



# LC8955

## Decoder Block

The decoder block converts the ADPCM data into 16-bit linear PCM data. Decoding parameters can either be set by the CPU, or read from subheader information in the ADPCM data stream.

## DAC Interface Block

Two output formats are available. The first is suitable for input to SANYO's LC7833, 7833M DA converters, and the second is the standard CD-I format. The output circuit will also accept CD-DA format input data and, by setting an LC8955 internal register, switch it through to the output pins without processing.

## Specifications

### Absolute Maximum Ratings at $V_{SS} = 0V$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{DD\ max}$	$T_a=25^\circ C$	-0.3 to +7.0	V
Input/output voltage	$V_I, V_O$	$T_a=25^\circ C$	-0.3 to $V_{DD} +0.3$	V
Allowable power dissipation	$P_d\ max$	$T_a \leq 70^\circ C$	350	mW
Operating temperature	$T_{opr}$		-30 to +70	$^\circ C$
Storage temperature	$T_{stg}$		-55 to +125	$^\circ C$
Solder temperature		10s., dipping of pins only	260	$^\circ C$

### Allowable Operating Conditions at $T_a = -30$ to $+70^\circ C$ , $V_{SS} = 0V$

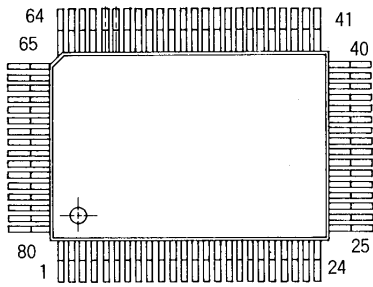
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Supply voltage	$V_{DD}$		4.5	5.0	5.5	V
Input voltage range	$V_{IN}$		0		$V_{DD}$	V

### DC Characteristics at $T_a = -30$ to $+70^\circ C$ , $V_{SS} = 0V$ , $V_{DD} = 4.5$ to $5.5V$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input high-level voltage	$V_{IH1}$	All input pins except RESETB, EOPB, IO7 to 0, SD7 to 0	2.2			V
Input low-level voltage	$V_{IL1}$				0.8	V
Input high-level voltage	$V_{IH2}$	RESETB, EOPB, IO7 to 0, SD7 to 0	2.5			V
Input low-level voltage	$V_{IL2}$				0.6	V
Output high-level voltage	$V_{OH}$	All output pins: $I_{OH} = -3mA$	2.4			V
Output low-level voltage	$V_{OL}$	All output pins: $I_{OL} = 3mA$			0.4	V
Input leakage current	$I_L$	All input pins: $V_I = V_{SS}, V_{DD}$	-25		+25	$\mu A$
Pull-up resistor	$R_{UP}$	IO0 to 7, SD0 to 7	10	20	40	$k\Omega$

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## Pin Assignment



### Type

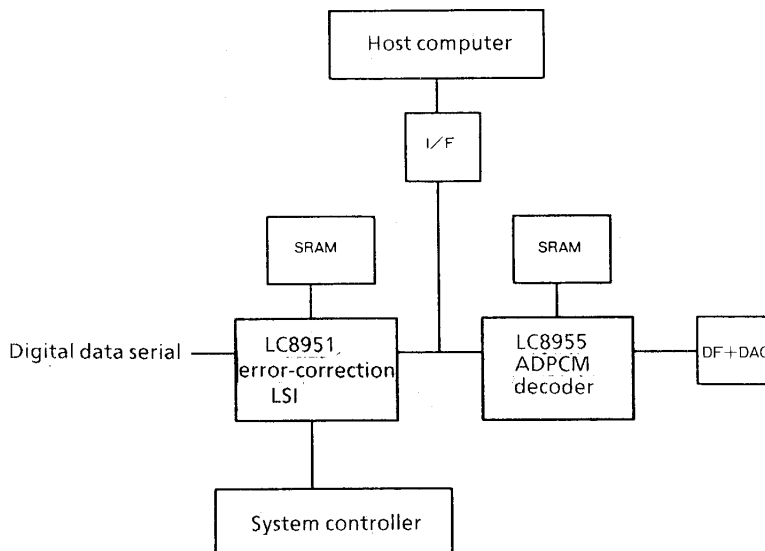
- I : Input pin
- O : Output pin
- B : Bidirectional pin
- P : Power supply pin
- NC : No connection

Note) All  $V_{DD}$  and  $V_{SS}$  pins should be connected to the positive supply or ground.

