MODEL 2000DSP

DIGITAL SIGNAL PROCESSOR CARD

The Model 2000DSP Digital Signal Processor card is a component of the IED Series 2000 UDAPS™. Its purpose is signal mixing and level control. The flexibility of the card allows various numbers of mixes of different numbers of channels. The signal level function may be controlled from either the IED 590 Microcomputer or from the 112 PLC Pushbutton Level Control.

The 2000DSP is available in two versions which represent two clock speeds. The versions are designated by suffixes. The 2000DSP-20 operates at 20 MHz, and the 2000DSP-27 at 27 MHz. The higher speed version can process more channels or perform more mixes. The maximum mix capabilities of both versions, based on mixing and level control, are listed in Table 1 on page 2.

The 2000DSP is designed to be mounted in the 2022M Mainframe, through which its power and signal connections are made. More than one 2000DSP may be used in the same UDAPS™ system.

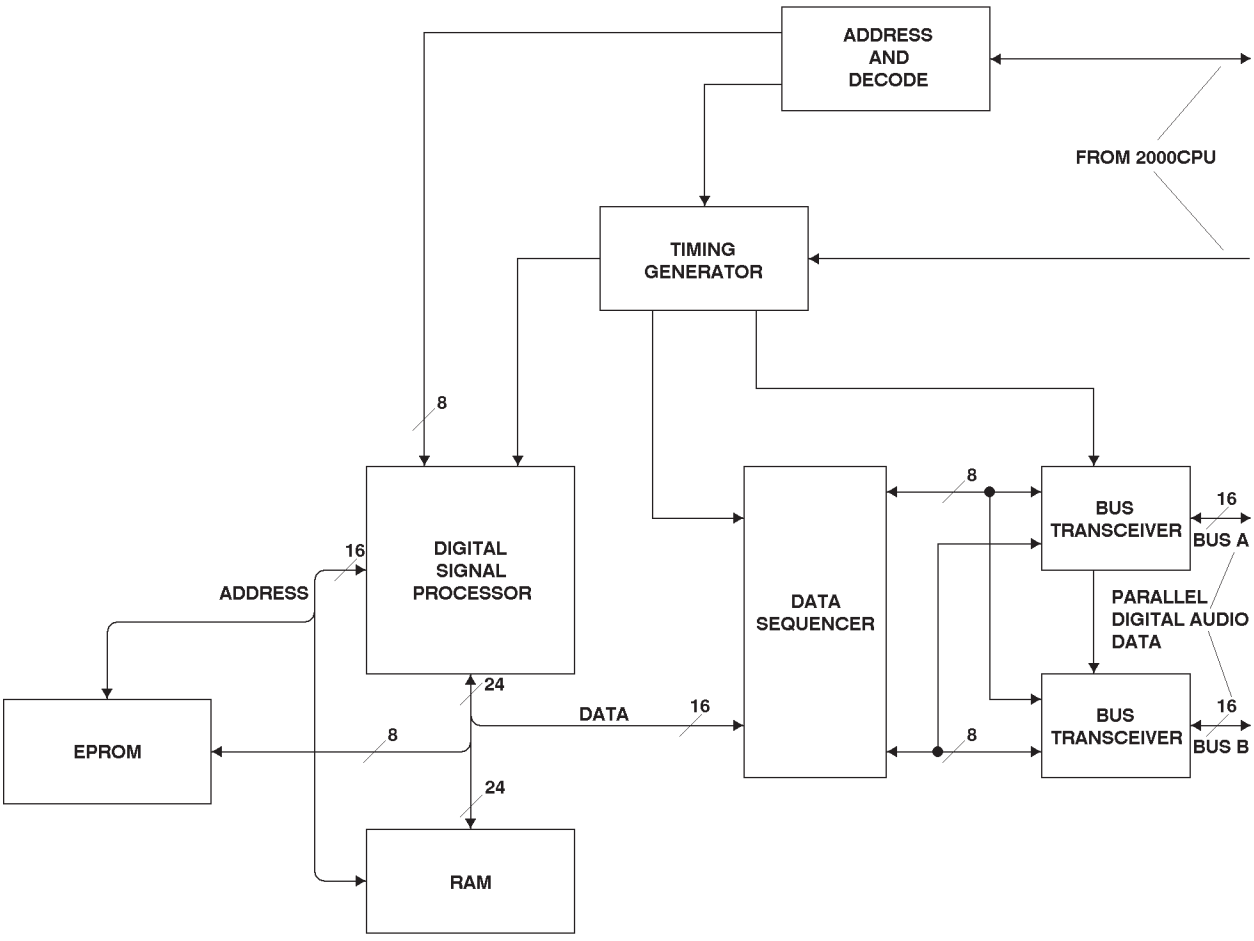

Figure 1 - 2032DSP Block Diagram

2000DSP-20		2000DSP-27	
NO. MIX INPUTS[1]	**MAX NO. MIXES**	**NO. MIX INPUTS**[1]	**MAX NO. MIXES**
1[2]	24	1[2]	35
2	21	2	31
3	19	3	27
4	17	4	24
5	15	5	22
6	14	6	20
7	13	7	19
8	12	8	17
9	11	9	16
11	10	10	15
13	9	11	14
15	8	13	13
18	7	14	12
23	6	16	11
28	5	18	10
37	4	21	9
52	3	25	8
81	2	29	7
168	1	35	6
		43	5
		56	4
		77	3
		118	2
		243	1

Notes: 1. All inputs have level control capability. 2. Single input is level control, only.

Table 1 - Mix Capability vs. Number of Mix Inputs

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SPECIFICATIONS

ELECTRICAL, ANALOG

1. Power Supply
   Supply Voltage Range
   +5 V supply. . . . . 4.75 V - 5.25 V
   Supply Current (all relays energized)
   V= +5 V . . . . . 200 mA

CONTROLS

1. Reset. . . . . Momentary Push Switch

INDICATORS

1. Card Accessed. . . . . Green LED
2. DSP Fault. . . . . Red LED

CONNECTORS

1. 100-pin Euro connector (male) . . . . . Hirose PCN13-100S-2.54DS
