

SPC8282F1A

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DESCRIPTION

The SPC8282F1A is a PCMCIA to ISA bus host adapter chip capable of controlling two PCMCIA sockets in accordance with PCMCIA-2.1 and JEIDA-4.1 standards. It's internal registers are 82365SL compatible. It supports 8-bit and 16-bit CPU's and PCMCIA devices. It provides programmable memory and I/O windowing as well as support for ATA (IDE) PCMCIA devices. It also incorporates programmable multi-mode power management and supports interrupt steering.

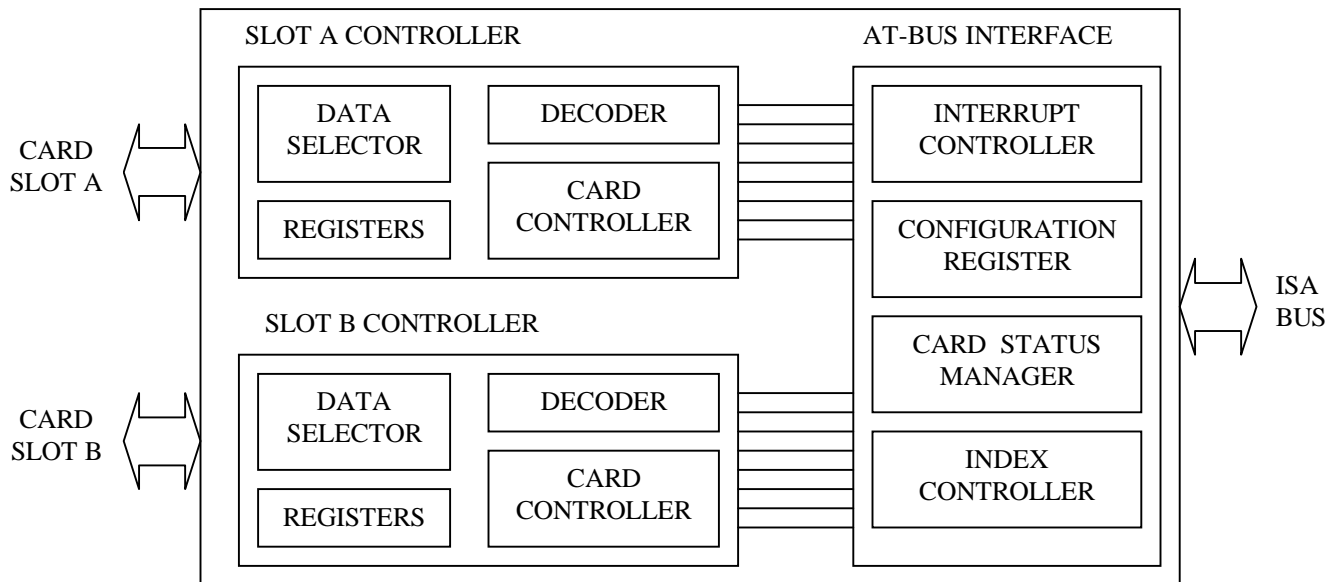
Complete Specification and a reference design (SDU8282#01) are also available.

FEATURES

- All host adapter functions in single chip.
- Direct connection to ISA (PC AT) bus.
- Direct connection to dual PCMCIA sockets.
- Dual socket interface using 208-pin PQFP.
- Five programmable memory windows per socket.
- Two programmable I/O windows per socket.
- 8 or 16 bit CPU interface.
- 8 or 16 bit PCMCIA support.
- Sockets configure-able for ATA disk interface.
- Programmable Interrupt steering.
- 3.3 V or 5.0 V operation.
- Fully compliant with PCMCIA-2.1 and JEIDA-4.1 plus DMA functions.
- Registers compatible with CL-PD7722.

