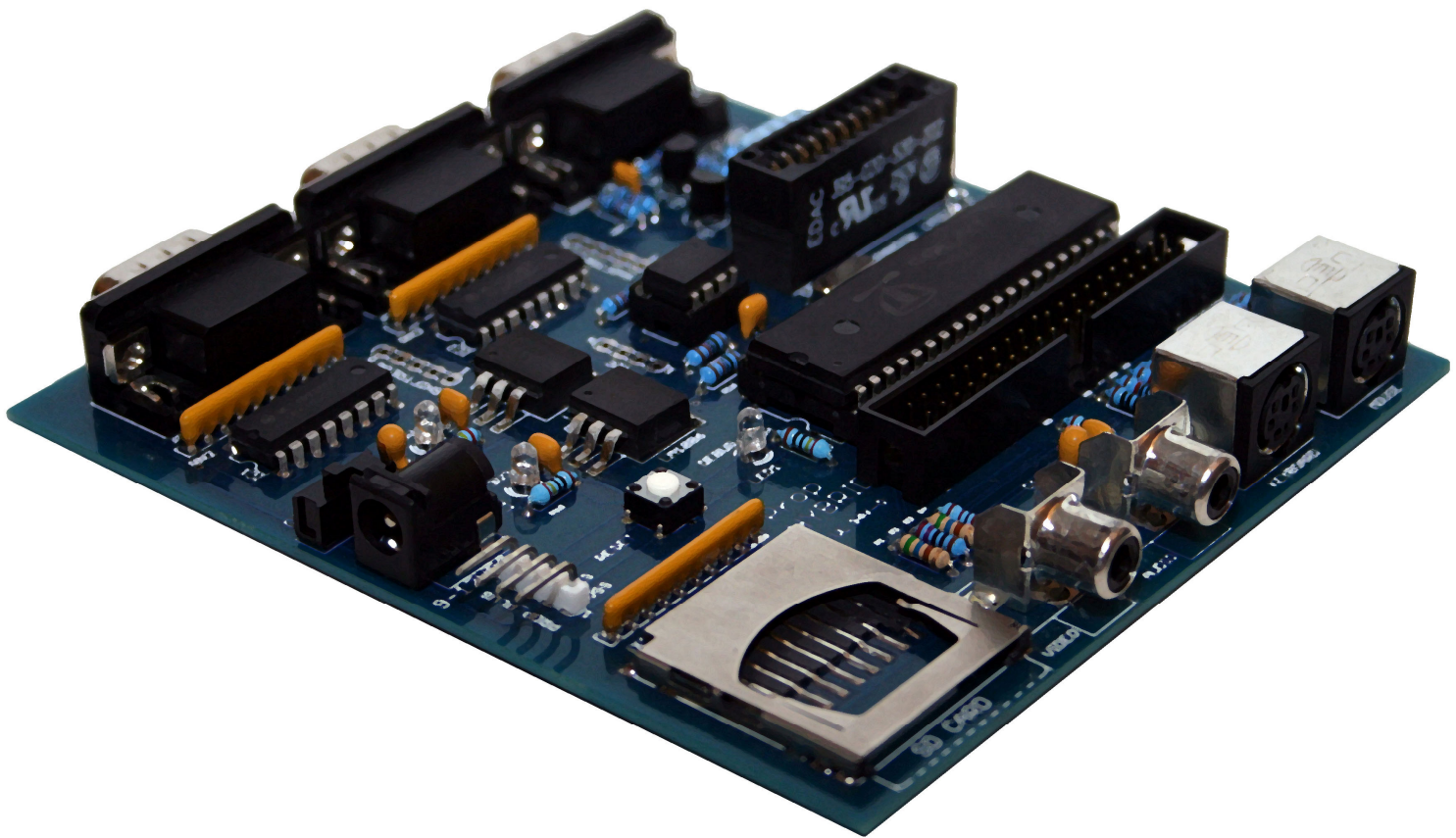


HYBRID

DEVELOPMENT SYSTEM

HYBRID



DEVELOPMENT SYSTEM