   For card connector pin connections see Table 2, page 4.

MECHANICAL

1. Size (maximum overall dimensions as viewed from front)
   Height . . . . . (16.3 cm) 6.42"
   Width. . . . . (1.83 cm) 0.72"
   Depth . . . . . (31.9 cm)12.55"
   Weight . . . . . (375 gm) 0.828 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	Serial Data Channels 5-8	51	Serial Data Channels 1-4
2	Spare 2	52	Spare 1
3	Serial Data Channels 13-16	53	Serial Data Channels 9-12
4	Spare 7	54	Spare 4
5	Spare 6	55	Buffered Serial Clock Out
6	Spare 3	56	Spare 5
7	Serial Data Channels 21-24	57	Serial Data Channels 17-20
8	Buffered Serial Sync Out	58	Spare 8
9	Serial Data Channels 25-28	59	Spare 9
10	Spare 10	60	Serial Data Channels 29-32
11	Spare 12	61	Spare 11
12	Spare 14	62	Spare 13
13	Board Select 0*	63	Board Select 1*
14	Board Select 2*	64	Board Select 3*
15	Board Select 4*	65	Ground
16	Serial Clock	66	Serial Sync
17	Control Address Strobe (Inverted)	67	Control Write (Inverted)
18	Swap	68	Disable (Inverted)
19	Parallel Clock	69	Parallel Sync
20	Control Acknowledge (Inverted)	70	Spare Bus
21	Control Data 6	71	Control Data 7
22	Control Data 4	72	Control Data 5
23	Control Data 2	73	Control Data 3
24	Control Data 0	74	Control Data 1
25	Control Address 14	75	Control Address 15
26	Control Address 12	76	Control Address 13
27	Control Address 10	77	Control Address 11
28	Control Address 8	78	Control Address 9
29	Control Address 6	79	Control Address 7
30	Control Address 4	80	Control Address 5
31	Control Address 2	81	Control Address 3
32	Control Address 0	82	Control Address 1
33	Digital Audio Data Bus B14	83	Digital Audio Data Bus B15
34	Digital Audio Data Bus B12	84	Digital Audio Data Bus B13
35	Digital Audio Data Bus B10	85	Digital Audio Data Bus B11
36	Digital Audio Data Bus B8	86	Digital Audio Data Bus B9
37	Digital Audio Data Bus B6	87	Digital Audio Data Bus B7
38	Digital Audio Data Bus B4	88	Digital Audio Data Bus B5
39	Digital Audio Data Bus B2	89	Digital Audio Data Bus B3

