

MODEL 2008DA

8-CHANNEL DIGITAL TO AUDIO CARD

The Model 2008DA Digital to Audio Card is a component of the IED 2000 Series UDAPS™. Its purpose is to convert serial digital output data to eight channels of low noise, low distortion audio output. It is designed to be mounted in the 2012M Mainframe, through which its power and signal connections are made.

The Model 2008DA has two output choices, the standard 200L which provides a balanced, floating output level of up to +24 dBm, or the optional 208S which delivers up to 8 W into an 8 Ω load, unbalanced. With the 208S option, the card also has gain controls (trim pots) on each channel.

The 2008DA card is a 16-bit D/A converter which processes the serial data stream driven by the UDAPS™ data rate clock of 44.1 kHz, but is capable of processing data of any rate from 32 kHz to 50 kHz.

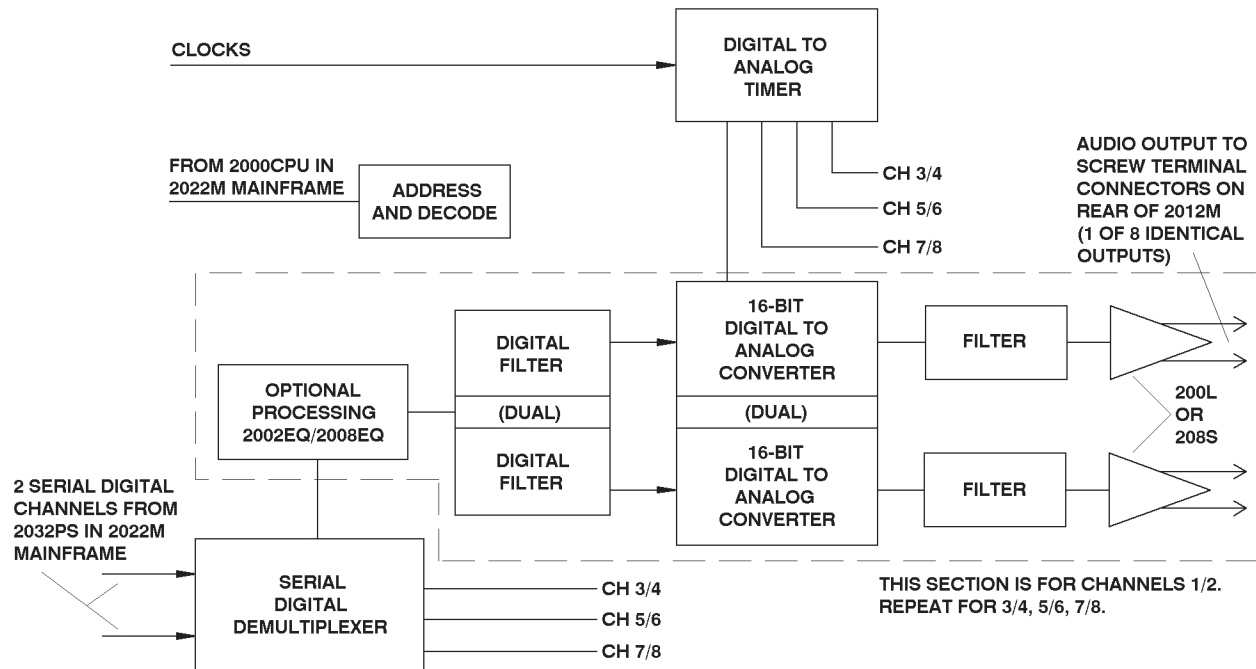


Figure 1 - 2008DA Block Diagram



SPECIFICATIONS

ELECTRICAL, ANALOG $V_{OUT} = +13.9$ dBu, $V_S = \pm 15$ V, +5V.

1. Frequency Response (system)	+0, -1 dB
20 Hz - 20 kHz	
2. Total Harmonic Distortion, THD	$\leq .01\%$
Filters, 10 Hz - 80 kHz	
3. Intermodulation Distortion, IM	$\leq 0.05\%$
60 Hz + 7 kHz	
4. Signal-to-Noise Ratio.	≥ 96 dB
Filters, 20 Hz - 20 kHz	
5. Output Impedance	$\leq 0.5 \Omega$
200L or 208S output	
6. Maximum Output Level	
200L	+24 dBm
208S.	≥ 8 Vrms
$R_L \geq 8 \Omega$	
9. Power Supply	
Supply Voltage Range	
± 15 V supply	± 13.5 V - ± 16.5 V
+5 V supply.	4.75 V - 5.25 V
Supply Current	
V = +5 V	400 mA
V = +15 V	425 mA
V = -15 V.	425 mA

ELECTRICAL, DIGITAL $V_{OUT} = +13.9$ dBu, $V_S = \pm 15$ V, +5V.

