

4 Signals and DC Characteristics

4.1 DC Characteristics and Pin Assignment

Table 4.1 : DC Electrical Characteristics (T_A = 0°C to 70°C, V_{DD} = 5V±5%)

SYMBOL	Parameter	Test Conditions	Min	Max
V _{IH}	Minimum input, high level	–	2.0 V	–
V _{IL}	Maximum input, low level	–	–	0.8 V
V _{OH}	Minimum output, high voltage	V _{DD} = 4.75 V, I _{OH} = –4.0 mA	2.4 V	–
V _{OL}	Maximum output, low voltage	V _{DD} = 4.75 V, I _{OL} = 4.0 mA	–	0.4 V
I _{IL}	Maximum input, low leakage current	V _{DD} = 5.25 V, V _{IN} = 0 V	–	–1.0 µA
I _{IH}	Maximum input, high leakage current	V _{DD} = 5.25 V, V _{IN} = V _{DD}	–	1.0 µA
I _{OZH}	Maximum output leakage current	V _{DD} = 5.25 V	–	10 µA
I _{OZL}		V _{DD} = 5.25 V	–	–10 µA
I _{DD}	V _{DD} supply current	V _{DD} = 5.25 V, clock = 33 MHz	–	70 mA
I _{DDSB}	Static V _{DD} supply current	V _{DD} = 5.25 V, V _{IN} = V _{DD} or V _{SS} outputs open	–	100 µA

Table 4.2 : VMEbus Address Lines A01-05 and A09-31

Signal	100-pin PQFP		Signal	100-pin PQFP
A01	94		A18	31
A02	95		A19	32
A03	96		A20	33
A04	97		A21	34
A05	98		A22	35
A09	99		A23	45
A10	100		A24	46
A11	5		A25	47
A12	6		A26	48
A13	8		A27	49
A14	22		A28	50
A15	24		A29	55
A16	25		A30	56
A17	30		A31	58

Table 4.3 : VMEbus/Local Data Bus

Signal	100-pin PQFP		Signal	100-pin PQFP
D0	10		D8	1
D1	11		D9	4
D2	12		D10	26
D3	13		D11	29
D4	16		D12	52
D5	17		D13	54
D6	18		D14	78
D7	19		D15	79

Table 4.4 : Numerical Pin List

Pin number	Pin name	Pin type	Input Type	Output Type
1	D[8]	I/O	TTL	TS
2	VDD	-	-	-
3	VSS	-	-	-
4	D[9]	I/O	TTL	TS
5	A[11]	I	TTL	-
6	A[12]	I	TTL	-
7	LRESET	O	-	OD
8	A[13]	I	TTL	-
9	AUXADD/LIRQ3	O	-	TP
10	D[0]	I/O	TTL	TS
11	D[1]	I/O	TTL	TS
12	D[2]	I/O	TTL	TS
13	D[3]	I/O	TTL	TS
14	VSS	-	-	-
15	VSS	-	-	-
16	D[4]	I/O	TTL	TS
17	D[5]	I/O	TTL	TS
18	D[6]	I/O	TTL	TS
19	D[7]	I/O	TTL	TS
20	SLOCLK/LIRQ2	O	-	TP
21	LIRQ1	O	-	TP
22	A[14]	I	TTL	-
23	LIRQ0	O	-	TP
24	A[15]	I	TTL	-
25	A[16]	I	TTL	-
26	D[10]	I/O	TTL	TS
27	VSS	-	-	-
28	VDD	-	-	-
29	D[11]	I/O	TTL	TS
30	A[17]	I	TTL	-
31	A[18]	I	TTL	-
32	A[19]	I	TTL	-

I: Input, I/O: Bidirectional, O: Output, OD: Open Drain, TP: Totem Pole, TS: Tri-State output, TTL: Input with TTL threshold, TTL Sch.: TTL Schmitt trigger input.

Table 4.4 : Numerical Pin List (Continued)

Pin number.	Pin name	Pin type	Input Type	Output Type
33	A[20]	I	TTL	-
34	A[21]	I	TTL	-
35	A[22]	I	TTL	-
36	LA[3]	I	TTL	-
37	LA[4]	I	TTL	-
38	DS0*	I	TTL Sch.	-
39	DS1*	I	TTL Sch.	-
40	VDD	-	-	-
41	CLOCK	I	TTL	-
42	LA[5]	I	TTL	-
43	AS*	I	TTL Sch.	-
44	WRITE*	I	TTL Sch.	-
45	A[23]	I	TTL	-
46	A[24]	I	TTL	-
47	A[25]	I	TTL	-
48	A[26]	I	TTL	-
49	A[27]	I	TTL	-
50	A[28]	I	TTL	-
51	LUDS	I	TTL Sch.	-
52	D[12]	I/O	TTL	TS
53	VDD	-	-	-
54	D[13]	I/O	TTL	TS
55	A[29]	I	TTL	-
56	A[30]	I	TTL	-
57	VIRQ1	O	-	TP
58	A[31]	I	TTL	-
59	VIRQ2	O	-	TP
60	VIRQ3	O	-	TP
61	LDTACK	O	-	TP
62	VDTACK	O	-	TP
63	IACKOUT*	O	-	TP
64	VSS	-	-	-
65	VSS	-	-	-

