



SYCARD
TECHNOLOGY

PCCextend 125 User's Manual

Preliminary

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1.0 Introduction

Sycard Technology's PCCextend 125 Flexible CardBus extender card is a debug tool for CardBus development and test. PCCextend offers the following features:

- Low profile design compatible with type I, II and III sockets
- Supports PC Card-16, CardBus and Zoomed Video cards
- Flexible extension allows user to access both sides of PC Card
- Removable cables allows user to create any length extension
- 4 layer construction to insure low noise environment
- Vcc, Vpp1 and Vpp2 can be isolated through jumper blocks for current measurements
- Vcc LEDs indicate 3.3V or 5V operation
- Card Detect jumpers allow insertion/removal simulation
- Convenient grounding posts for scope probes or other test equipment

2.0 Using the PCCextend 125

The PCCextend 125 consists of three major subassemblies. The host interface board, card interface board and the four 34-pin cable assemblies. The host interface board is designed to be inserted into any PC Card type I, II or III socket. Four 34-pin headers are the interface to the card interface board. Four Mounting holes on the host Interface board allow the unit to be attached to any special fixturing with 2-56 screws.

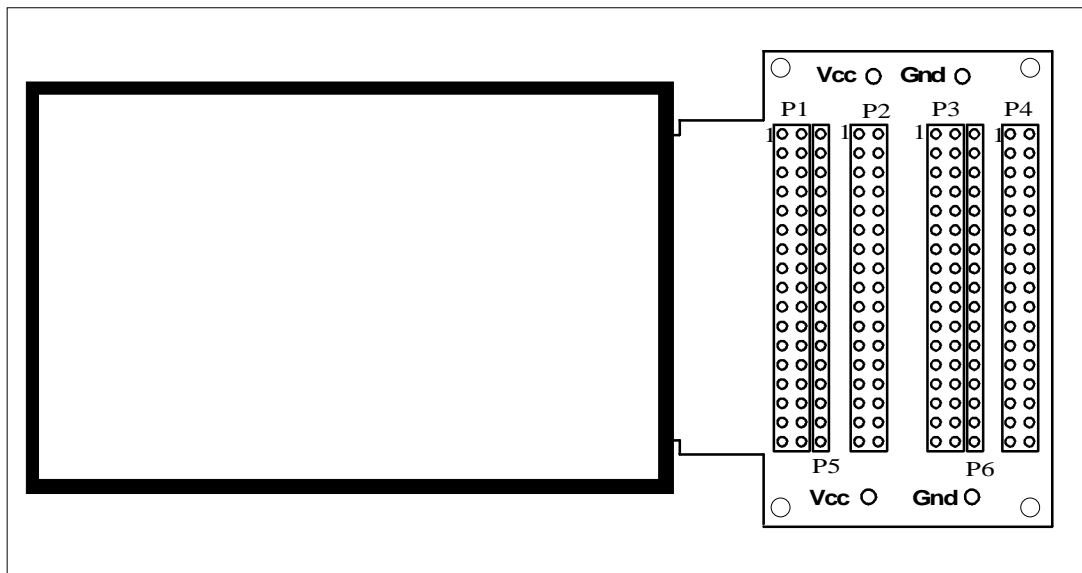


Figure 2.0-1 Host Interface Board

The card interface board is connected to the host interface via four 34-pin ribbon cables. The card interface board includes jumpers to isolate power and card detects for any special testing requirements. Dual LEDs indicate the Vcc power status. Four Mounting holes on the card interface board allow the unit to be attached to any special fixturing with 2-56 screws.

