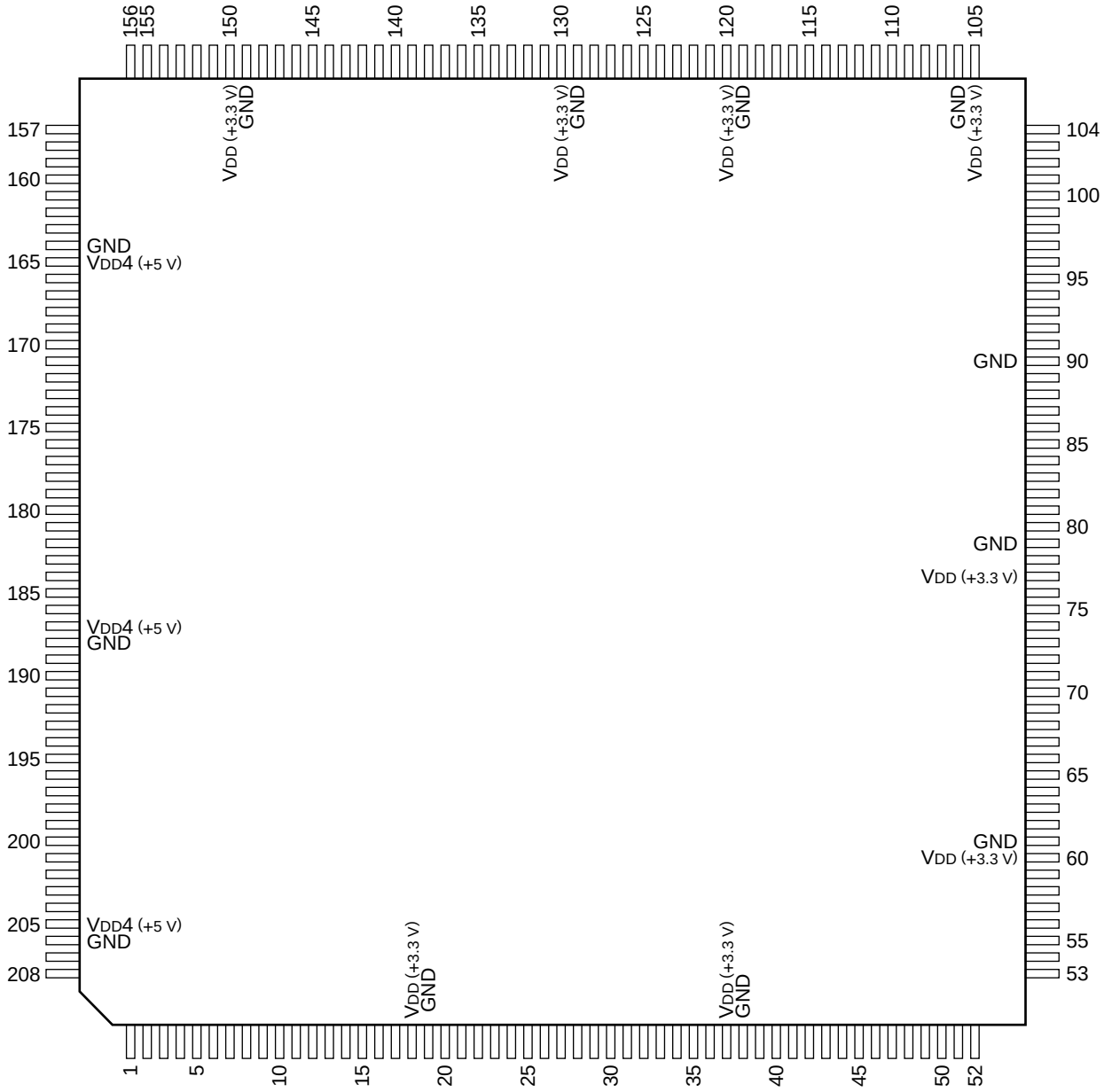
C-MOS RAID CONTROLLER (GATE ARRY)