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Table 4.4 : Numerical Pin List (Continued)

Pin number	Pin name	Pin type	Input Type	Output Type
66	LBENB	O	-	TP
67	VBENB	O	-	TP
68	BWK/BRD	O	-	TP
69	VIRQ4	O	-	TP
70	VIRQ5	O	-	TP
71	VIRQ6	O	-	TP
72	LWORD*	I	TTL	-
73	VIRQ7	O	-	TP
74	AM[0]	I	TTL	-
75	AM[1]	I	TTL	-
76	VSS	-	-	-
77	VSS	-	-	-
78	D[14]	I/O	TTL	TS
79	D[15]	I/O	TTL	TS
80	AM[2]	I	TTL	-
81	AM[3]	I	TTL	-
82	AM[4]	I	TTL	-
83	AM[5]	I	TTL	-
84	IACK*	I	TTL Sch.	-
85	LR/W	I	TTL Sch.	-
86	RMC/LAS	I	TTL Sch.	-
87	IACKIN*	I	TTL Sch.	-
88	SYSRESET*	I	TTL Sch.	-
89	VDD	-	-	-
90	LCE	I	TTL Sch.	-
91	LLDS	I	TTL Sch.	-
92	LA[1]	I	TTL	-
93	LA[2]	I	TTL	-
94	A[01]	I	TTL	-
95	A[02]	I	TTL	-
96	A[03]	I	TTL	-
97	A[04]	I	TTL	-
98	A[05]	I	TTL	-

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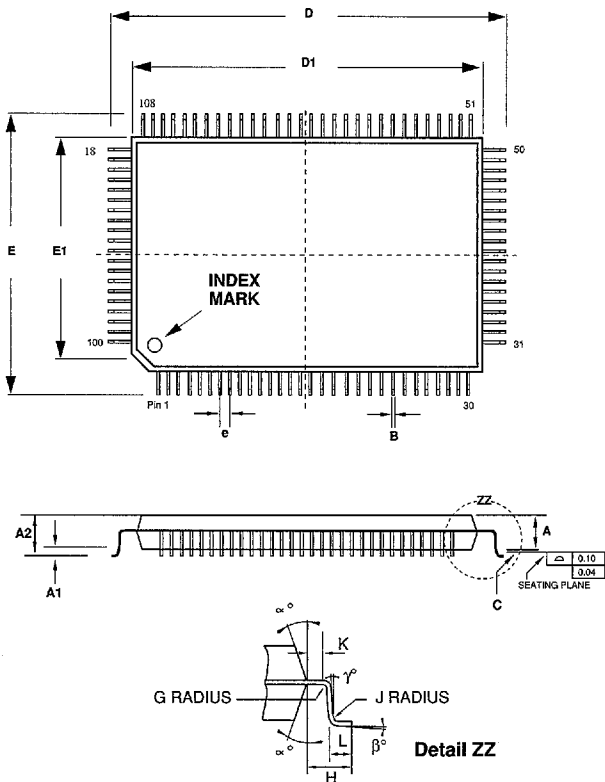
Table 4.4 : Numerical Pin List (Continued)

Pin number	Pin name	Pin type	Input Type	Output Type
99	A[09]	I	TTL	-
100	A[10]	I	TTL	-

I: Input, I/O: Bidirectional, O: Output, OD: Open Drain, TP: Totem Pole, TS: Tri-State output, TTL: Input with TTL threshold, TTL Sch.: TTL Schmitt trigger input.

Appendix E Mechanical and Ordering Information

E.1 Mechanical Information



Controlling Dimensions in mm

Dimension	Min	Max
A	—	3.40
A1	0.25	—
A2	2.57	2.87
D	23.65	24.15
D1	19.90	20.10
E	17.65	18.15
E1	13.90	14.10
L	0.65	0.95
e	0.65 BSC	
B	0.22	0.38
c	0.13	0.23
α	12	16
β°	0	7
γ°	0	—
G	0.13	—
H	1.95 REF	
J	0.13	0.30
K	0.40	—

Figure E.1 : Mechanical Dimensions for 100-Pin PQFP - Trooper II

E.2 Ordering Information

Newbridge Microsystems products are designated by a Product Code. When ordering, refer to products by their full code. For detailed mechanical drawings or alternative packaging requirements, please contact our factory directly.