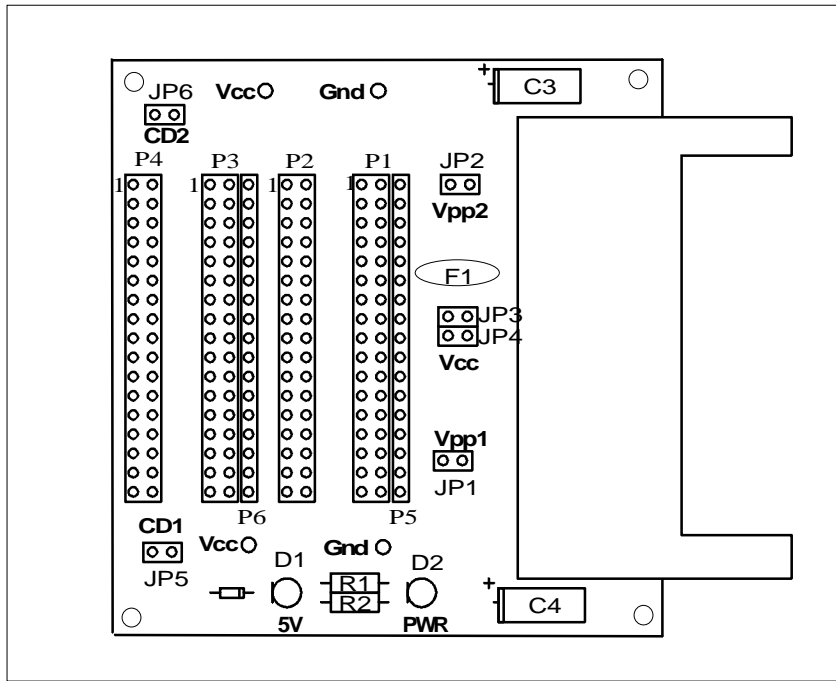


Figure 2.0-2 Card Interface Board

The PCCextend 125 must be assembled prior to use. The four 34-pin cables are attached between the host interface board and the card interface board. The cables are installed as follows:

| Cable | Host Interface Board | Card Interface Board |
|----------|----------------------|----------------------|
| Shortest | P4 | P4 |
| | P3 | P3 |
| | P2 | P2 |
| Longest | P1 | P1 |

Table 2.1-1 Cable Location

Once assembled, use of the PCCextend is straightforward. The extender card is inserted into the desired slot in the host system. Then the PC Card under test is inserted into the card connector.

Caution: Insertion and removal of the extender and PC card should be done with care. The PC Card's fragile connectors may be broken or bent if improper force is used. Both card and extender should be inserted straight without any lateral movement or force. Proper care and use of the extender card will insure years of trouble free operation.

2.2 Power Indicators

Two LED power indicators on the card interface board display the status of the socket's Vcc. The PWR LED indicates that power is applied to the board. When both the PWR LED and the 5V LED are lit, a Vcc of greater than approximately 3.5V is present. When only the PWR LED is lit, the Vcc is at a level of less than 3.5V.

Note: The power LEDs are designed to indicate the presence of power on the Vcc supply pins. The LEDs do not provide an accurate measurement of Vcc. Use a voltmeter to determine the actual operating voltage.

2.2 Current Measurements

Vcc, Vpp1 and Vpp2 power buses may be isolated from the PC Card socket through three sets of jumper blocks. Each jumper block consists of two sets of jumpers. Both jumpers must be removed to isolate the power. A current meter can be inserted to measure card current consumption.

| Supply | Jumper | Note |
|--------|-----------|--|
| Vcc | JP3 + JP4 | Jumper blocks JP3, JP4 and F1 must be removed to isolate Vcc |
| Vpp1 | JP1 | |
| Vpp2 | JP2 | |

Table 2.2-1 Current Measurement Jumpers

Caution: Care must be taken to insure that the current measuring device is inserted before turning on power to the host socket. Improper power sequencing may cause a damaging latchup condition.

2.3 Using the Card Detect Jumpers

The card interface board includes two jumper (JP5 and JP6) to interrupt the Card Detect signals, These jumpers can interrupt the card detect signals (-CD1 and -CD2) to simulate a card removal/insertion cycle.

To test the operation of these jumpers, be sure that your PC Card Software drivers are loaded. Momentarily remove both JP5 and JP6. Most software drivers will issue a removal beep followed by an insertion beep. The software may also remove power from the socket when the card is removed.

2.5 Current Protection Device

A resettable fuse on the card interface board protects the host from excessive current consumption from the card. Located at F1, the PolySwitch RXE090 resettable fuse provides low resistance operation up to 900mA. The resettable fuse is disabled at the factory. To enable the resettable fuse, remove jumper JP3 and JP4.

3.0 Ordering Information

The PCCextend 125 may be ordered as a complete unit or as individual pieces. The following ordering number may be use. Contact Sycard Technology or your distributor for pricing.

| Product | Order Number |
|------------------------------------|---------------|
| PCCextend 125 | PCCextend 125 |
| PCCextend 125 Host Interface Board | A150542-3 |
| PCCextend 125 Card Interface Board | A150543-3 |
| 5" Cable Assembly | A140010-1 |

Table 3.0-1 Ordering Information

Sycard Technology also supplies extender cards for CardBus, CompactFlash and SmartMedia. Contact Sycard directly or download information from our web site at <http://www.sycard.com>.

