

The XR21V1414 (V1414) is an enhanced 4-channel USB Universal Asynchronous Receiver and Transmitter (UART). The USB interface is fully compliant to Full Speed USB 2.0 specification that supports 12 Mbps USB data transfer rate. The USB interface also supports USB suspend, resume and remote wakeup operations.

The V1414 operates from an internal 48MHz clock therefore no external crystal/oscillator is required like previous generation UARTs. With the fractional baud rate generator, any baud rate can accurately be generated using the internal 48MHz clock.

The large 128-byte FIFO and 384-byte RX FIFO of the V1414 helps to optimize the overall data throughput for various applications. The Automatic Transceiver Direction control feature simplifies both the hardware and software for half-duplex RS-485 applications. If required, the multidrop (9-bit) mode with automatic half-duplex transceiver control feature further simplifies typical multidrop RS-485 applications.

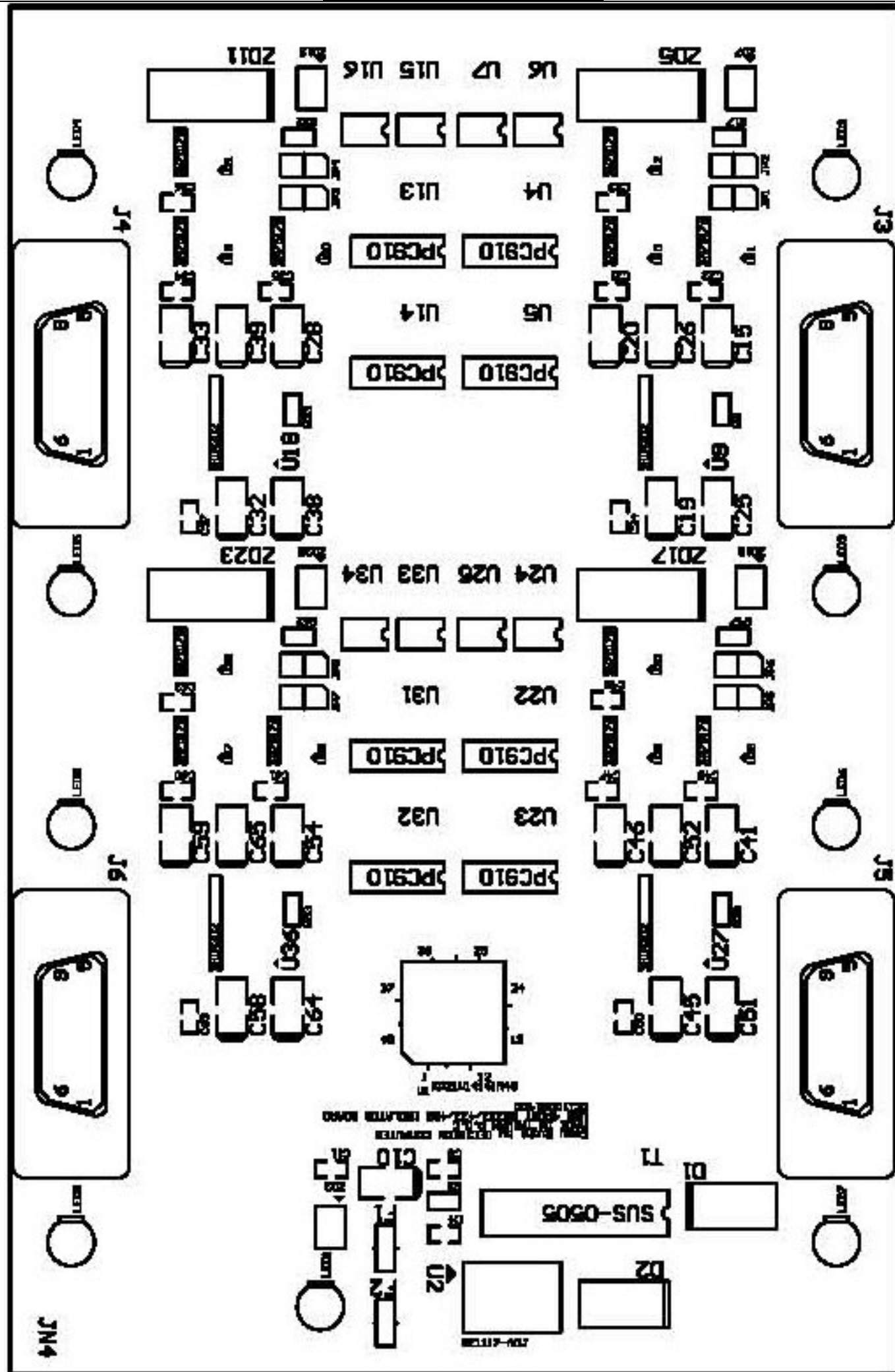
The V1414 operates from a single 2.97 to 3.63 volt power supply and has 5V tolerant inputs. The V1414 is available in a 48-pin TQFP package.