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TYPICAL SYSTEM DIAGRAM



SPC8282F1A

SPC8282F1A**■ PIN CONFIGURATION**

| Pin # | Signal Name | Power | Pin # | Signal Name | Power | Pin # | Signal Name | Power | Pin # | Signal Name | Power |
|-------|-------------|-------|-------|--------------|-------|-------|--------------|-------|-------|----------------|-------|
| 1 | AVPPPGM | S | 53 | AA4 | A | 105 | BA15 | B | 157 | LA23 | V |
| 2 | AVPPVCC | S | 54 | AWAIT# | A | 106 | BA23 | B | 158 | IOCS16# | V |
| 3 | VPPVALID# | S | 55 | AA3 | A | 107 | BA12 | B | 159 | SBHE# | V |
| 4 | AVCC3# | S | 56 | AINPACK# | A | 108 | BA24 | B | 160 | MEMCS16# | V |
| 5 | AVCC5# | S | 57 | AA2 | A | 109 | BA7 | B | 161 | SA0 | V |
| 6 | A5VDET | S | 58 | AA1 | A | 110 | BA25 | B | 162 | SA1 | V |
| 7 | B5VDET | S | 59 | ABVD2_SPKR# | A | 111 | GND | B | 163 | CLK (8MHz) | V |
| 8 | AREG# | A | 60 | AA0 | A | 112 | BA6 | B | 164 | SA2 | V |
| 9 | AD3 | A | 61 | ABVD1_STSCG# | A | 113 | BA5 | B | 165 | SA3 | V |
| 10 | ACD1# | A | 62 | AD0 | A | 114 | BRESET | B | 166 | ALE | V |
| 11 | AD4 | A | 63 | AD8 | A | 115 | BA4 | B | 167 | SA4 | V |
| 12 | AD11 | A | 64 | AD1 | A | 116 | BWAIT# | B | 168 | SA5 | V |
| 13 | AD5 | A | 65 | AD9 | A | 117 | BSLOTVCC2 | B | 169 | SA6 | V |
| 14 | AD12 | A | 66 | AD2 | A | 118 | BA3 | B | 170 | IRQ3 | V |
| 15 | AD6 | A | 67 | AD10 | A | 119 | BINPACK# | B | 171 | SA7 | V |
| 16 | AD13 | A | 68 | AWP_IOCS16# | A | 120 | BA2 | B | 172 | IRQ4 | V |
| 17 | AD7 | A | 69 | ACD2# | A | 121 | BA1 | B | 173 | SA8 | V |
| 18 | AD14 | A | 70 | GND | A | 122 | BBVD2_SPKR# | B | 174 | IRQ5 | V |
| 19 | ACE1# | A | 71 | BREG# | B | 123 | BA0 | B | 175 | SA9 | V |
| 20 | AD15 | A | 72 | BD3 | B | 124 | BBVD1_STCHG# | B | 176 | SA10 | V |
| 21 | AA10 | A | 73 | BCD1# | B | 125 | BD0 | B | 177 | IRQ7 | V |
| 22 | ACE2# | A | 74 | BD4 | B | 126 | BD8 | B | 178 | SA11 | V |
| 23 | AOE# | A | 75 | BD11 | B | 127 | BD1 | B | 179 | SA12 | V |
| 24 | ASLOTVCC2 | A | 76 | BD5 | B | 128 | BD9 | B | 180 | REFRESH# | V |
| 25 | AA11 | A | 77 | BD12 | B | 129 | BD2 | B | 181 | SA13 | V |
| 26 | AIORD# | A | 78 | BD6 | B | 130 | BD10 | B | 182 | SA14 | V |
| 27 | VDD (5V) | A | 79 | GND | B | 131 | BWP_IOCS16# | B | 183 | SA15 | V |
| 28 | AA9 | A | 80 | BD13 | B | 132 | BCD2# | B | 184 | SA16 | V |
| 29 | AIOWR# | A | 81 | BD7 | B | 133 | VDD (5V) | I | 185 | IOR# | V |
| 30 | AA8 | A | 82 | BD14 | B | 134 | SD15 | I | 186 | IOW# | V |
| 31 | GND | A | 83 | BCE1# | B | 135 | SD14 | I | 187 | AE# | V |
| 32 | AA17 | A | 84 | BD15 | B | 136 | SD13 | I | 188 | IOCHRDY | V |
| 33 | AA13 | A | 85 | BA10 | B | 137 | SD12 | I | 189 | SD0 | V |
| 34 | AA18 | A | 86 | BCE2# | B | 138 | ISAVCC | I | 190 | SD1 | V |
| 35 | AA14 | A | 87 | BOE# | B | 139 | SD11 | I | 191 | OWS# | V |
| 36 | AA19 | A | 88 | BSLOTVCC1 | B | 140 | GND | I | 192 | GND | V |
| 37 | AWE# | A | 89 | BA11 | B | 141 | SD10 | I | 193 | SD2 | V |
| 38 | AA20 | A | 90 | BIORD# | B | 142 | SD9 | I | 194 | SD3 | V |
| 39 | ARDY_IREQ# | A | 91 | BA9 | B | 143 | SD8 | I | 195 | ISAVCC | V |
| 40 | AA21 | A | 92 | BIOWR# | B | 144 | MEMW# | I | 196 | SD4 | V |
| 41 | AA16 | A | 93 | BA8 | B | 145 | MEMR# | I | 197 | SD5 | V |
| 42 | AA22 | A | 94 | BA17 | B | 146 | LA17 | I | 198 | IRQ9 | V |
| 43 | AA15 | A | 95 | BA13 | B | 147 | LA18 | I | 199 | SD6 | V |
| 44 | AA23 | A | 96 | BA18 | B | 148 | IRQ14 | I | 200 | SD7 | V |
| 45 | AA12 | A | 97 | BA14 | B | 149 | LA19 | I | 201 | PWRGOOD | V |
| 46 | AA24 | A | 98 | BA19 | B | 150 | IRQ15 | I | 202 | SPKOUT#_CSEL | V |
| 47 | AA7 | A | 99 | BWE# | B | 151 | LA20 | I | 203 | INTR# | V |
| 48 | AA25 | A | 100 | BA20 | B | 152 | IRQ12 | I | 204 | BVPPPGM | S |
| 49 | AA6 | A | 101 | BRDY/IREQ# | B | 153 | LA21 | I | 205 | BVPPVCC | S |
| 50 | AA5 | A | 102 | BA21 | B | 154 | IRQ11 | I | 206 | BVCC3# | S |
| 51 | ARESET | A | 103 | BA16 | B | 155 | LA22 | I | 207 | BVCC5# | S |
| 52 | ASLOTVCC1 | A | 104 | BA22 | B | 156 | IRQ10 | I | 208 | SYSTEM VCC(5V) | S |

