

# PD-DAP-HD HD/SD-SDI Digital Audio Loudness Processor

The PD-DAP-HD is a modular HD/SD-SDI digital audio loudness processor. It is used in 1RU or 2RU PANDORA platform. Dynamic audio processing including compression, limit, expansion, enhancement and gain control is available for audio signals associated with the HD/SD-SDI inputs. Compression/expansion threshold can be selected according to audio VU value or loudness.

The module supports 1 program input and provides 2 program outputs. Audio signals associated with the program input can be dynamically and fully controlled. By-pass protection is supported on the program input so that the program can be output without any interruption. Auto cable equalizing is up to 1000 ft (300 m) for SD-SDI input and 500 ft (160m) for HD-SDI input.

An RJ-45 connector is provided for control of dedicated control panel remotely. Audio signals associated in program input can be monitored. A programmable GPI interface is provided to trigger bypass protection. Additionally, control of PD-MASTER application is supported.

## SPECIFICATIONS

Specifications are subject to change without notice.

### DIGITAL VIDEO INPUT

Signal Format.....	SMPTE 259M SD-SDI SMPTE 292M HD-SDI
Signal Standards.....	SMPTE 272M and SMPTE 299M
Connector.....	BNC (x1)
Impedance.....	75 Ω
Return Loss.....	>18 dB @ 270 MHz, SD >15 dB @ 1.485 GHz, HD

### DIGITAL VIDEO OUTPUT

Signal Format.....	SMPTE 259M SD-SDI SMPTE 292M HD-SDI
Connector.....	BNC (x2)
Impedance.....	75 Ω
Return Loss.....	>12 dB @ 5 MHz ~ 1.5 GHz
Amplitude.....	800 mVp-p ±10%
Rise/Fall Time.....	400 ~ 1500 ps, SD <270ps, HD
Overshoot.....	<10% of amplitude
Jitter.....	<0.12 UI, SD; <0.2 UI, HD

### DIGITAL AUDIO OUTPUT

Signal Format.....	AES3
Connector.....	RJ-45
Impedance.....	110 Ω
Level.....	5 Vp-p ±10%

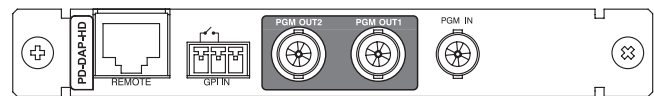
### PERFORMANCE

Gain Adjustment Range.....	-20 dB ~ +20 dB
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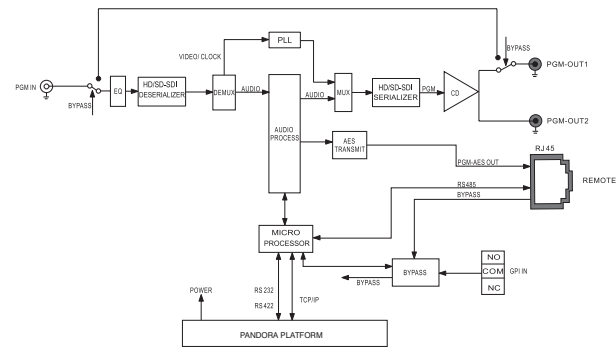
## KEY FEATURES AND BENEFITS

- Extracts RMS and loudness characteristics of audio signals
- Provides dynamic control of audio signals associated in HD/SD-SDI inputs, including compression, limit, expansion, enhancement and gain adjustment
- Compression/expansion threshold can be selected based on VU value or loudness
- Auto cable equalizing up to 1000 ft (300 m) for SD and 500 ft (160m) for HD
- By-pass protection
- Supports control of remote control panel
- Supports GPI input

## BACK MODULE



## BLOCK DIAGRAM



Compress Ratio.....	1:1 ~ ∞:1
Compress Threshold.....	VU: -44 dBFS ~ -4 dBFS Loudness: -54 dBFS ~ -14 dBFS
Expansion Threshold.....	-60 dBFS ~ -20 dBFS, Loudness & VU
Attack Time.....	0.1 ms ~ 500 ms Compression & Expansion
Release Time.....	20 ms ~ 5 s, Compression & Expansion
Noise Threshold.....	-70 dBFS ~ -44 dBFS
Automatic Loudness Control Range.....	-44 dBFS ~ -14 dBFS
Enhancement Threshold.....	-44 dBFS ~ -10 dBFS

## ELECTRICAL

Power Consumption.....	5 W
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## ENVIRONMENTAL

Operating Temperature.....	32° ~ 104° F (0° ~ 40° C)
Relative Humidity.....	10% ~ 90%