SYCARD TECHNOLOGY

CF Extend 180
User's Manual

Preliminary

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1.0 Introduction

Sycard Technology's CF Extend 180 Flexible CompactFlash extender card is a debug tool for CompactFlash development and test. CF Extend offers the following features:

- Low profile design compatible with all CompactFlash sockets
- Flexible extension allows user to access both sides of CompactFlash card
- Removable cables allows user to create any length extension
- 4 layer construction to insure low noise environment
- Vcc 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 CF Extend 180

The CF Extend 180 consists of three major subassemblies. The host interface board, card interface board and the four 26-pin cable assemblies. The host interface board is designed to be inserted into any CompactFlash socket. Four 26-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.

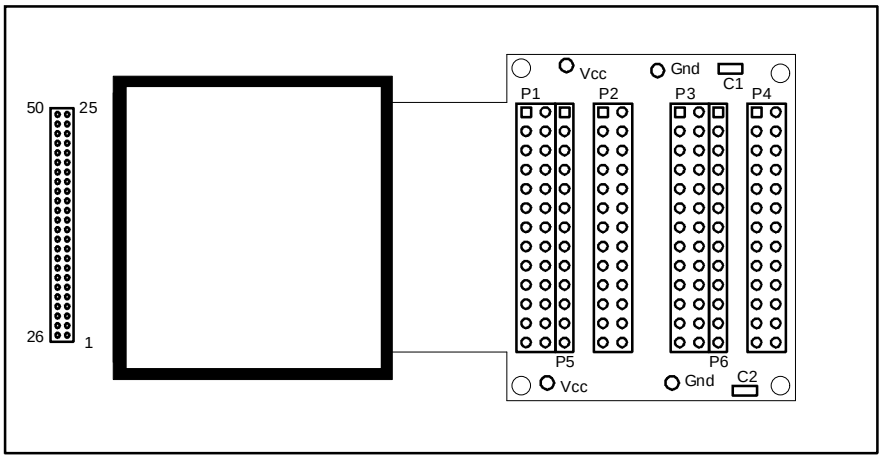


Figure 2.0-1 Host Interface Board

The card interface board is connected to the host interface via four 26-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.

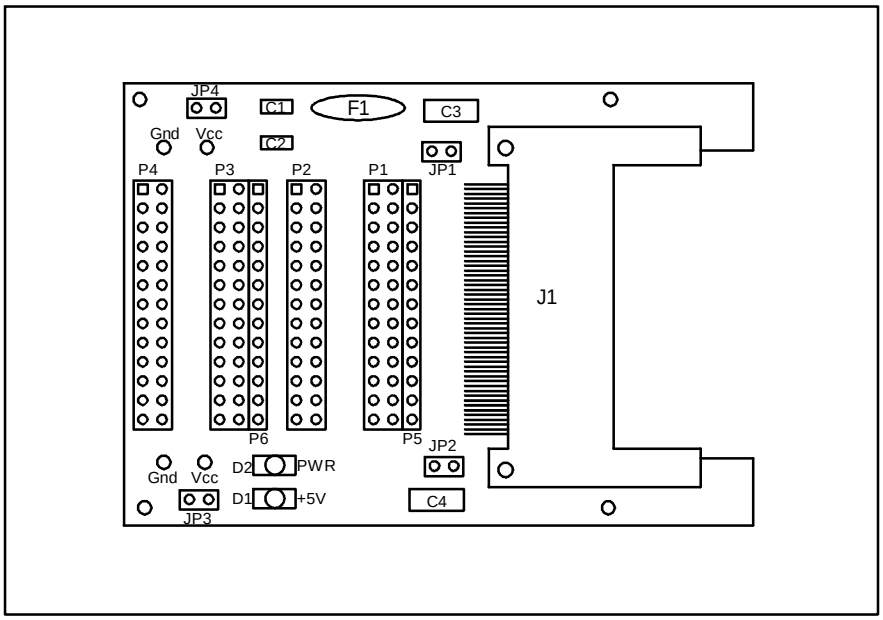


Figure 2.0-2 Card Interface Board

The CF Extend 180 must be assembled prior to use. The four 26-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 CF Extend is straightforward. The extender card is inserted into the desired slot in the host system. Then the CompactFlash card under test is inserted into the card connector.

> ***Caution**: Insertion and removal of the extender and CF card should be done with care. The CF 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.*

2.3 Current Measurements

The Vcc power bus may be isolated from the CF 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	JP1+ JP2	Both JP1 and JP2 must be removed to isolate Vcc

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.*

***Note**: The current protection device at location F1 is in parallel with JP1 and JP2. F1 must be removed prior to doing any current measurements.*

2.4 Using the Card Detect Jumpers

The card interface board includes two jumper (JP3 and JP4) 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 RXE050 resettable fuse provides low resistance operation up to 500mA. The current protection device is in parallel with JP1 and JP2. When shipped from the factory the current protection device enabled. To disable the current protection device, insert both JP1 and JP2 jumpers.