LEGEND

S SYSTEM VCC

A A SLOT VCC

B B SLOT VCC

I

RECOMMENDED OPERATING CONDITIONS

The SPC8282F1A has five power supply systems as follows:

| | |
|--------------------|------------------------------------------|
| System Control: | SYSTEM VCC (+5VDC recommended) |
| ISA Bus Interface: | ISAVCC (+5VDC recommended for most case) |
| SLOT A Interface: | A_SLOTVCC |
| SLOT B Interface: | B_SLOTVCC |
| Chip Core: | VDD (+5VDC only) |

SLOT A Interface and SLOT B Interface power supply may operate at LVDD (3.3 V TYP) or HVDD (5.0 V TYP). Recommended operating parameters are shown in the following tables:

| Parameter | Symbol | Condition | MIN | TYP | MAX | Unit |
|-----------------------|------------------|-----------|-----|-----|-----|------|
| Supply Voltage - high | HVDD | VSS = 0 V | 4.5 | 5.0 | 5.5 | V |
| Supply Voltage - low | LVDD | VSS = 0 V | 3.0 | 3.3 | 3.6 | V |
| Input Voltage | V _{IN} | VSS = VSS | VSS | | VDD | V |
| Operating Temperature | T _{OPR} | | -40 | 25 | 85 | °C |

7.3 INPUT DC SPECIFICATIONS

| Parameter | Symbol | Conditions | MIN | TYP | MAX | Unit |
|-----------------------------------|------------------|----------------|-----|-----|-----|------|
| Input High Voltage 1 ^a | V _{IH1} | VDD = HVDD MAX | 2.0 | | | V |
| | | VDD = LVDD MAX | 1.8 | | | V |
| Input Low Voltage 1 ^a | V _{IL1} | VDD = HVDD MIN | | | 0.8 | |
| | | VDD = LVDD MIN | | | 0.5 | V |
| Input High Voltage 2 ^b | V _{IH2} | VDD = HVDD MAX | 3.5 | | | V |
| | | VDD = LVDD MAX | 2.2 | | | V |
| Input Low Voltage 2 ^b | V _{IL2} | VDD = HVDD MIN | | | 1.0 | V |
| | | VDD = LVDD MIN | | | 0.8 | |

^a Specification applies to all input pins and input sections of all I/O pins except for CD2# and CD1#.

^b Specification applies to pins CD2# and CD1# only.