1. Sampling Rate	32 kHz - 50 kHz
16-bit D/A	

INDICATORS

1. Card access	Green LED
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CONNECTORS

1. 96-pin Euro connector (male)	AMP 650973-5
For card connector pin connections, see Table 1, page 4.	

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MECHANICAL

- 1. Size, overall . . . (33.1 cm L x 11.9 cm H x 4.45 cm W) 13.03" L x 4.67" H x 1.75" W
- 2. Weight
 - No EQ card (457 gm) 1.01 lb
 - With EQ card (630 gm) 1.388 lb

ENVIRONMENTAL

- 1. Operating Temperature Range (+32 °F - +104 °F) 0 °C - +40 °C
- 2. Storage Temperature Range (-40 °F - +158 °F) -40 °C - +70 °C



PIN NO.	FUNCTION	PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Analog Ground	33	Channel 8 -	65	Channel 7 -
2	Analog Ground	34	Test +	66	Test -
3	Analog Ground	35	Channel 8 +	67	Channel 7 +
4	Analog Ground	36	20 kHz +	68	20 kHz -
5	Analog Ground	37	Analog Ground	69	Analog Ground
6	+30 V	38	+30 V	70	+30 V
7	Analog Ground	39	Channel 6 -	71	Channel 5 -
8	-15 V	40	-15 V	72	-15 V
9	Analog Ground	41	Channel 6 +	73	Channel 5 +
10	-15 V	42	-15 V	74	-15 V
11	Analog Ground	43	Analog Ground	75	Analog Ground
12	+15 V	44	+15 V	76	+15 V
13	Analog Ground	45	Channel 4 -	77	Channel 3 -
14	+15 V	46	+15 V	78	+15 V
15	Analog Ground	47	Channel 4 +	79	Channel 3 +
16	+5 V	48	+5 V	80	+5 V
17	Analog Ground	49	Analog Ground	81	Analog Ground
18	+5 V	50	+5 V	82	+5 V
19	Analog Ground	51	Channel 2 -	83	Channel 1 -
20	+5 V	52	+5 V	84	+5 V
21	Analog Ground	53	Channel 2 +	85	Channel 1 +
22	Digital Ground	54	Digital Ground	86	Digital Ground
23	Digital Ground	55	Digital Ground	87	Digital Ground
24	SDOB (P-1)	56	CS3 ³	88	CS1 ³
25	SDOA (P-1)	57	BS0 ²	89	CS0 ³
26	Spare	58	BS1 ²	90	CS2 ³
27	SSYNCB	59	BS2 ²	91	SCLK7B
28	AD0 ¹	60	BS3 ²	92	Spare
29	AD2 ¹	61	UAS	93	AD1 ¹
30	AD4 ¹	62	LAS	94	AD3 ¹
31	AD6 ¹	63	RD	95	AD5 ¹
32	ACK	64	WR	96	AD7 ¹

Notes: 1. CPU address lines. 2. Mother board (mainframe) select lines. 3. Card slot select lines.

Table 1 - 2008DA Card Connector Pin Connections

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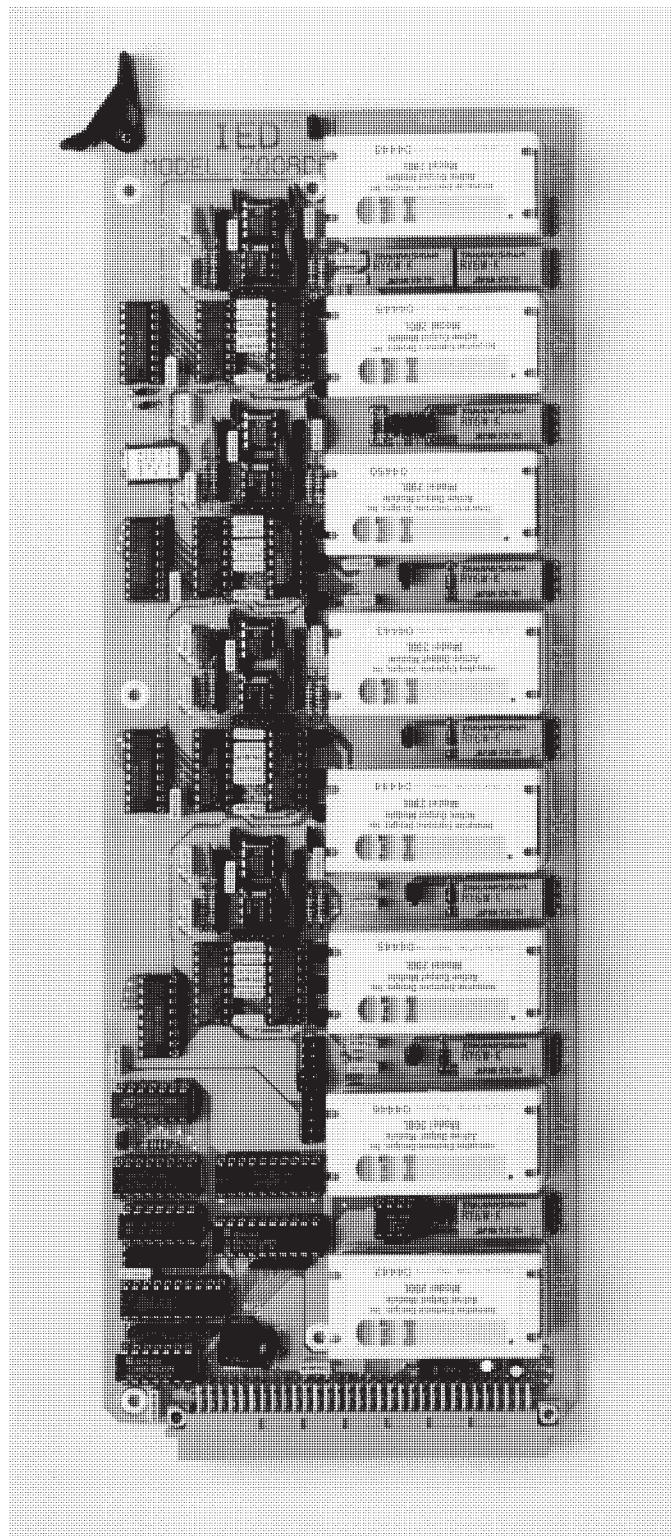