—TOP VIEW—



(V_{DD} = +3.3 V, $V_{DD}4$ = +5 V)

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	DATAIO0	53	O	THOUT	105	—	V_{DD}	157	O	DLYAOUT6
2	I/O	DATAIO1	54	I	SCAN0	106	—	GND	158	O	DLYAOUT5
3	I/O	DATAIO2	55	I	SCAN1	107	I	RST	159	O	DLYAOUT4
4	I/O	DATAIO3	56	I	SCAN2	108	O	RSTABR	160	O	DLYAOUT3
5	I/O	DATAIO4	57	O	SCAN3	109	O	RSTABW	161	O	DLYAOUT2
6	I/O	DATAIO5	58	I	TSTZ	110	O	RSTCR	162	O	DLYAOUT1
7	I/O	DATAIO6	59	I	IDDTEST	111	O	RSTCW	163	O	DLYAOUT0
8	I/O	DATAIO7	60	—	V_{DD}	112	O	SCNTCOR	164	—	GND
9	I/O	DATAIO8	61	—	GND	113	O	SCNT1	165	—	$V_{DD}4$
10	I/O	DATAIO9	62	O	DUMYGET	114	O	SCNTRAID	166	I	H200SELI
11	I/O	DATAIO10	63	O	GET	115	O	START	167	I	DLYCIN9
12	I/O	DATAIO11	64	O	$\overline{IV}$	116	I	$\overline{SV}$	168	I	DLYCIN8
13	I/O	DATAIO12	65	O	KEY	117	O	WCNT1	169	I	DLYCIN7
14	I/O	DATAIO13	66	O	PLAYBSY	118	O	WCNTWID	170	I	DLYCIN6
15	I/O	DATAIO14	67	O	RECPLAY	119	—	GND	171	I	DLYCIN5
16	I/O	DATAIO15	68	O	PUT	120	—	V_{DD}	172	I	DLYCIN4
17	I/O	DATAIO16	69	O	REAB	121	O	WCT0	173	I	DLYCIN3
18	—	V_{DD}	70	O	REC	122	O	WEAB	174	I	DLYCIN2
19	—	GND	71	O	REVOUTL	123	O	WEC	175	I	DLYCIN1
20	I/O	DATAIO17	72	O	REVOUTU	124	O	WEVINL	176	I	DLYCIN0
21	I/O	DATAIO18	73	O	RECBSY	125	O	WEVINU	177	I	DLYBIN9
22	I/O	DATAIO19	74	O	DSTART	126	O	WEVPL	178	I	DLYBIN8
23	I/O	DATAIO20	75	I	SREQ	127	O	WEVPU	179	I	DLYBIN7
24	I/O	DATAIO21	76	I	OFFSET	128	O	PT	180	I	DLYBIN6
25	I/O	DATAIO22	77	—	V_{DD}	129	—	GND	181	I	DLYBIN5