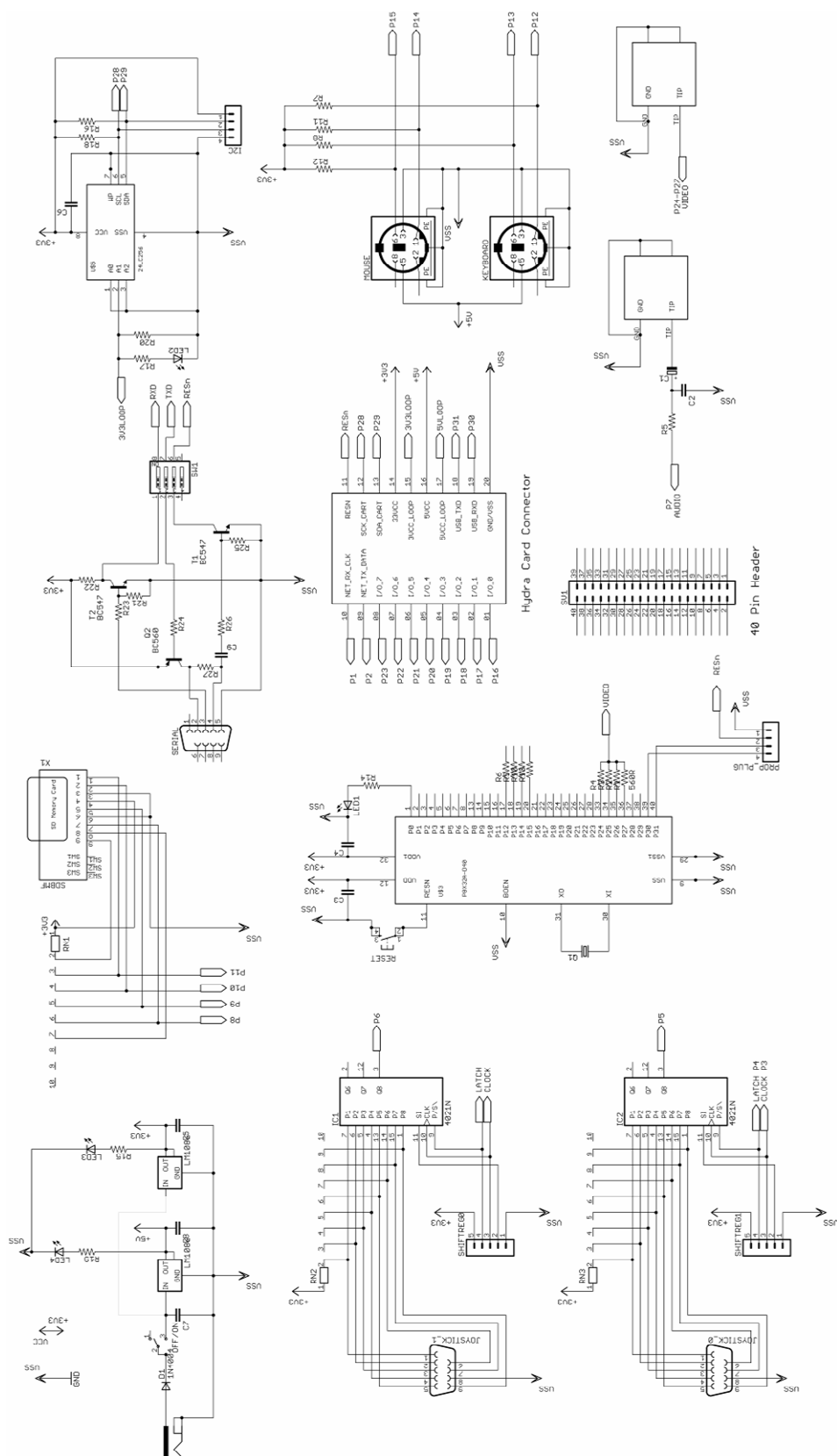
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