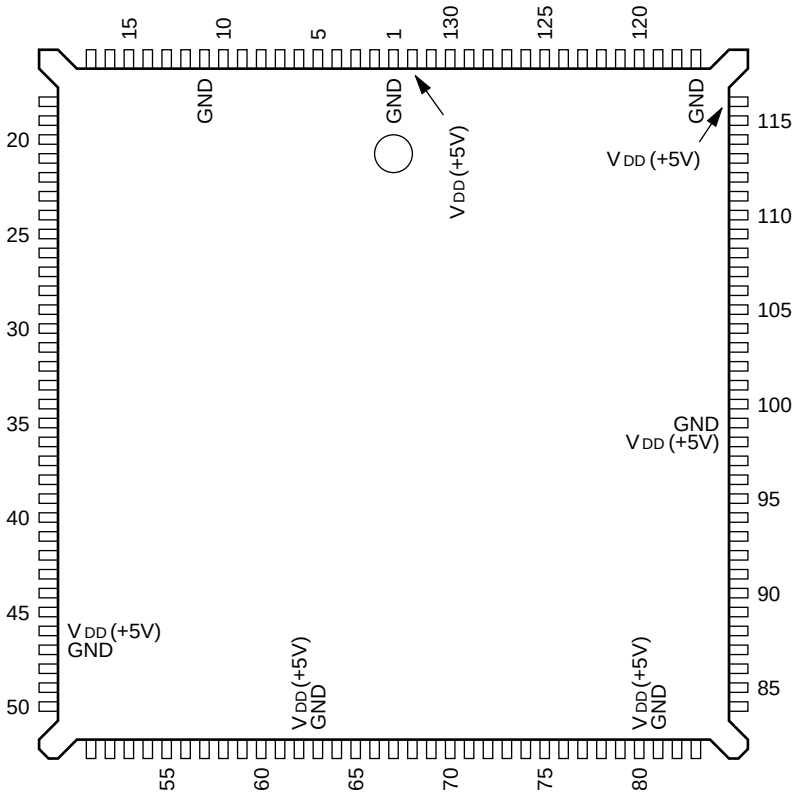
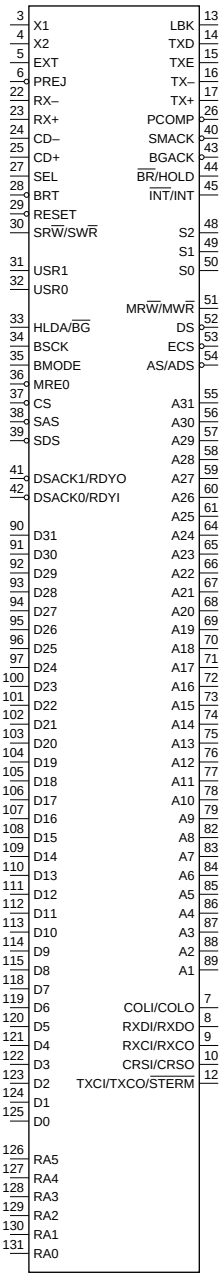
C-MOS SYSTEMS-ORIENTED NETWORK INTERFACE CONTROLLER (SONIC)

- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	–	GND	34	I	BSCK	67	O	A21	100	I/O	D23
2	–	ANGND	35	I	BMODE	68	O	A20	101	I/O	D22
3	I/O	X1	36	I	$\overline{\text{MREO}}$	69	O	A19	102	I/O	D21
4	I	X2	37	I	$\overline{\text{CS}}$	70	O	A18	103	I/O	D20
5	I	EXT	38	I	$\overline{\text{SAS}}$	71	O	A17	104	I/O	D19
6	I	$\overline{\text{PREJ}}$	39	I	$\overline{\text{SDS}}$	72	O	A16	105	I/O	D18
7	I,O	COLI/COLO	40	O	$\overline{\text{SMACK}}$	73	O	A15	106	I/O	D17
8	I,O	RXDI/RXDO	41	I/O	$\overline{\text{DSACK1}}$/$\overline{\text{RDYO}}$	74	O	A14	107	I/O	D16
9	I,O	RXCI/RXCO	42	I/O	$\overline{\text{DSACK0}}$/$\overline{\text{RDYI}}$	75	O	A13	108	I/O	D15
10	I,O	CRSI/CRSO	43	O	$\overline{\text{BGACK}}$	76	O	A12	109	I/O	D14
11	–	GND	44	O	$\overline{\text{BR}}$/HOLD	77	O	A11	110	I/O	D13
12	I,O	TXCI/TXCO/$\overline{\text{STERM}}$	45	O	$\overline{\text{INT}}$/INT	78	O	A10	111	I/O	D12
13	O	LBK	46	–	V_{DD}	79	O	A9	112	I/O	D11
14	O	TXD	47	–	GND	80	–	V_{DD}	113	I/O	D10
15	O	TXE	48	O	S2	81	–	GND	114	I/O	D9
16	O	TX–	49	O	S1	82	O	A8	115	I/O	D8
17	O	TX+	50	O	S0	83	O	A7	116	–	V_{DD}
18	–	TXGND	51	O	MR$\overline{\text{W}}$/MW$\overline{\text{R}}$	84	O	A6	117	–	GND
19	–	TXV_{DD}	52	O	$\overline{\text{DS}}$	85	O	A5	118	I/O	D7
20	–	$PLLV_{DD}$	53	O	$\overline{\text{ECS}}$	86	O	A4	119	I/O	D6
21	–	RXV_{DD}	54	O	$\overline{\text{AS}}$/$\overline{\text{ADS}}$	87	O	A3	120	I/O	D5
22	I	RX–	55	O	A31	88	O	A2	121	I/O	D4
23	I	RX+	56	O	A30	89	O	A1	122	I/O	D3
24	I	CD–	57	O	A29	90	I/O	D31	123	I/O	D2
25	I	CD+	58	O	A28	91	I/O	D30	124	I/O	D1
26	O	$\overline{\text{PCOMP}}$	59	O	A27	92	I/O	D29	125	I/O	D0
27	I	SEL	60	O	A26	93	I/O	D28	126	I	RA5
28	I	$\overline{\text{BRT}}$	61	O	A25	94	I/O	D27	127	I	RA4
29	I	$\overline{\text{RESET}}$	62	–	V_{DD}	95	I/O	D26	128	I	RA3
30	I	SR$\overline{\text{W}}$/SW$\overline{\text{R}}$	63	–	GND	96	I/O	D25	129	I	RA2
31	I/O	USR1	64	O	A24	97	I/O	D24	130	I	RA1
32	I/O	USR0	65	O	A23	98	–	V_{DD}	131	I	RA0
33	I	HLDA/$\overline{\text{BG}}$	66	O	A22	99	–	GND	132	–	V_{DD}