26	I/O	DATAIO23	78	I	CLOCK	130	—	V_{DD}	182	I	DLYBIN4
27	I/O	DATAIO24	79	—	GND	131	O	H200SEL0	183	I	DLYBIN3
28	I/O	DATAIO25	80	I	VI0	132	O	DLYCOUT9	184	I	DLYBIN2
29	I/O	DATAIO26	81	I	VI1	133	O	DLYCOUT8	185	I	DLYBIN1
30	I/O	DATAIO27	82	I	VI2	134	O	DLYCOUT7	186	I	DLYBIN0
31	I/O	DATAIO28	83	I	VI3	135	O	DLYCOUT6	187	—	$V_{DD}4$
32	I/O	DATAIO29	84	I	VI4	136	O	DLYCOUT5	188	—	GND
33	I/O	DATAIO30	85	I	VI5	137	O	DLYCOUT4	189	I	DLYAIN9
34	I/O	DATAIO31	86	I	VI6	138	O	DLYCOUT3	190	I	DLYAIN8
35	O	EN	87	I	VI7	139	O	DLYCOUT2	191	I	DLYAIN7
36	O	$\overline{EV}$	88	I	VI8	140	O	DLYCOUT1	192	I	DLYAIN6
37	—	V_{DD}	89	I	VI9	141	O	DLYCOUT0	193	I	DLYAIN5
38	—	GND	90	—	GND	142	O	DLYBOUT9	194	I	DLYAIN4
39	O	CSVOUTL	91	O	VO0	143	O	DLYBOUT8	195	I	DLYAIN3
40	O	CSVOUTU	92	O	VO1	144	O	DLYBOUT7	196	I	DLYAIN2
41	I	$\overline{CTL}$	93	O	VO2	145	O	DLYBOUT6	197	I	DLYAIN1
42	O	DEND	94	O	VO3	146	O	DLYBOUT5	198	I	DLYAIN0
43	O	DOUTCTL	95	O	VO4	147	O	DLYBOUT4	199	I	PEN
44	O	DREQCTL0	96	O	VO5	148	O	DLYBOUT3	200	I	GEN
45	O	DREQCTL1	97	O	VO6	149	—	GND	201	I	$\overline{AFPA}$
46	O	READCTL0	98	O	VO7	150	—	V_{DD}	202	I	$\overline{AFDT}$
47	O	READCTL1	99	O	VO8	151	O	DLYBOUT2	203	I	$\overline{EMPDT}$
48	O	WRITECTL0	100	O	VO9	152	O	DLYBOUT1	204	I	$\overline{EF}$
49	O	WRITECTL1	101	O	VSIG0	153	O	DLYBOUT0	205	—	$V_{DD}4$
50	O	LCNTLSB	102	O	VSIG1	154	O	DLYAOUT9	206	—	GND
51	O	DACT	103	O	VSIG2	155	O	DLYAOUT8	207	I	VTEST
52	O	EORCTL	104	O	VSIG3	156	O	DLYAOUT7	208	I	PBINH

