

# ProGrid Analog Audio Devices



PG16-AUDIO



PG8-AUDIO

The PG-Audio devices are 1RU digital audio I/O interface devices for the ProGrid Signal Transport Solution featuring the Optocore™ Optical and SANE™ CAT5 Digital Network technologies.

## DESCRIPTION

All PG-Audio devices transports analog audio and data signals in a variety of ways that can be customized to fit user needs.

The PG16-Audio devices have four different rear types including microphone inputs, Line Level inputs and outputs, and dual microphone preamplifiers. The rears are available in seven different configurations that enable the conversion of signals: 16 inputs, 16 outputs, 8 inputs, 8 outputs and 8 dual microphone inputs with two independent adjustable gains.

The PG8-Audio devices have three different rear types that enable the conversion of signals: 8 microphone inputs, 8 line inputs or 8 line outputs.

Every PG-Audio-FX device can add and/or extract up to 1024 audio channels from the ProGrid Signal Transport Solution and 64 audio channels to/from the SANE network. A single PG-Audio TP device can exchanged up to 64 audio channels from the SANE network and two AES/EBU ports, each capable of 16 channels.

Devices include dual power supplies with automatic switchover.

## NETWORK

Redundant fiber connections can be established using the two provided Optocore Optical LINK interfaces. All PG-Audio devices are equipped with either single-mode or multi-mode SFP fiber transceivers. Depending on the selected transceivers, distances from 2300ft (700m) up to 43.5mi (70km) can be covered. The dual redundant ring structure provides maximum safety in a network with low latency. Four RS485 ports allow the transport of a wide range of serial data standards, such as RS422, DMX and MIDI. In addition to the audio signals, video and data signals are transmitted by the fiber connection.

## SANE

Each PG-Audio panel is equipped with two SANE ports, which enables send and receive of up to 56/64 audio channels via standard CAT5 cable. Use the SANE ports to expand the number of inputs and outputs on ProGrid FX devices. SANE ports can also be used to send Ethernet data. In addition, PG-Audio devices have two separate LAN ports for 100BaseT Ethernet transmission.

## WORD CLOCK

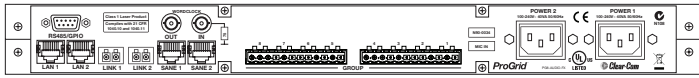
Optocore technology uses synchronous transmission, allowing extremely low-jitter Word Clock transportation together with audio and video. All ProGrid devices are equipped with a Word Clock IN and OUT to enable the synchronization of the devices to an external source and are used to pass on the Word Clock from one device to the next. For stand-alone applications, the devices are equipped with an internal Word Clock.

## PROGRID CONFIGURATION SOFTWARE

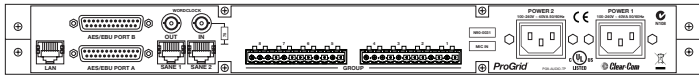
The ProGrid Configuration Application Software provides easy access to all configuration and control tools, including routing, naming, storage and recall of configurations on the computer, including an off and online mode with real-time level display.

## KEY FEATURES AND BENEFITS

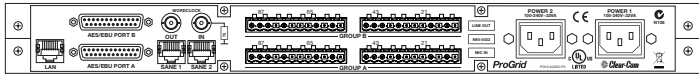
- 4 x RS485 serial data connections
- Word Clock input and output
- 2 x optical LINK interface with duplex LC connectors (FX version only)
- 2 x AES/EBU ports, 16 channels each (TP version only)
- USB, RS232 and LAN ports for configuration and control
- Dual power supply for redundancy



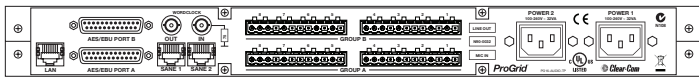
PG8-Audio-FX Rear Panel



PG8-Audio-TP Rear Panel



PG16-Audio-FX Rear Panel



PG16-Audio-TP Rear Panel

## PG8-Audio Panels

- 8-channel converter
- 3 Card Types:
  - 8 mic inputs
  - 8 line inputs
  - 8 line outputs