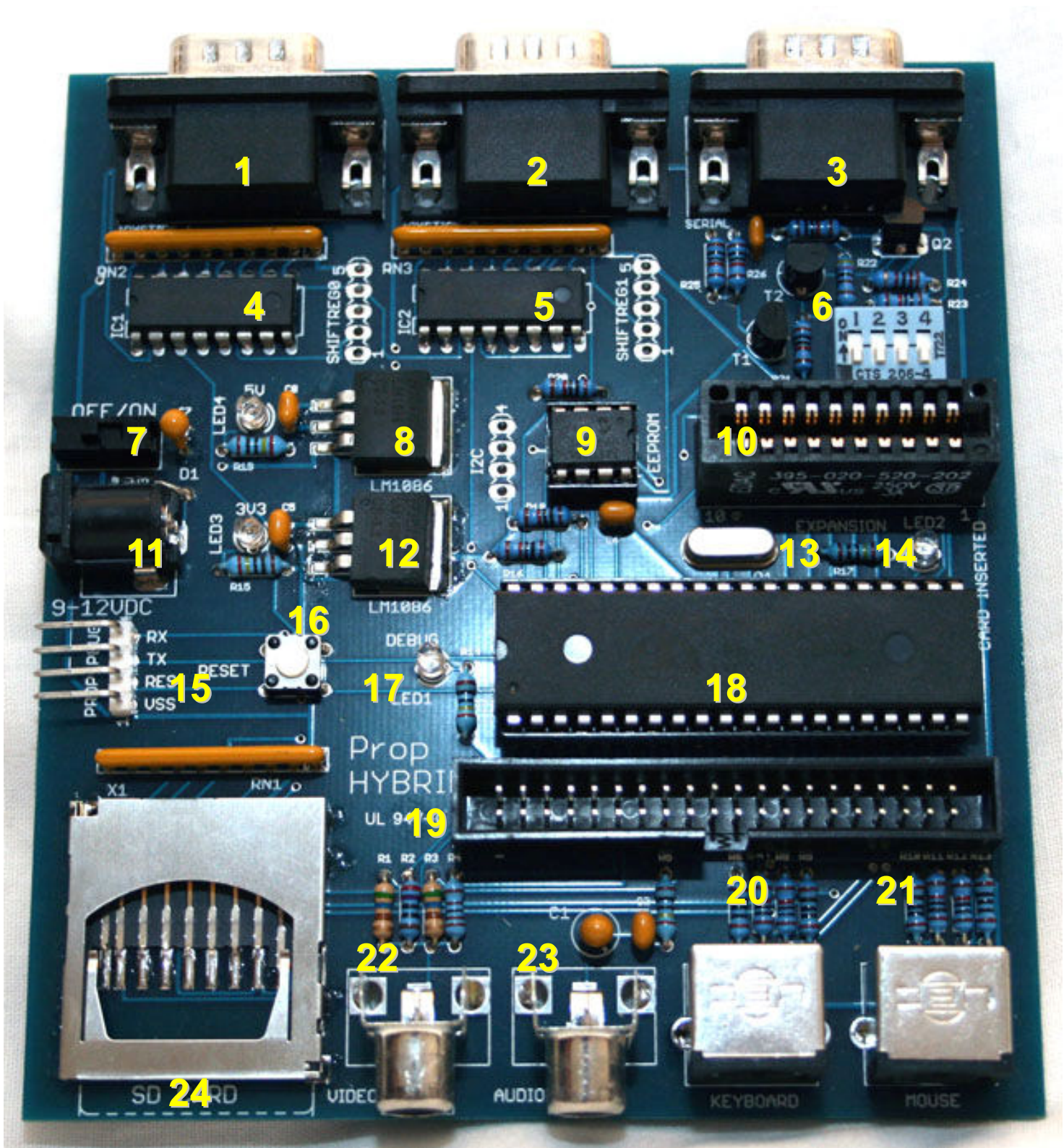
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System Schematic