INPUT

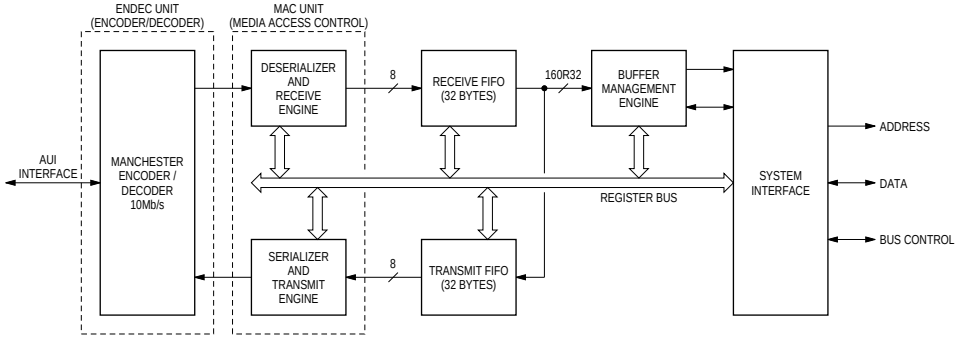
BG	; BUS GRANT (BMODE=1)
BMODE	; BUS MODE
BRT	; BUS RETRY
BSCK	; BUS CLOCK
CD (+, –)	; COLLISION (+, –) (EXT=1)
COLI	; COLLISION DETECT INPUT (EXT=1)
CRSI	; CARRLER SENSE INPUT (EXT=1)
CS	; CHIP SELECT
EXT	; EXTERNAL ENDEC SELECT
HLDA	; HOLD ACKNOWLEDGE (BMODE=0)
MREO	; MEMORY REPUEST
PREJ	; PACKET REJECT
RA0-RA5	; REGISTER ADDRESS BUS
RDYI	; READY INPUT (BMODE=0)
RESET	; RESET
RXCI	; RECEIVE CLOCK INPUT (EXT=1)
RXDI	; RECEIVE DATA INPUT (EXT=1)
RX (+, –)	; RECEIVE (+, –) (EXT=1)
SAS	; SLAVE ADDRESS STROBE
SDS	; SLAVE DATA STROBE
SEL	; MODE SELECT (EXT=0)
SRW	; SLAVE READ/WRITE STROBE (BMODE=1)
STERM	; SYNCHRONOUS TERMINATION (BMODE=1)
SWR	; SLAVE READ/WRITE STROBE (BMODE=0)
TXCI	; TRANSMIT CLOCK INPUT (EXT=1)
X2	; CRYSTAL FEEDBACK INPUT

OUTPUT

A1-A31	; ADDRESS BUS
ADS	; ADDRESS STROBE (BMODE=0)
AS	; ADDRESS STROBE (BMODE=1)
BGACK	; BUS GRANT ACKNOWLEDGE (BMODE=1)
BR	; BUS REQUEST (BMODE=1)
COLO	; COLLISION OUTPUT (EXT=0)
CRSO	; CARRIER SENSE OUTPUT (EXT=1)
DS	; DATA STROBE
ECS	; EARLY CYCLE START
HOLD	; HOLD REQUEST (BMODE=0)
INT	; INTERRUPT (BMODE=0)
INT	; INTERRUPT (BMODE=1)
LBK	; LOOPBACK
MRW	; MEMORY READ / WRITE STROBE (BMODE=1)
MWR	; MEMORY READ / WRITE STROBE (BMODE=0)
PCOMP	; PACKET COMPRESSION
RDYO	; READY OUTPUT (BMODE=0)
RXDO	; RECEIVE DATA OUTPUT (EXT=0)
RXCO	; RECEIVE CLOCK OUTPUT (EXT=0)
S0-S2	; BUS STATUS
SMACK	; SLAVE AND MEMORY ACKNOWLEDGE
TXCO	; TRANSMIT CLOCK OUTPUT (EXT=0)
TXD	; TRANSMIT DATA
TXE	; TRANSMIT ENABLE
TX (+, –)	; TRANSMIT (+, –) (EXT=1)

INPUT/OUTPUT

D0-D31	; DATA BUS
DSACK (0, 1)	; DATA AND SIZE ACKNOWLEDGE (0, 1) (BMODE=1)
USR (0, 1)	; USER DEFINABLE (0, 1)
X1	; CRYSTAL DRIVE OR EXTERNAL OSCILLATOR INPUT


ENDEC UNIT
(ENCODER/DECODER)
MAC UNIT
(MEDIA ACCESS CONTROL)
AUI
INTERFACE
MANCHESTER
ENCODER /
DECODER
10Mb/s
DESERIALIZER
AND
RECEIVE
ENGINE
8
RECEIVE FIFO
(32 BYTES)
160R32
BUFFER
MANAGEMENT
ENGINE
SYSTEM
INTERFACE
ADDRESS
DATA
BUS CONTROL
REGISTER BUS
SERIALIZER
AND
TRANSMIT
ENGINE
8
TRANSMIT FIFO
(32 BYTES)