Software drivers for Windows 2000, XP, Vista, and CE, as well as Linux and Mac are supported for the XR21V1414..

❖ The features of 2~4 PORT PHOTO ISOLATOR RS232/422/485 BOARD are:

- XR21V1414 (V1414) is an enhanced 4-channel USB Universal Asynchronous Receiver and Transmitter (UART).
- USB 2.0 Compliant Interface
 - Supports 12 Mbps USB full-speed data rate
 - Supports USB suspend, resume and remote wakeup operations
- Enhanced Features of each UART
 - Data rates up to 12 Mbps
 - Fractional Baud Rate Generator
 - 128 byte TX FIFO
 - 384 byte RX FIFO
 - 7, 8 or 9 data bits, 1 or 2 stop bits
 - Automatic Hardware (RTS/CTS) Flow Control
 - Automatic Software (Xon/Xoff) Flow Control
 - Multidrop mode w/ Auto Half-Duplex Transceiver Control
 - Multidrop mode w/ Auto TX Enable
- POWER From DC+5V/500mA External POWER
- Virtual COM Port drivers
 - Windows 2000, XP and Vista, Windows 7
 - Linux
- EIA RS232 to EIA RS485/RS422 isolator input and output.
- Heavy-duty optical couplers and a transformer isolated DC-to-DC converter to provide significantly higher electrical isolation - 5000V DC surge (1 minute), 5000V rms continuous.
- Support Tx, Rx, RTS, CTS, SG signals for RS232, Tx+, Tx-, Rx+, Rx-, SG signals for RS422, and TRD+, TRD-, SG signals for RS485.
- Communication speeds up to 230 K bps.
- Transmit distance up to 4000ft.
- Three LED indicators correspond to Tx(Orange), Rx(Pure Green), and power(red) signals.
- Life expectancy for relay: 100 million operations at signal level load.
- Allow the photo input signals to be completely floated and prevent the ground loops
- Operating temperature range from -10 to 50C.
- Relative humidity rage from 0 to 90%.