7.4 OUTPUT DC SPECIFICATIONS

| Parameter | Symbol | Conditions | MIN | MAX | Unit |
|------------------------------------|------------------|--------------------------------------------|------------|-----------|------|
| Output High Voltage 1 ^a | V _{OH1} | VDD = HVDD MIN, I _{OH1} = - 4 mA | HVDD - 0.4 | | V |
| | | VDD = LVDD MIN, I _{OH1} = - 2 mA | LVDD - 0.3 | | V |
| Output Low Voltage 1 ^a | V _{OL1} | VDD = HVDD MIN, I _{OL1} = 4 mA | | VSS + 0.4 | V |
| | | VDD = LVDD MIN, I _{OL1} = 2 mA | | VSS + 0.3 | V |
| Output High Voltage 2 ^b | V _{OH2} | VDD = HVDD MIN, I _{OH1} = - 12 mA | HVDD - 0.4 | | V |
| | | VDD = LVDD MIN, I _{OH1} = - 6 mA | LVDD - 0.3 | | V |
| Output Low Voltage 2 ^b | V _{OL2} | VDD = HVDD MIN, I _{OL1} = 12 mA | | VSS + 0.4 | V |
| | | VDD = LVDD MIN, I _{OL1} = 6 mA | | VSS + 0.3 | V |

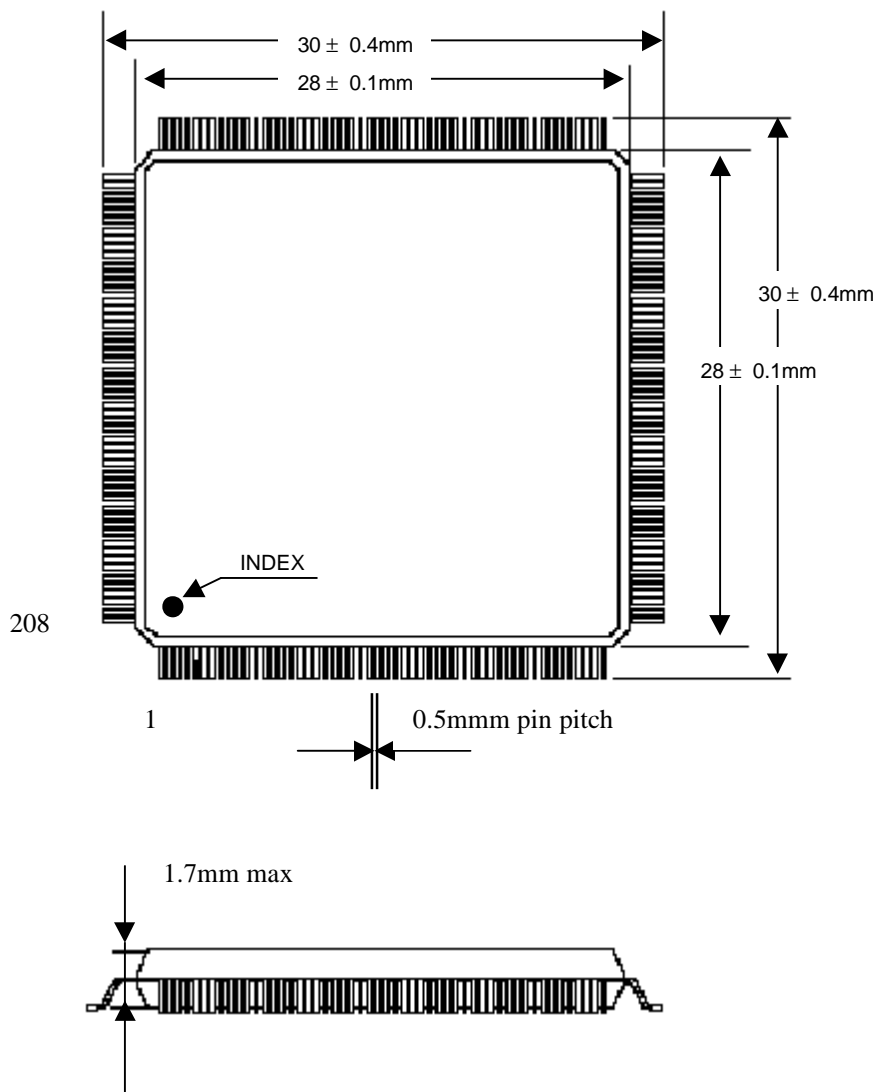
^a Specification applies to all 2/ 4 mA drive output pins and output section of the 16 bit card data bus I/O pins, D[15:0]

^b Specification applies to all 6/12 mA drive output pins and the output section of ISA data bus (SD[15:0]) and SPKROUT# I/O pins.

FALCONER**EPSON****SPC8282F1A**

MECHANICAL DATA (Package Dimension)

Plastic LQFP 208pin body size 28 x 28 x 1.4mm (LQFP22)



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