## PG16-Audio Panels

- 16-channel converter
- 4 Card Types:
  - 8 mic inputs
  - 8 line inputs
  - 8 line outputs
  - 8 dual mic inputs

## Order Codes:

PG8-8MI-FX	PG16-16LI-TP
PG8-8MI-TP	PG16-16LO-FX
PG8-8LI-FX	PG16-16LO-TP
PG8-8LI-TP	PG16-8MI-8LI-FX
PG8-8LO-FX	PG16-8MI-8LI-TP
PG8-8LO-TP	PG16-8AE-FX
PG16-16MI-FX	PG16-8AE-TP
PG16-16MI-TP	PG16-8AE-SRC-FX
PG16-8MI-8LO-FX	PG16-8AE-SRC-TP
PG16-8MI-8LO-TP	PG16-4AE-8MI-FX
PG16-8LI-8LO-FX	PG16-4AE-8MI-TP
PG16-8LI-8LO-TP	PG16-4AE-8LI-FX
PG16-8DMPRE-FX	PG16-4AE-8LI-TP
PG16-8DMPRE-TP	PG16-4AE-LO-FX
PG16-16LI-FX	PG16-4AE-LO-TP

## TECHNICAL SPECIFICATIONS

### Analog Audio Mic Inputs

ADC	
Gain/Steps:	0dB to +70dB; 1dB steps
Maximum Input Level:	@ 0dB gain: +22dBu; @ +70 dB gain: -48dBu
SNR:	@ 0dB gain: 118.5dB(A); @ +30dB gain: 116.5dB(A)
Dynamic Range:	@ 0dB gain: > 118.5dB(A); gain + ADC: > 154dB

### Analog Audio Line Inputs

ADC	
Gain/Steps:	-5, 0 +4, +14dB; 4dB steps
Maximum Input Level:	@ -5dB gain: +27dBu; @ +14dB gain: +8dBu
SNR: @ 0dB gain:	118dB(A); @ +14dB gain: 118dB(A)
Dynamic Range:	@ 0dB gain: > 118.5dB(A); gain + ADC: > 137dB

### Analog Audio Line Outputs

ADC	
Gain/Steps:	0, -4, -10, -14dB; 4dB steps
Maximum Output Level:	@ 0dB gain: +22dBu; @ -14dB gain: +8dBu
SNR: @ 0dB gain:	119dB(A); @ -14dB gain: 118dB(A)
Dynamic Range:	@ 0dB gain: > 119dB(A); gain +ADC: > 134dB

### Word Clock

Hardware standard:	750hm / BNC
Data Rate:	44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz (Depend- ing on used sample rate)

### Optical Link (FX devices only)

Input, Output, Dual:	Full bandwidth
Connection:	Duplex LC
Protocol:	Optocore
Transmission:	Full-duplex
Data Rate:	2 x 2Gbps

### Optical Wave Guide

Cable Lengths:	Multi-mode fiber 50µm; ≤ 700 m Single-mode fiber 9µm; <10km (70 km on request)
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### Power Supply

Number of Power Supplies:	2 (with function check and automatic switch-over)
Type:	Switch-mode, universal input
Mains Voltage:	100 - 240VAC; 50 - 60Hz; 10VA-typ
Frequency:	50 - 60Hz

### Remote Control

RS232/USB/Ethernet Port:	Interface to PC
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### Dimensions

19.2 in W x 1.73 in H x 7.87 in D (483 mm x 44 mm x 200 mm)
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### Weight

6.0 lbs (2.7 kg)
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### Notice About Specifications

While Clear-Com makes every attempt to maintain the accuracy of the information contained in its data sheets, that information is subject to change without notice. Performance specifications included in this data sheet are design-center specifications and are included for customer guidance and to facilitate system installation. Actual operating performance may vary.