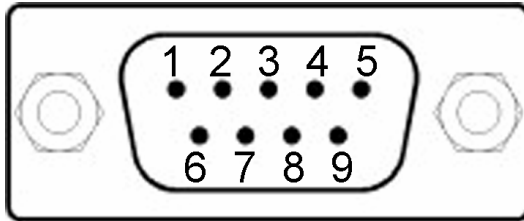
Component Layout



Component Description

- 1) Joystick_1 DB9 Connector
- 2) Joystick_0 DB9 Connector
- 3) RS232 Serial DB9 Connector
- 4) Joystick_1 Shift Register
- 5) Joystick_0 Shift Register
- 6) RS232 Serial Circuit and Isolation Switches
- 7) Off/On Switch
- 8) 5V Voltage Regulator
- 9) 32K EEPROM
- 10) Expansion Port Connector
- 11) 9-12V DC Power Connector
- 12) 3V3 Voltage Regulator
- 13) 6MHz Crystal
- 14) Expansion card Inserted Indicator
- 15) Prop Plug™ Compatible Connector
- 16) Reset Switch
- 17) Debug LED
- 18) Parallax Propeller™ Chip
- 19) 40 Way Prototyping Connector
- 20) PS/2 Keyboard Port Connector
- 21) PS/2 Mouse Port Connector
- 22) Video Out Connector
- 23) Audio Out Connector
- 24) SD Memory Card Connector

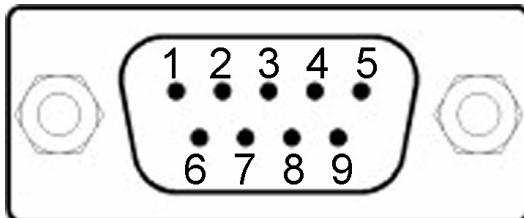
Joystick_0 Connector



Pin	Assignment
1	Shift Register IC2 Bit 0
2	Shift Register IC2 Bit 1
3	Shift Register IC2 Bit 2
4	Shift Register IC2 Bit 3
5	Shift Register IC2 Bit 4
6	Shift Register IC2 Bit 5
7	Shift Register IC2 Bit 6
8	Ground
9	Shift Register IC2 Bit 7

Shift Register IC2 Data Pin is P5
All bits are tied to VDD via 10KR

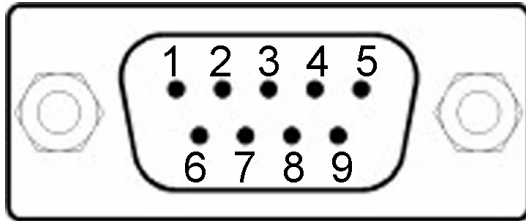
Joystick_1 Connector



Pin	Assignment
1	Shift Register IC1 Bit 0
2	Shift Register IC1 Bit 1
3	Shift Register IC1 Bit 2
4	Shift Register IC1 Bit 3
5	Shift Register IC1 Bit 4
6	Shift Register IC1 Bit 5
7	Shift Register IC1 Bit 6
8	Ground
9	Shift Register IC1 Bit 7

Shift Register IC1 Data Pin is P6
All bits are tied to VDD via 10KR

Serial RS232 Connector



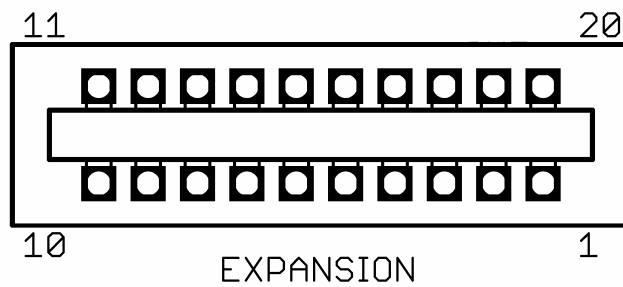
Pin	Assignment
1	No Connection
2	TX (Data Out)
3	RX (Data In)
4	DTR (Reset)
5	Ground
6	No Connection
7	No Connection
8	No Connection
9	No Connection

Serial RS232 Circuit Isolation Switch SW1

Switch	ON	OFF
1	No Connection	No Connection
2	DTR (Reset) Signal Active	DTR (Reset) Signal Inactive
3	RX (Data In) Active	RX (Data In) Inactive
4	TX (Data Out) Active	TX (Data Out) Inactive