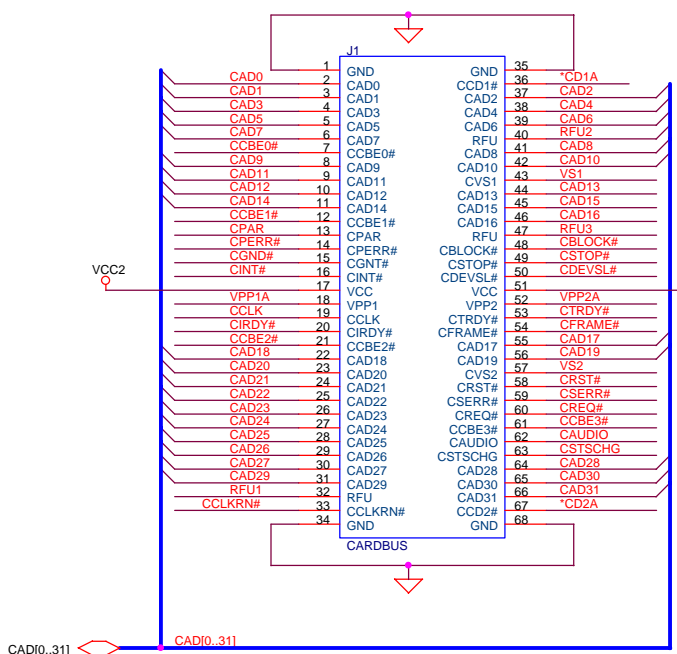
Appendix A

A. 68 Pin PC Card Socket

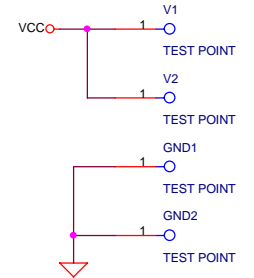
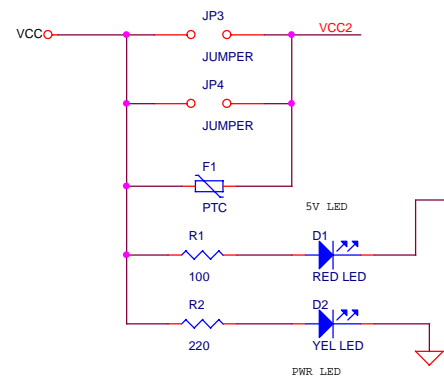
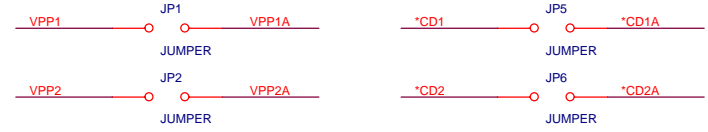
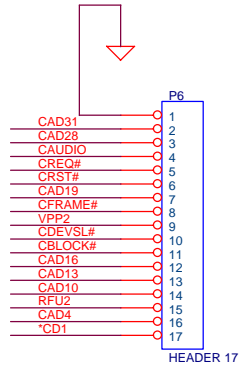
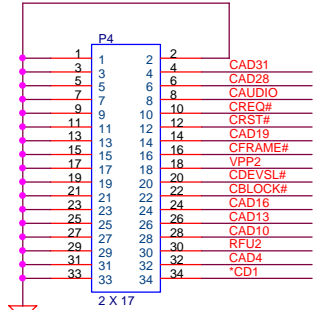
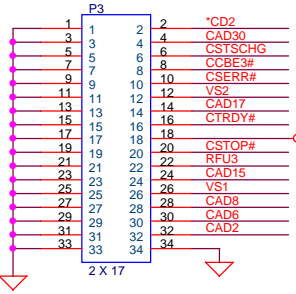
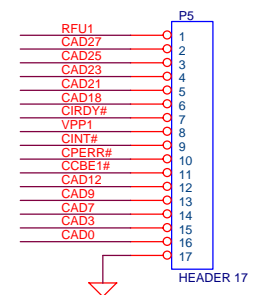
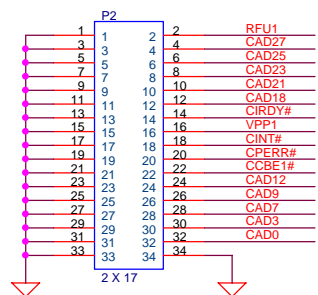
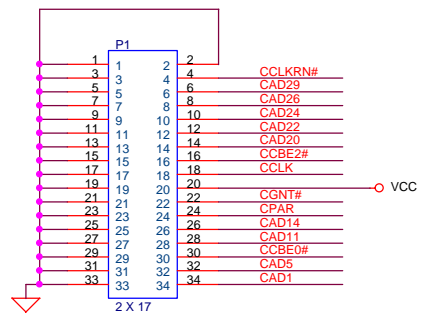
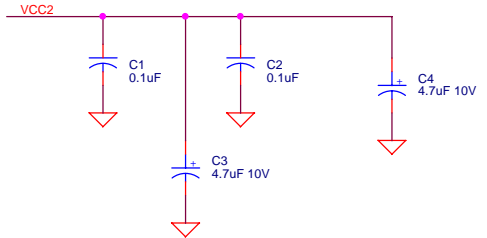
| Zoomed Video | 16-Bit | CardBus | | | CardBus | 16-Bit | Zoomed Video |
|--------------|--------|----------|----|----|----------|--------|--------------|
| GND | GND | GND | 35 | 1 | GND | GND | GND |
| CD#1 | CD1# | CCD1# | 36 | 2 | CAD0 | D3 | D3 |
| D11 | D11 | CAD2 | 37 | 3 | CAD14 | D4 | D4 |
| D12 | D12 | CAD4 | 38 | 4 | CAD3 | D5 | D5 |
| D13 | D13 | CAD6 | 39 | 5 | CAD5 | D6 | D6 |
| D14 | D14 | RFU | 40 | 6 | CAD7 | D7 | D7 |
| D15 | D15 | CAD8 | 41 | 7 | CC/BE0# | CE1# | CE#1 |
| CE#2 | CE2# | CAD10 | 42 | 8 | CAD9 | A10 | HREF |
| VS1# | VS1# | CVS1 | 43 | 9 | CAD11 | OE# | OE# |
| RSVD | RSVD | CAD13 | 44 | 10 | CAD12 | A11 | VSYNC |
| RSVD | RSVD | CAD15 | 45 | 11 | CAD14 | A9 | Y0 |
| Y1 | A17 | CAD16 | 46 | 12 | CC/BE1# | A8 | Y2 |
| Y3 | A18 | RFU | 47 | 13 | CPAR | A13 | Y4 |
| Y5 | A19 | CBLOCK# | 48 | 14 | CPERR# | A14 | Y6 |
| Y7 | A20 | CSTOP# | 49 | 15 | CGNT# | WE# | WE# |