3.0 Ordering Information

The CF Extend 180 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
CF Extend 180	CF Extend 180
CF Extend 180 Host Interface Board	A150046-3
CF Extend 180 Card Interface Board	A150047-3
5" Cable Assembly	A140011-1

Table 3.0-1 Ordering Information

Sycard Technology also supplies extender cards for PC Card-16, CardBus, and SmartMedia. Contact Sycard directly or download information from our web site at **http://www.sycard.com.**

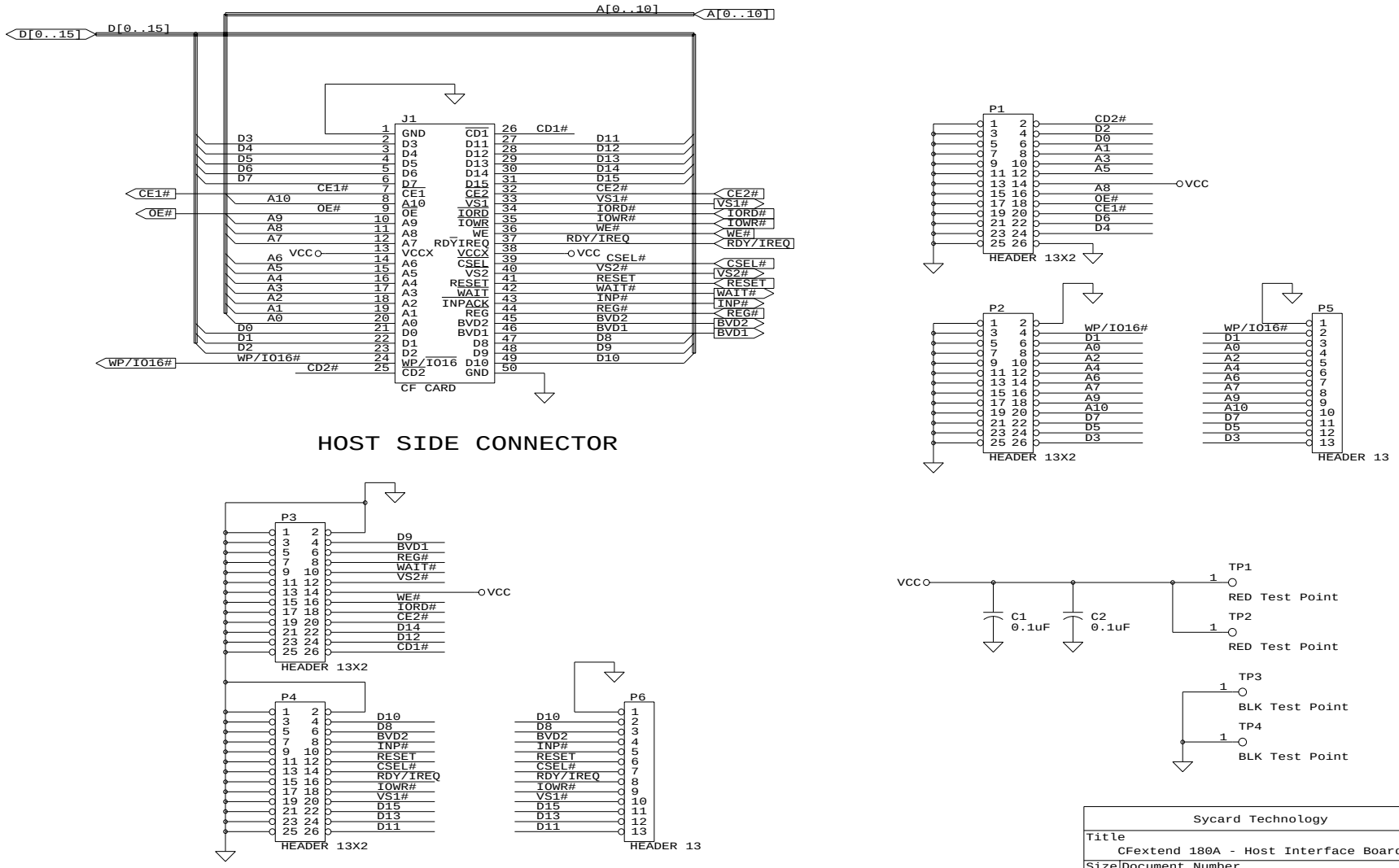
Appendix A

A. Compact Flash 50-Pin Interface

Pin	Name	Description	Pin	Name	Description
1	GND	Ground	26	CD1#	Card Detect 1
2	D03	Data Bit 3	27	D11	Data Bit 11
3	D04	Data Bit 4	28	D12	Data Bit 12
4	D05	Data Bit 5	29	D13	Data Bit 13
5	D06	Data Bit 6	30	D14	Data Bit 14
6	D07	Data Bit 7	31	D15	Data Bit 15
7	CE1#	Card Enable 1	32	CE2#	Card Enable 2
8	A10	Address Bit 10	33	VS1#	Voltage Sense 1
9	OE#	Output Enable	34	IORD#	I/O Read Strobe
10	A09	Address Bit 9	35	IOWR#	I/O Write Strobe
