog)
Brick Wall Limiter	
Threshold	-20dBu to +20dBu
Ratio	Infinite
Attack	0.2ms/dB to 50 ms/dB
Release	5ms/dB to 1000ms/dB
Compressor	
Threshold	-20dBu to +20dBu
Ratio	1.2:1 to infinite
Attack	0.2 to 50ms
Release	5ms/dB to 1000ms/dB
Detector	Peak/Average
Attenuation Bus	2 available
Metering	In, Out, Attenuation, Graphical
Autoleveler Controls	
Target Level	-40dBu to +20dBu
Action	Gentle, normal, aggressive, user defined
Maximum Gain	0dB to +22dB
Metering	Input, Gain, Attenuation
Ratio	1.2:1 to 10:1
Threshold Below Target	-30dB to 0dB
Gain Increase/Decrease Rate	5ms/dB to 1000ms/dB
Hold Time	0-6 sec
Ducking: High/Low Priority, Trigger, Filibuster, Ducked Program	
Trigger Threshold	-80dBu to +20 dBu
Ducking Release	5ms/dB to 1000ms/dB
Ducking Depth	0dB to -30dB, -∞
Enable Ducking at Matrix Mixer	Yes
Metering	Input
Gate	
Threshold	-80dBu to +20dBu
Range	off, 100dB to 0dB
Attack	0.2ms/dB to 50 ms/dB
Release	5ms/dB to 1000ms/dB
Metering	Key Signal, Gate LED, Graphical

Advanced Gate Controls	
Key Engage Enable	Yes
Key Frequency	20Hz to 20kHz
Key Bandwidth	0.016 to 3.995 Octave
Gain	
Gain (with/without VCA)	-50dB to +12dB, off, polarity invert
Digital VCA Groups	4 available
Remote RD8C Gain	Enable per channel, 0dB to -∞
WR-5 (neWR-5) Remote Gain	0 to -50dB, Mute
EQ: FIR Filter (Output only, 48kHz only, 2-384 Taps)	
File Type	.csv, .fir
EQ: 31-Band	
Filter Type	Constant Q or proportional
Bandwidth	0.499oct to 0.25oct
EQ: Parametric 2,4,6, or 10 Band	
Frequency	20-20kHz
Level	-30dB to +15dB
Q Value	0.016 to 3.995 Octave
EQ: Hi/Low Shelf 6/12 dB/oct	
Frequency	20Hz-20kHz
Level	-15dB to +15dB
EQ: All Pass	
Frequency	20Hz-20kHz
EQ: Variable Q HP/LP	
Frequency	20Hz-20kHz
Q Value	3.047 to 0.267
EQ: Notch/Bandpass	
Frequency	20Hz-20kHz
Q Value	92.436 to 0.267
Crossover: 2 Way, 3 Way, 4 Way Crossover & High Pass/Low Pass Filters	
Bessel & Butterworth Filters	12/18/24/48 dB/oct
Linkwitz-Riley Filter	12/24/48 dB/oct
Frequency	Off, 20Hz-20kHz

Delay: @ 48kHz Sampling Rate (Input Time, Distance & Temperature)	
Speaker Delay	0-21ms
Delay	0-682ms
Delay: @ 96kHz Sampling Rate (Input Time, Distance & Temperature)	
Speaker Delay	0-10.6ms
Delay	0-341ms
Audio Metering Tool	
Range	-60dBu to +20dBu
Increments	1dB
Peak Hold Indicator	Yes
Signal Generator Tool: Pink noise, White noise, Sine wave	
Signal Level	Off, -50dBu to +20dBu
Sine Wave Frequency	20Hz-12kHz
Matrix Mixer	
Gain (0.5dB increments)	Off, -50 to +12dB
Mute	Per channel
Enable Ducking at Mixer	Yes
Processors	
Input A/D, Output D/A	24 bit
DSP Processors	32-bit floating point
Sample Rates	48kHz, 96kHz
Propagation Delay @ 48kHz:	1.42ms
Propagation Delay @ 96kHz:	0.71ms





# NE 4250 ARCHITECT & ENGINEERING SPECS

## ne4250

The four-channel power amplifier shall deliver a minimum power of 150 Watts RMS per channel into 8 Ohm loads and 250 Watts RMS per channel into 4 Ohm loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 of the amplifier shall deliver at least 500 Watts RMS into an 8 Ohm load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options with the addition of a 4-Channel DAC card. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 23 pounds (10.4kg) or less.

The power amplifier shall be an Ashly model **ne4250**

## ne4250 with DSP Option

The four-channel power amplifier shall deliver a minimum power of 150 Watts RMS per channel into 8 Ohm loads and 250 Watts RMS per channel into 4 Ohm loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 of the amplifier shall deliver at least 500 Watts RMS into an 8 Ohm load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options with the addition of a 4-Channel DAC card. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 23 pounds (10.4kg) or less.

The power amplifier shall be an Ashly model **ne4250pe**

## ne4250.70

The four-channel power amplifier shall deliver a minimum power of 250 Watts RMS per channel into 70V loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 of the amplifier shall deliver at least 500 Watts RMS into a 140V load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options with the addition of a 4-Channel DAC card. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 23 pounds (10.4kg) or less.