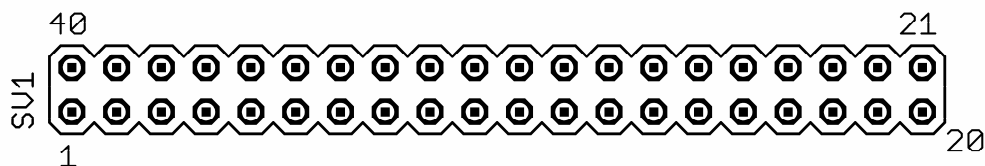
When using the Prop Plug to program your Propeller™ Chip SW1 1-4 should be set to the OFF position

Expansion Port Connector



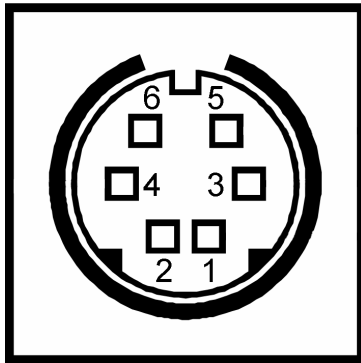
Pin	Assignment
1	I/O_0 (P16)
2	I/O_1 (P17)
3	I/O_2 (P18)
4	I/O_3 (P19)
5	I/O_4 (P20)
6	I/O_5 (P21)
7	I/O_6 (P22)
8	I/O_7 (P23)
9	NET_TX_DATA (P2)
10	NET_RX_CLK (P1)
11	Reset (RESn)
12	SCK_CART (P28)
13	SDA_CART (P29)
14	3V3
15	3V3 LOOPBACK
16	5V
17	5V LOOPBACK
18	USB_TXD (P31)
19	USB_RXD (P30)
20	Ground

40 Way Prototyping Connector



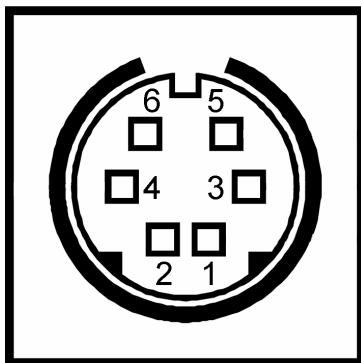
Pins 1 – 40 are an exact reproduction of the Propeller™ Chip pins 1-40