No.	Pin Name	Type
1	T2	I
2	T1	I
3	OUTSET	I
4	$V_{SS}$	P
5	A12	O
6	A11	O
7	A10	O
8	A9	O
9	A8	O
10	A7	O
11	A6	O
12	A5	O
13	$V_{SS}$	P
14	A4	O
15	A3	O
16	A2	O
17	A1	O
18	A0	O
19	MWEB	O
20	MCSB	O
21	$V_{SS}$	P
22	IO7	B
23	IO6	B
24	IO5	B
25	IO4	B
26	IO3	B
27	IO2	B
28	IO1	B
29	IO0	B
30	DD7	I
31	$V_{DD}$	P
32	DD6	I
33	DD5	I
34	DD4	I
35	DD3	I
36	DD2	I
37	DD1	I
38	DD0	I
39	EFLAG	I
40	READB	O

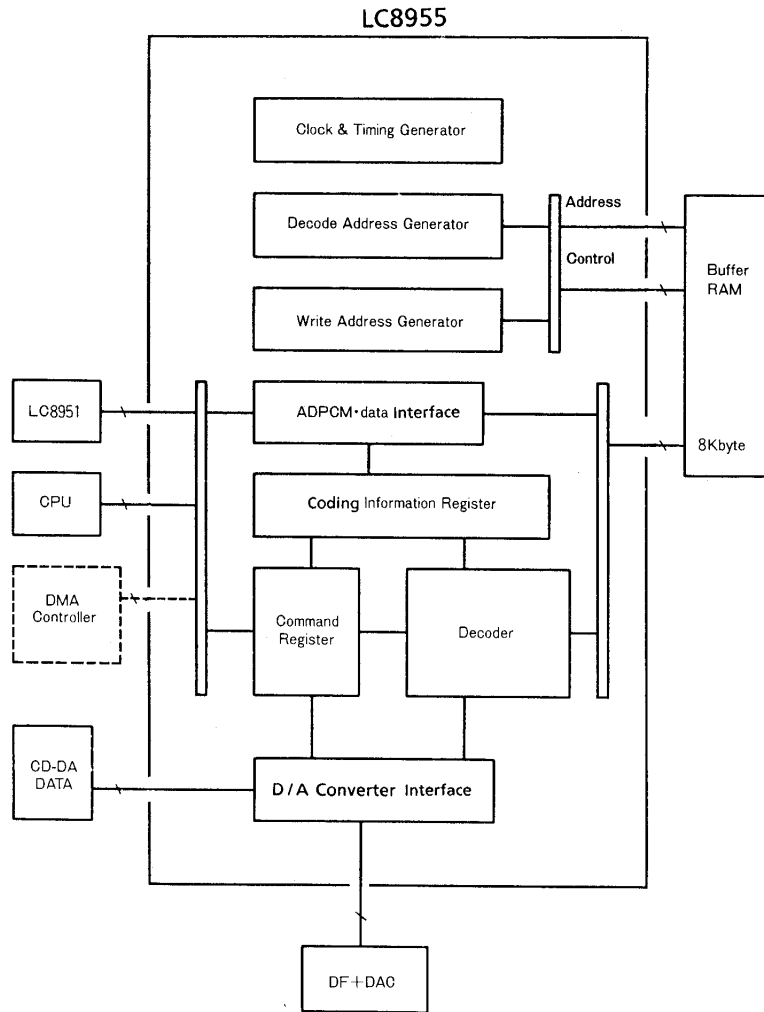
No.	Pin Name	Type
41	WAITB	I
42	MCK	I
43	DTENB	I
44	EOPB	I
45	SD7	B
46	SD6	B
47	SD5	B
48	SD4	B
49	SD3	B
50	SD2	B
51	SD1	B
52	$V_{SS}$	P
53	SD0	B
54	SA1	I
55	SA0	I
56	CSB	I
57	RDB	I
58	WRB	I
59	BUSY	O
60	BUFFULL	O
61	UNDFLOW	O
62	DATAEMP	O
63	MEMPHAS	O
64	MBITSPL	O
65	MSPLFRQ	O
66	MSTEMON	O
67	RESETB	I
68	LRCLK	O
69	WCLK	O
70	DATA	O
71	BCLK	O
72	CLRCLK	I
73	$V_{DD}$	P
74	CWCLK	I
75	CDATA	I
76	CBCLK	I
77	REQB	O
78	DACKB	I
79	READYB	O
80	DONEB	I

## System Diagram



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## Block Diagram



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