Figure 2 - 2008DA Digital to Analog Card



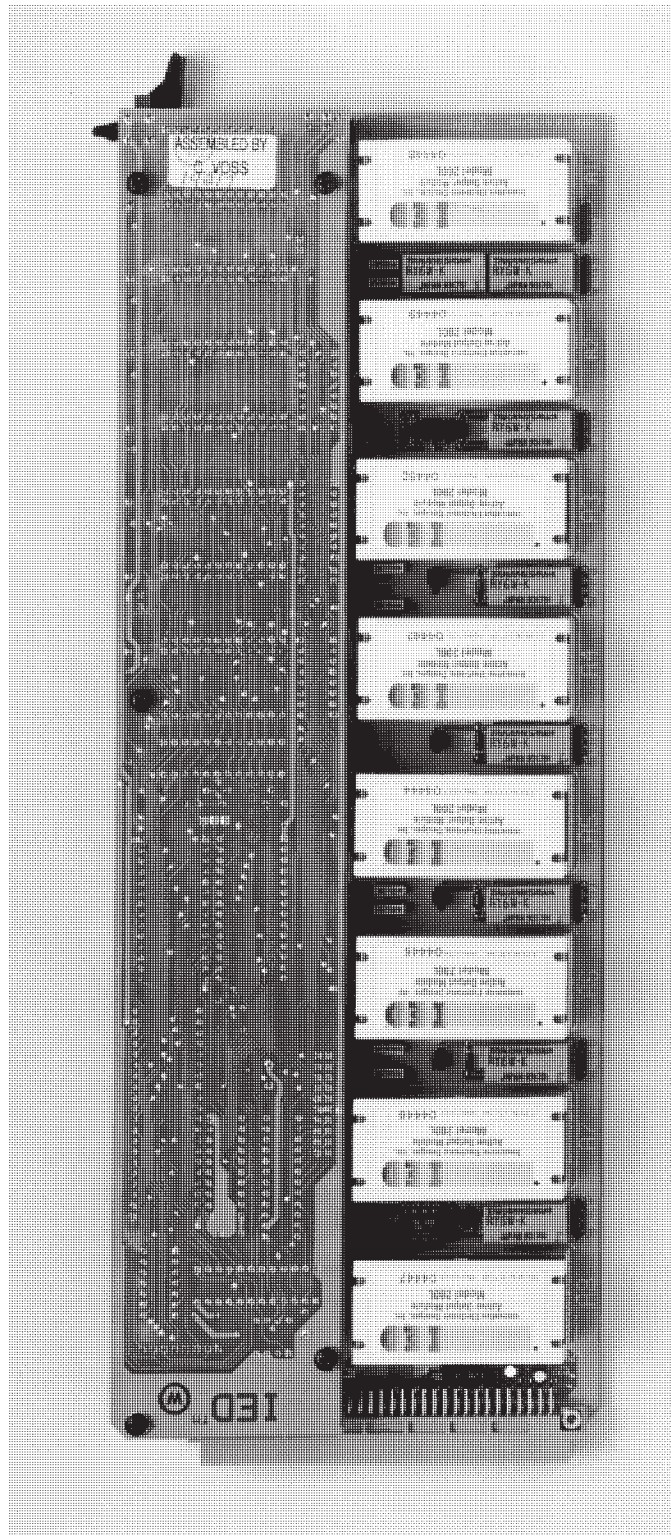


Figure 3 - 2008DA Digital to Analog Card
With EQ Option installed

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