| UV0 | A21 | CDEVSEL# | 50 | 16 | CINT# | READY | READY |
| Vcc | Vcc | Vcc | 51 | 17 | Vcc | Vcc | Vcc |
| Vpp2 | Vpp2 | Vpp2 | 52 | 18 | Vpp1 | Vpp1 | Vpp1 |
| UV1 | A22 | CTRDY# | 53 | 19 | CCLK | A16 | UV2 |
| UV3 | A23 | CFRAME# | 54 | 20 | CIRDY# | A15 | UV4 |
| UV5 | A24 | CAD17 | 55 | 21 | CC/BE2# | A12 | UV6 |
| UV7 | A25 | CAD19 | 56 | 22 | CAD18 | A7 | SCLK |
| VS2# | VS2# | CVS2 | 57 | 23 | CAD20 | A6 | MCLK |
| RESET | RESET | CRST | 58 | 24 | CAD21 | A5 | RSVD |
| WAIT# | WAIT# | CSERR# | 59 | 25 | CAD22 | A4 | RSVD |
| LRCLK | RSVD | CREQ# | 60 | 26 | CAD23 | A3 | A[3::0] |
| REG# | REG# | CC/BE3# | 61 | 27 | CAD24 | A2 | A[3::0] |
| SDATA | BVD2 | CAUDIO# | 62 | 28 | CAD25 | A1 | A[3::0] |
| BVD1 | BVD1 | CSTSCHG | 63 | 29 | CAD26 | A0 | A[3::0] |
| D8 | D8 | CAD28 | 64 | 30 | CAD27 | D0 | D0 |
| D9 | D9 | CAD30 | 65 | 31 | CAD29 | D1 | D1 |
| D10 | D10 | CAD31 | 66 | 32 | RFU | D2 | D2 |
| CD2# | CD2# | CCD2# | 67 | 33 | CCLKRUN# | WP | PCLK |
| GND | GND | GND | 68 | 34 | GND | GND | GND |

Figure B-2 PC Card Socket Pinouts Host Socket's View

B. PCCextend 125 Schematic



Card Side Connector



| | | |
|--|----------------------------|----------|
| Sycard Technology | | |
| Title PCCextend 125B - Card Interface | | |
| Size B | Document Number S140041 | Rev A |
| Date: Friday, December 14, 2001 | Sheet 2 | of 2 |