PS/2 Keyboard Port Connector



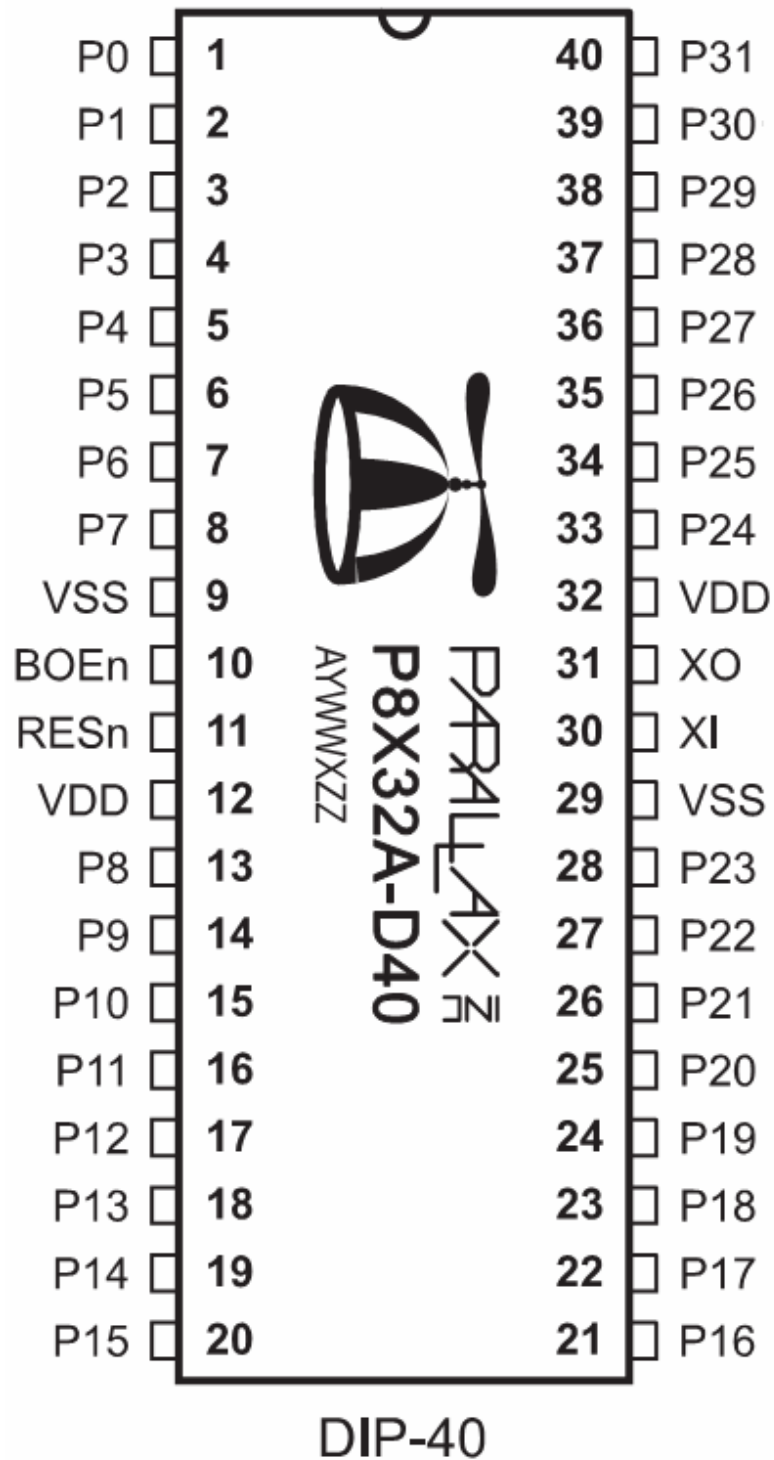
Pin	Assignment
1	DATA Bidirectional
2	No Connection
3	GND Ground
4	VCC +5V
5	CLK
6	No Connection

PS/2 Mouse Port Connector



Pin	Assignment
7	DATA Bidirectional
8	No Connection
1	GND Ground
2	VCC +5V
3	CLK
4	No Connection

Parallax Propeller™ Chip



HYBRID PIN ASSIGNMENTS

Peripheral	Function	Pin
Debug LED	P0	1
Expansion Port (10) NET_RX_CLK	P1	2
Expansion Port (9) NET_TX_DATA	P2	3
Joystick Shift Registers CLOCK	P3	4
Joystick Shift Registers LATCH	P4	5
Joystick_0 Shift Register DATA	P5	6
Joystick_1 Shift Register DATA	P6	7
Audio Out	P7	8
SD CARD d0	P8	13
SD CARD clk	P9	14
SD CARD di	P10	15
SD CARD cs	P11	16
PS/2 Keyboard DATA	P12	17
PS/2 Keyboard CLOCK	P13	18
PS/2 Mouse DATA	P14	19
PS/2 Mouse CLOCK	P15	20
Expansion Port (1) I/O_0	P16	21
Expansion Port (2) I/O_1	P17	22
Expansion Port (3) I/O_2	P18	23
Expansion Port (4) I/O_3	P19	24
Expansion Port (5) I/O_4	P20	25
Expansion Port (6) I/O_5	P21	26
Expansion Port (7) I/O_6	P22	27
Expansion Port (8) I/O_7	P23	28
Video DAC	P24	33
Video DAC	P25	34
Video DAC	P26	35
Video DAC	P27	36
I2C EEPROM SCL	P28	37
I2C EEPROM SDA	P29	38
Prop Plug RX / RS232 RX (DATA OUT)	P30	39
Prop Plug TX / RS232 TX (DATA IN)	P31	40