Table 2 - 2032PS Card Connector Pin Connections

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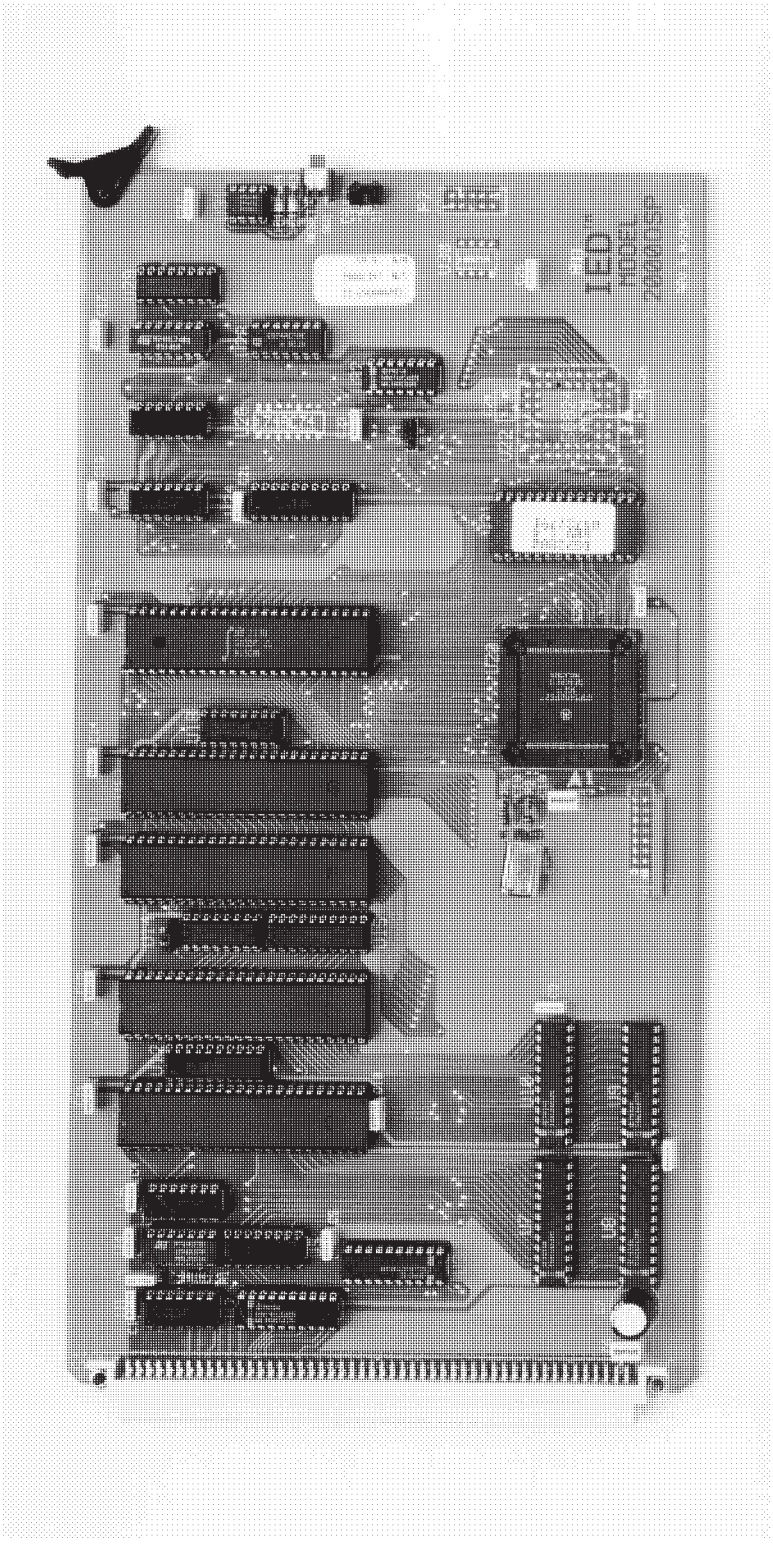

Figure 2 - 2000DSP Digital Signal Processor Card

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