11	A08	Address Bit 8	36	WE#	Write Enable
12	A07	Address Bit 7	37	RDY/BSY/IREQ	Ready/Busy/Interrupt Request
13	VCC	Card Power	38	VCC	Card Power
14	A06	Address Bit 6	39	CSEL#	Master Slave Select
15	A05	Address Bit 5	40	VS2#	Voltage Sense 2
16	A04	Address Bit 4	41	RESET	Card Reset
17	A03	Address Bit 3	42	WAIT#	Extend Bus Cycle
18	A02	Address Bit 2	43	INPACK#	Input Port Acknowledge
19	A01	Address Bit 1	44	REG#	Register Select
20	A00	Address Bit 0	45	BVD2	Battery Voltage Detect 2
21	D00	Data Bit 0	46	BVD1	Battery Voltage Detect 1
22	D01	Data Bit 1	47	D08	Data Bit 8
23	D02	Data Bit 2	48	D09	Data Bit 9
24	WP/IOIS16	Write Protect I/O is 16 Bits	49	D10	Data Bit 10
25	CD2#	Card Detect 2	50	GND	Ground

Appendix B

B. CF Extend 180 Schematic



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Date: February 18, 1999	Sheet 1 of 1	

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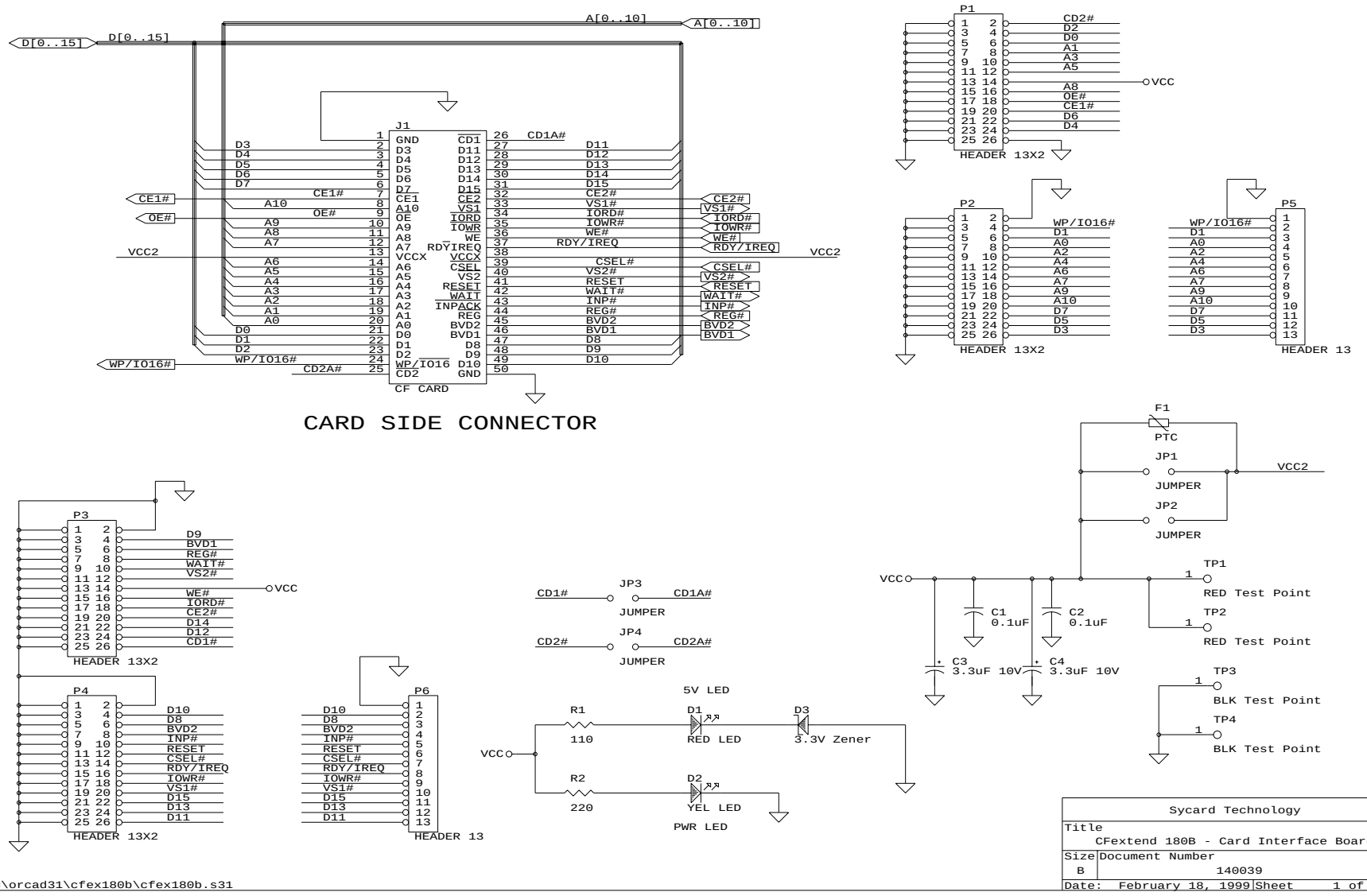

CARD SIDE CONNECTOR

Sycard Technology		
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