INPUT

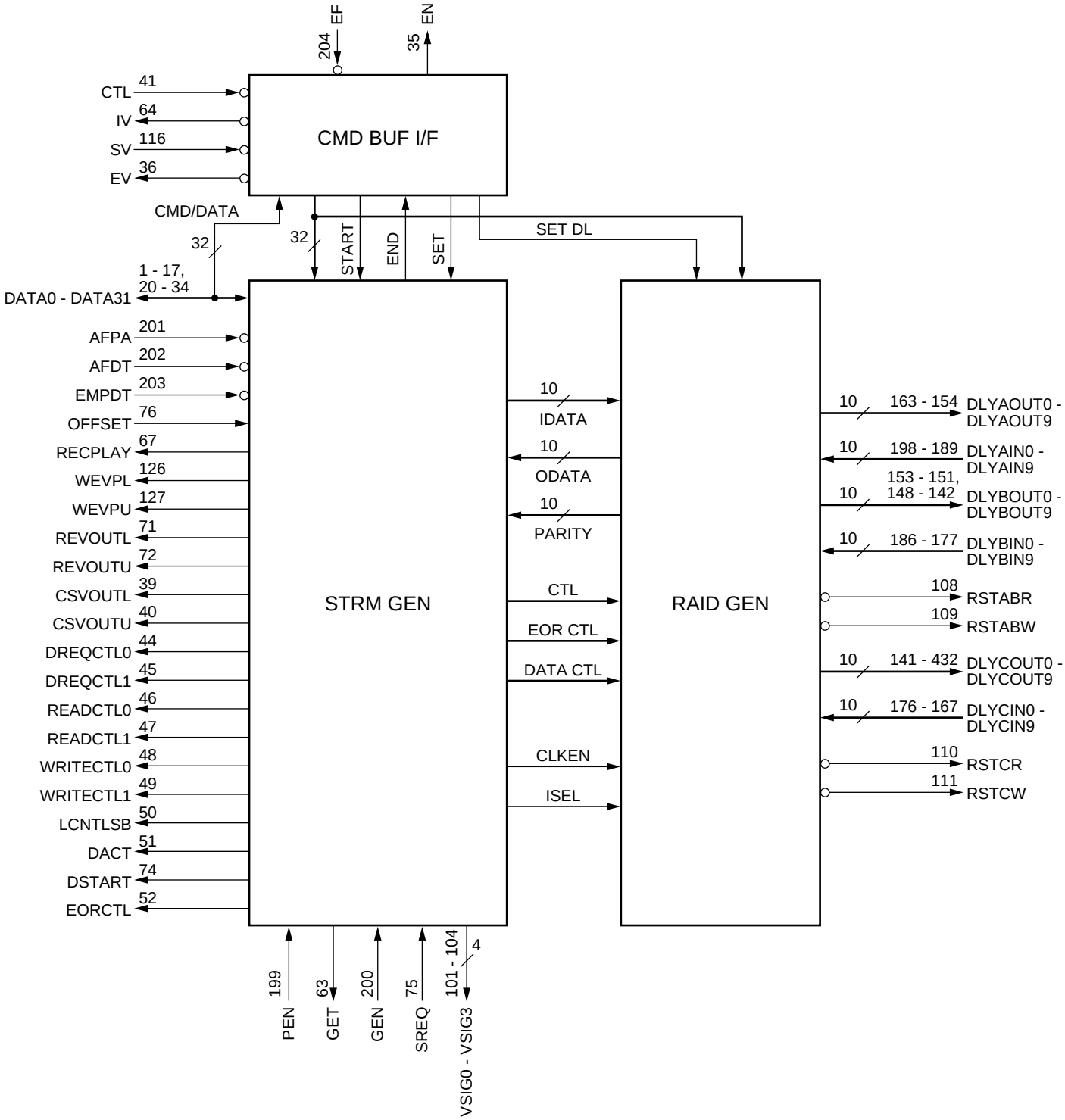
$\overline{\text{AFDT}}$	: ALMOST FULL FROM BUFFER FOR VIDEO (REC)
$\overline{\text{AFPA}}$	: ALMOST FULL FROM BUFFER FOR PARITY (REC)
CLOCK	: SYSTEM CLOCK
$\overline{\text{CTL}}$	: DMAC CONTROL
DLYAIN0 - DLYAIN9	: DATA INPUT FROM DELAY A
DLYBIN0 - DLYBIN9	: DATA INPUT FROM DELAY B
DLYCIN0 - DLYCIN9	: DATA INPUT FROM DELAY C
$\overline{\text{EF}}$	: EMPTY FROM SEQUENCE BUFFER
$\overline{\text{EMPDT}}$	: EMPTY FROM BUFFER FOR PLAYING (PLAY)
GEN	: GET ENABLE FROM VIDEO BLOCK
H200SELI	: DUMMY COLOR SELECT FROM DELAY C
IDDTEST	: IDD TEST
OFFSET	: OFFSET FOR BUFFER FROM DMAC
PBINH	: PLAYBACK INHIBIT
PEN	: PUT ENABLE FROM VIDEO BLOCK
RST	: RESET
SCAN0 - SCAN2	: SCAN TEST
$\overline{\text{SREQ}}$	: S REQUEST FROM DMAC
$\overline{\text{SV}}$	: START VIDEO
TSTZ	: HIGH IMPEDANCE TEST
VI0 - VI9	: VIDEO
VTEST	: VIDEO TEST