The power amplifier shall be an Ashly model **ne4250.70**

## ne4250.70 with DSP Option

The four-channel power amplifier shall deliver a minimum power of 250 Watts RMS per channel into 70V loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 of the amplifier shall deliver at least 500 Watts RMS into a 140V load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options with the addition of a 4-Channel DAC card. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 23 pounds (10.4kg) or less.

The power amplifier shall be an Ashly model **ne4250.70pe**



# NE 8250

## ARCHITECT & ENGINEERING SPECS

### ne8250

The eight-channel power amplifier shall deliver a minimum power of 150 Watts RMS per channel into 8 Ohm loads and 250 Watts RMS per channel into 4 Ohm loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 or 5+6 or 7+8 of the amplifier shall deliver at least 500 Watts RMS into an 8 Ohm load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options with the addition of two 4-Channel DAC cards. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 24.7 pounds (11.2kg) or less.

The power amplifier shall be an Ashly model **ne8250**

### ne8250 with DSP Option

The eight-channel power amplifier shall deliver a minimum power of 150 Watts RMS per channel into 8 Ohm loads and 250 Watts RMS per channel into 4 Ohm loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 or 5+6 or 7+8 of the amplifier shall deliver at least 500 Watts RMS into an 8 Ohm load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, over-current, and Ethernet communication. The power amplifier shall have an internal factory installed digital signal processing (DSP) option controlled using Protea (network-enabled) software. Each amplifier input channel shall be configured with pluggable DSP blocks to have its own dynamics control, gain functions, graphic and/or parametric EQ, Hi-pass/Lo-pass filters, time delay, metering, and test signal generator. A mixer section with assignable routing shall allow any input to drive any or all amplifier outputs. Outputs shall have the same DSP functions as inputs, with the addition of FIR filters, and a fast, automated crossover setup. Both inputs and outputs shall copy/paste their settings to other channels, or link with one or more other channels to track their settings. Presets shall be used to store and retrieve global parameters of an amplifier's control surface and DSP section from a file. Sub-Presets shall allow for a collection of individual DSP function parameters within and across both channels of an amplifier to be stored and recalled as a set, affecting only those parameters which have been tagged. Up to 35 presets/sub-presets shall be stored within the amplifier, and shall be recalled in real time via Ethernet from a computer using Protea software. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 24.7 pounds (11.2kg) or less.

The power amplifier shall be an Ashly model **ne8250pe**

### ne8250.70

The eight-channel power amplifier shall deliver a minimum power of 250 Watts RMS per channel into 70V loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 or 5+6 or 7+8 of the amplifier shall deliver at least 500 Watts RMS into a 140V load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, overcurrent, and Ethernet communication. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options with the addition of two 4-Channel DAC cards. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 24.7 pounds (11.2kg) or less.

The power amplifier shall be an Ashly model **ne8250.70**

### ne8250.70 with DSP Option

The eight-channel power amplifier shall deliver a minimum power of 250 Watts RMS per channel into 70V loads with all channels operating. When switched into bridged-mono mode, channels 1+2 or 3+4 or 5+6 or 7+8 of the amplifier shall deliver at least 500 Watts RMS into a 140V load. The power amplifier shall include Euroblock input connectors and Euroblock output connectors. It shall have balanced analog inputs. The power amplifier shall have remote standby for power up, DC remote level control and contact closure preset recall. It shall have Ethernet control and monitoring of power functions, level, mute, polarity, temperature, current, and amplifier fault conditions. Frequency response shall be 20Hz to 20kHz  $\pm 1.0$ dB. Signal-to-Noise shall be greater than 105dB unweighted and SMPTE intermodulation distortion shall be less than 0.5% into an 8 Ohm load, 10dB below rated output. The front panel shall provide the status of power, standby, protect, power switch disable, signal level, bridge, over-temperature, overcurrent, and Ethernet communication. The power amplifier shall have an internal factory installed digital signal processing (DSP) option controlled using Protea (network-enabled) software. Each amplifier input channel shall be configured with pluggable DSP blocks to have its own dynamics control, gain functions, graphic and/or parametric EQ, Hi-pass/Lo-pass filters, time delay, metering, and test signal generator. A mixer section with assignable routing shall allow any input to drive any or all amplifier outputs. Outputs shall have the same DSP functions as inputs, with the addition of FIR filters, and a fast, automated crossover setup. Both inputs and outputs shall copy/paste their settings to other channels, or link with one or more other channels to track their settings. Presets shall be used to store and retrieve global parameters of an amplifier's control surface and DSP section from a file. Sub-Presets shall allow for a collection of individual DSP function parameters within and across both channels of an amplifier to be stored and recalled as a set, affecting only those parameters which have been tagged. Up to 35 presets/sub-presets shall be stored within the amplifier, and shall be recalled in real time via Ethernet from a computer using Protea software. The power amplifier will be capable of having factory installed AES3, CobraNet®, or Dante® interface options. The amplifier shall mount in a standard 19 inch rack using two spaces (3.5. high) and weigh 24.7 pounds (11.2kg) or less.

The power amplifier shall be an Ashly model **ne8250.70pe**