Rev. B, 2007-08-31

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M0030 RS232 Level Shifter Board
Technical Specification

1. General

This board provides an RS232 to TTL level shifting interface. The RS232 interface is configured as a DTE.

2. Electrical Specifications

Parameter	Condition	Specification			Units
		Min	Typ	Max	
GENERAL					
Power supply voltage (J1)	Vcc	3.0		5.0	V
Operating Temperature	Ta	0		70	C
Bit rate				120	KBps
RS232 DRIVER					
Output voltage swing (J3)	Vcc = 3.3V Positive 3K to GND Negative	5.0 -5.0	6.2 -6.2		V
Logic Input Voltage level (J4)	Vil (Vout = high) Vih (Vout = low, Vcc = 3.3V) Vih (Vout = low, Vcc = 5.0V)	 2.0 2.4		0.8	V
RS232 RECEIVER					
Input Threshold (J3)		0.8	1.5	2.4	V
Logic Output Voltage level (J4)	Vol (Iout = -1.6mA Voh(Iout = 160uA)	 Vcc-0.6	0.2	0.4	V

3. Certifications

The unit carries no FCC or Industry Canada certifications. It is exempt from FCC regulations under Part 15.103.

4. Physical Dimensions

PCB outline approximately 3.25" x 2.0".

Mounting holes in each corner of PCB, each approximately 0.125" in diameter.

Rev. B, 2007-08-31

5. Connectors

J1 – Power supply **3.5mm Terminal Block**

Pin	Label	Direction	Description
1	VCC	PWR	Power supply voltage 3 to 5.5V
2	GND	PWR	Power supply ground

J3 – RS232 Interface (DTE Configuration) **DB9 Male**

Pin	Label	Direction	Description
1	DCD	IN	Data Carrier Detect
2	RXD	IN	Receive Data
3	TXD	OUT	Transmit Data
4	DTR	OUT	Data Terminal Ready
5	GND	PWR	Ground
6	DSR	IN	Data Set Ready
7	RTS	OUT	Request To Send
8	CTS	IN	Clear To Send
9	RI	IN	Ring Indicator

J4 – TTL Interface **10 pin, 0.1" header**

Pin	Label	Direction	Description
1	DCD	OUT	Data Carrier Detect
2	RXD	OUT	Receive Data
3	TXD	IN	Transmit Data
4	DTR	IN	Data Terminal Ready
5	GND	PWR	Ground
6	DSR	OUT	Data Set Ready
7	RTS	IN	Request To Send
8	CTS	OUT	Clear To Send
9	RI	OUT	Ring Indicator
10	(none)	N/A	Not Connected