HARDWARE INSTALLATION



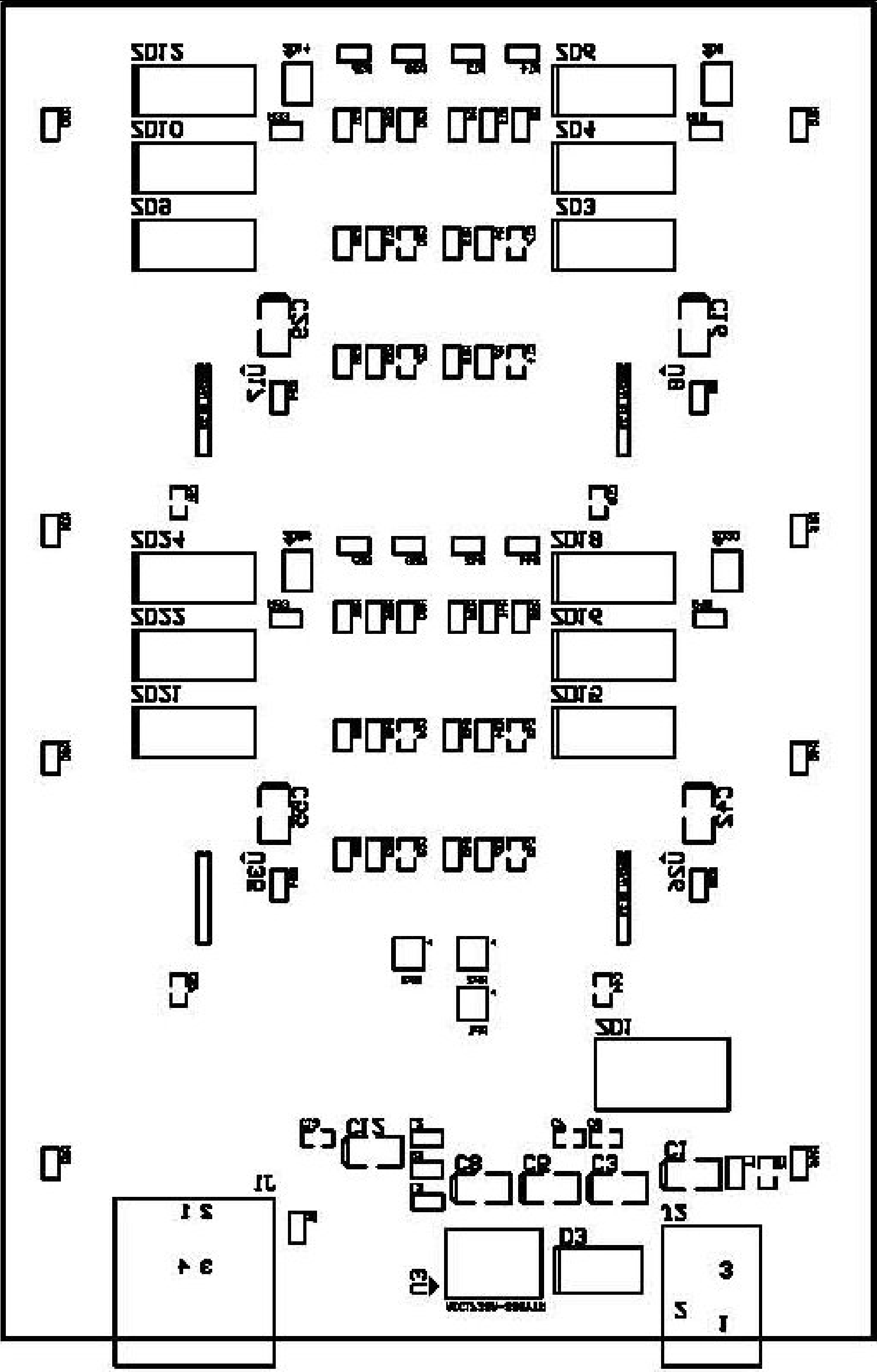
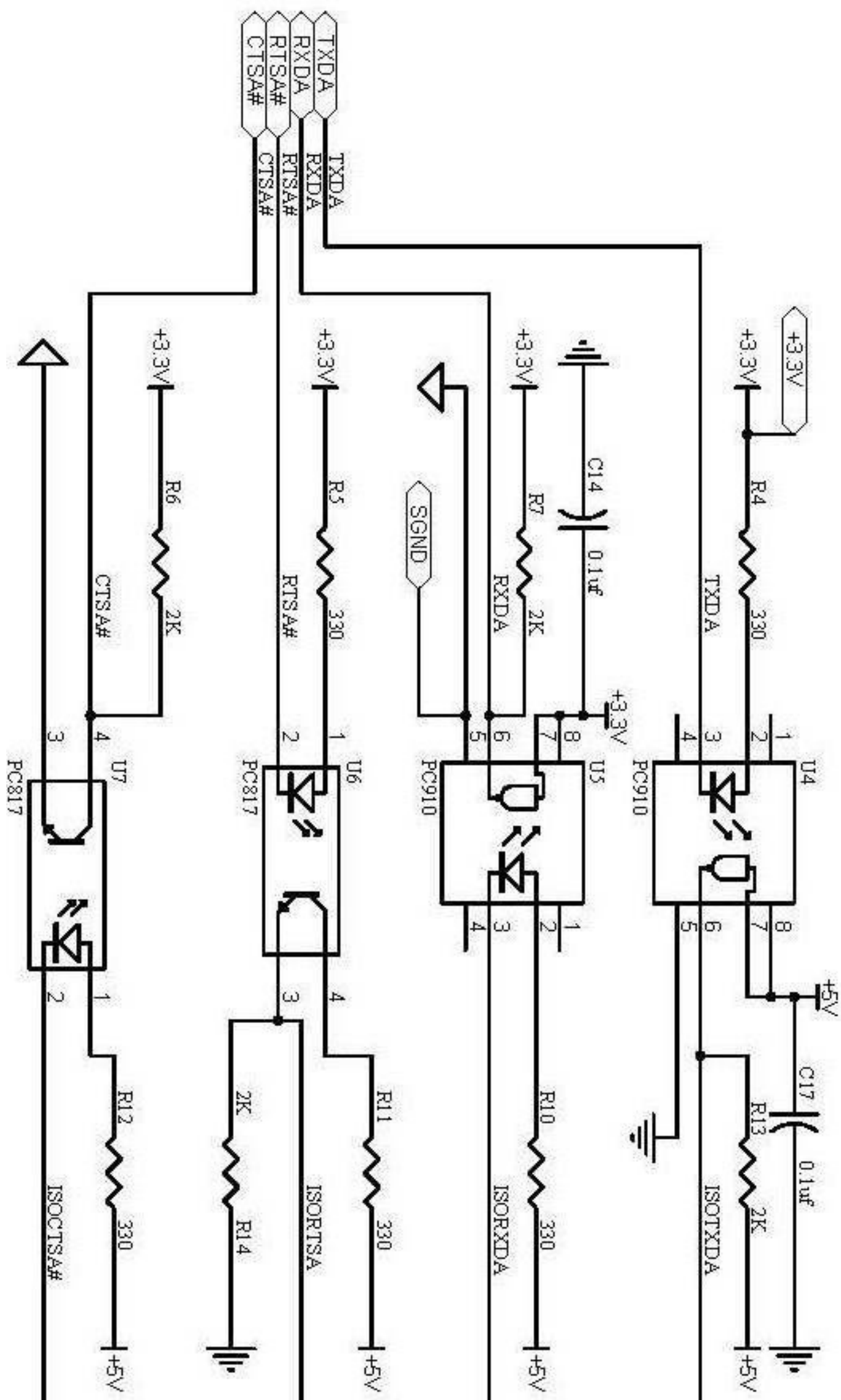


















