

# MODEL 8001SA

## SYSTEM SIGNAL ANALYSIS CARD

The Model 8001SA System Signal Analysis Card is a component of the IED 8000 Series™. It has 2 balanced input channels, the Audio Monitor Bus and the Audio Test Bus. The Audio Monitor bus contains signals to be routed to the DSP for monitoring and audibly monitored by a monitor speaker.

The Audio Test Bus and Audio Monitor Bus contain test signals returning from the test points for comparison and analysis. The on-board processing of the signals is performed in the digital domain (DSP). The signal processing includes filtering, amplitude measurement, frequency measurement, and delay measurement, among others. The sampling rate is 44.1 kHz. An internal test tone generator is included which generates any test tone frequency between 20 Hz and 20 kHz for use in testing the system on the Audio Test Signal Bus. The Monitor Output and Audio Test Signal Bus are balanced outputs capable of driving long lines.

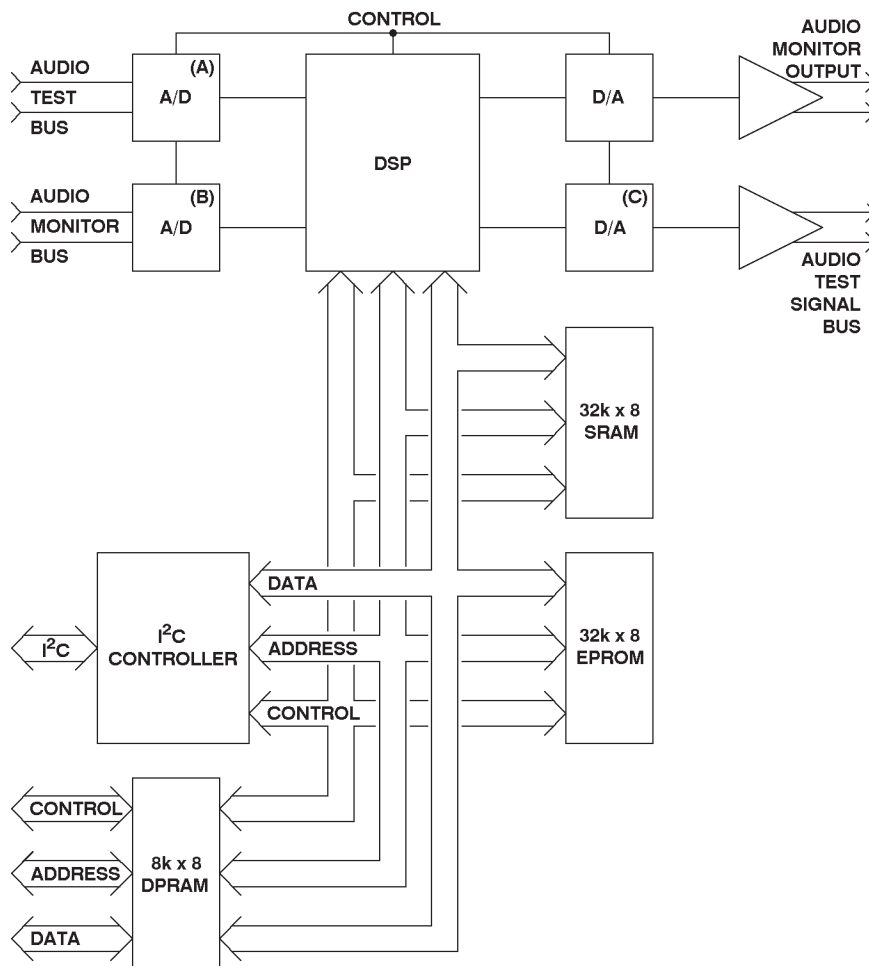


Figure 1 - 8001SA System Signal Analysis Card Block Diagram



## SPECIFICATIONS

### ELECTRICAL, ANALOG

1. Number of signal inputs . . . . .	2
Balanced	
2. Number of outputs . . . . .	2
Balanced	
3. Output Impedance . . . . .	< 100 $\Omega$
4. Maximum Output Level . . . . .	+24 dBu
$R_L \mid 600 \Omega$	
5. Frequency Response . . . . .	+0, -0.1 dB
20 Hz - 20 kHz	
6. Total Harmonic Distortion, THD . . . . .	< 0.05%
22 Hz - 22 kHz filters	
7. Intermodulation Distortion, IMD . . . . .	< 0.05%
60 Hz/7 kHz	
8. Signal-to-Noise Ratio, S/N . . . . .	> 90 dB
Referenced to +14 dBu, 22 Hz - 22 kHz filters	
9. Power Supply	
Supply Voltage Range	
+15 V Supply . . . . .	+14.25 V to +15.75 V
-15 V Supply . . . . .	-14.25 V to -15.75 V
+5 V Supply . . . . .	+4.75 to +5.25
Supply current	
V= +15 V . . . . .	30 mA
V= -15 V . . . . .	35 mA
V= +5 V . . . . .	200 mA

### ELECTRICAL, DIGITAL

1. Sampling Rate . . . . .	44.1 kHz
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### CONNECTORS

1. 64-pin Euro Connector, male, right-angle . . . . .	Hirose PCN10-64P-2.54DS
See Table 1 on page 3 for pin connections.	

### MECHANICAL

1. Size (maximum overall dimensions as viewed from the front)	
Height . . . . .	(11.43 cm) 4.50"
Width . . . . .	(2.03 cm) 0.80"
Depth . . . . .	(20.42 cm) 8.04"
2. Weight . . . . .	(200 gm) 0.44 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

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PIN	FUNCTION	PIN	FUNCTION
1	Address Line 8	33	Address Line 9
2	Address Line 10	34	Address Line 11
3	Address Line 12	35	Address Line 13
4	Address Line 14	36	Address Line 15
5	Address Line 6	37	Address Line 7
6	Address Line 4	38	Address Line 5
7	Address Line 2	39	Address Line 3
8	Address Line 0	30	Address Line 1
9	No Connection	41	Data Line 6
10	Data Line 7	42	Data Line 4
11	Data Line 5	43	Data Line 2
12	Data Line 3	44	Data Line 1
13	Data Line 1	45	Write Enable (Inverted)
14	DSP Interrupt (Inverted)	46	Read Enable (Inverted)
15	-15 V	47	-15 V
16	+15 V	48	+15 V
17	Ground	49	Ground
18	Ground	50	Ground
19	Spare	51	Spare
20	Reset	52	I <sup>2</sup> C Clock
21	I <sup>2</sup> C Data	53	I <sup>2</sup> C Interrupt (Inverted)
22	Ground	54	Ground
23	Spare	55	Spare
24	Monitor Out -	56	Monitor Out +
25	Spare	57	DSP Chip Select
26	+5 V	58	+5 V
27	Ground	59	Ground
28	Audio Test Bus -	60	Audio Test Bus +
29	Ground	61	Ground
30	Audio Monitor Bus B -	62	Audio Monitor Bus +
31	Ground	63	Ground
32	Audio Test Signal Bus -	64	Audio Test Signal Bus +

Table 1 - Pin Connections, Euro Connector



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