OUTPUT

CSVOUTL	: CHIP SELECT FOR PLAYING (LOWER SIDE)
CSVOUTU	: CHIP SELECT FOR PLAYING (UPPER SIDE)
DACT	: DATA ACTIVE
DEND	: END OF DATA PACK SEQUENCE
DLYAOUT0 - DLYAOUT9	: DATA OUTPUT TO DELAY A
DLYBOUT0 - DLYBOUT9	: DATA OUTPUT TO DELAY B
DLYCOUT0 - DLYCOUT9	: DATA OUTPUT TO DELAY C
DOUTCTL	: DATA OUT ENABLE
DREQCTL0, DRECCTL1	: DATA REQUEST SEQUENCE
DSTART	: DATA START SEQUENCE
DUMYGET	: DUMMY GET
EN	: READ ENABLE
EORCTL	: EOR SEQUENCE
$\overline{\text{EV}}$	: END VIDEO
GET	: GET
H200SELO	: DUMMY COLOR SELECT TO DELAY C
$\overline{\text{IV}}$	: INTERRUPT VIDEO
KEY	: KEY MODE
LCNTLSB	: LSB OF LOOP COUNTER
PLAYBSY	: PLAY BUSY
PT	: 10-BIT MODE
PUT	: PUT
REAB	: READ ENABLE TO DELAY A AND B
READCTL0, READCTL1	: READ SEQUENCE
REC	: READ ENABLE TO DELAY C
RECBSY	: REC BUSY
RECPLAY	: REC/PLAY
REVOUTL	: READ ENABLE FOR PLAYING (LOWER)
REVOUTU	: READ ENABLE FOR PLAYING (UPPER)
RSTABR	: RESET TO DELAY A AND B READ
RSTABW	: RESET TO DELAY A AND B WRITE
RSTCR	: RESET TO DELAY C READ
RSTCW	: RESET TO DELAY C WRITE
SCAN3	: SCAN TEST
SCNT1	: STREAM COUNT 1
SCNTCOR	: CORRECT SIGNAL IN STREAM COUNT
SCNTRAID	: STREAM COUNT RAID
START	: START SIGNAL OF DATA SEQUENCE
THOUT	: TH TEST
VO0 - VO9	: VIDEO
VSIG0 - VSIG3	: VIDEO BLOCK SIGNAL
WCNT1	: WORD COUNT 1
WCNTWID	: WORD COUNT WIDTH
WCT0	: LSB OF WORD COUNT
WEAB	: WRITE ENABLE TO DELAY A AND B
WEC	: WRITE ENABLE TO DELAY C
WEVINL	: WRITE ENABLE TO BUFFER VIDEO IN DMA SIDE (LOWER)
WEVINU	: WRITE ENABLE TO BUFFER VIDEO IN DMA SIDE (UPPER)
WEVPL	: WRITE ENABLE TO BUFFER PARITY IN DMA SIDE (LOWER)
WEVPU	: WRITE ENABLE TO BUFFER PARITY IN DMA SIDE (UPPER)
WRITECTL0, WRITECTL1	: WRITE SEQUENCE

INPUT/OUTPUT

DATAIO0 - DATAIO31	: DATA


CMD BUF I/F
STRM GEN
RAID GEN
204
EF
35
EN
CTL
41
IV
64
SV
116
EV
36
CMD/DATA
32
32
START
END
SET
SET DL
1 - 17,
20 - 34
DATA0 - DATA31
AFPA
201
AFDT
202
EMPDT
203
OFFSET
76
RECPLAY
67
WEVPL
126
WEVPU
127
REVOUTL
71
REVOUTU
72
CSVOUTL
39
CSVOUTU
40
DREQCTL0
44
DREQCTL1
45
READCTL0
46
READCTL1
47
WRITECTL0
48
WRITECTL1
49
LCNTLSB
50
DACT
51
DSTART
74
EORCTL
52
10
IDATA
10
ODATA
10
PARITY
CTL
EOR CTL
DATA CTL
CLKEN
ISEL
10
163 - 154
DLYAOUT0 -
DLYAOUT9
10
198 - 189
DLYAIN0 -
DLYAIN9
10
153 - 151,
148 - 142
DLYBOUT0 -
DLYBOUT9
10
186 - 177
DLYBIN0 -
DLYBIN9
108
RSTABR
109
RSTABW
10
141 - 432
DLYCOUT0 -
DLYCOUT9
10
176 - 167
DLYCIN0 -
DLYCIN9
110
RSTCR
111
RSTCW
199
PEN
63
GET
200
GEN
75
SREQ
101 - 104
4
VSIG0 - VSIG3