Photo Isolator Channel Diagram









J1 USB PORT B TYPE Right Angle Male Define

<div><div> A</div><div> B</div><div> Mini</div></div> <div>  </div>					
Pin No.	Signal Name	Pin Define			
1	VCC	+5 VDC(USB VBUS POWER)			
2	D-	Data -			
3	D+	Data +			
4	SGND	Signal Ground			

LED1 = POWER 5mm (5mm Super Red LED Lamps)

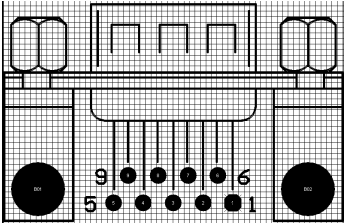
J2 POWER JACK Define

   			 		
Pin No.	Signal Name	Pin Define			
1	EXT GND	External Ground			
2	EXT GND	External Ground			
3	EXT DC+5V	External Power for DC+5V/500mA			

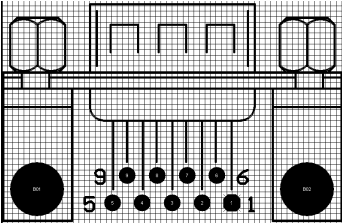
LED2 、 4 、 6 、 8 = TXD 5mm (5mm Super Orange LED Lamps)

LED3 、 5 、 7 、 9 = RXD 5mm (5mm Super Pure Green LED Lamps)

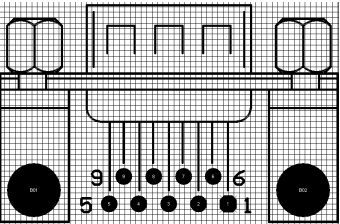
J3~J6 RS232 Define

					
Pin No.	Signal Name	Pin Define			
2	Receive Data(RxD)	Input			
3	Transmit Data(TxD)	Output			
5	SGND	Signal Ground			
7	Request to Send(RTS)	Output			
8	Clear to Send(CTS)	Input			

J3~J6 RS422 Define

		
Pin No.	Signal Name	Pin Define
2	Receive Data+(RxD+)	Input
3	Transmit Data+(TxD+)	Output
4	Transmit Data-(TxD-)	Output
6	Receive Data-(RxD-)	Input

J3~J6 RS485 Define

		
Pin No.	Signal Name	
2	Transmit Data+/Receive Data+(TRD+)	
3	Transmit Data-/Receive Data-(TRD-)	

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RS-422/485 Terminating Resistance Setting

1. JP2、JP4、JP6、JP8

Short	RS422 Terminating Resistance Enable
Open	RS422 Terminating Resistance Disable

2. JP1、JP3、JP5、JP7

Short	RS485 Terminating Resistance Enable
Open	RS485 Terminating Resistance Disable

 JP1