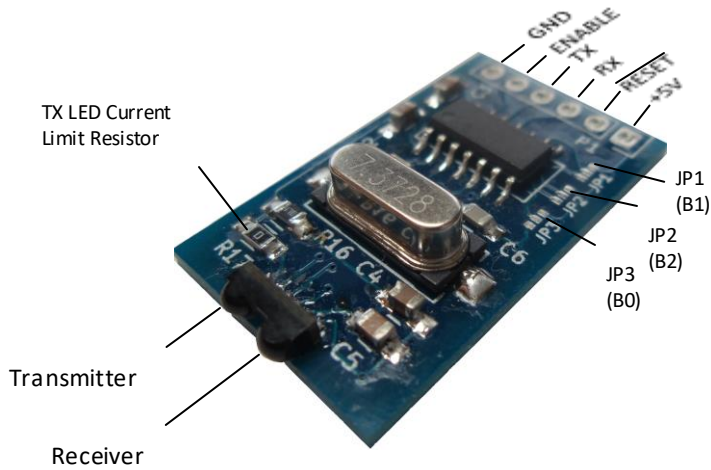




## Serial IrDa Communications Board



Thank you for purchasing the Serial IrDa Communications Board! In order to use your board you will need a host controller or a USB/FTDI cable with a terminal communications program. You will have greater control of the board using a host controller as the communications software is entirely up to you.

Your MCP2120 Infrared Encoder/Decoder has been hardwire configured (via the MODE pin) to Hardware Baud Rate selection only. The MODE pin is tied to the RESET line which is exposed via the header connection, and both must be held at logic HIGH. If you are using a micro controller to communicate with the MCP2120, you can connect the reset line from the micro controller to the board's RESET connection.

To activate the chip to perform active communications, the ENABLE line via the header connection must be held at logic HIGH.

### USAGE NOTE:

Before using your Serial IrDa board, you will need to decide what baud rate you will be communicating with and using a soldering iron, carefully bridge the jumpers to the side indicated for each jumper listed in the jumper settings chart (lower right.)

Connections for Software Serial		Connections for FTDI Cable	
ARDUINO	to	FTDI	to
GND	----->	GND	----->
VCC	----->	VCC	----->
TXD	----->	TXD	----->
RXD	<-----	RXD	<-----
???	----->		
???	----->		

Serial IrDa

Serial IrDa

Note:  
1> Jumper ENABLE to +5v w/10K res.  
2> Jumper RESET to +5v w/10K res.

Parameter	Unit	Value
<b>Mass</b>		
Complete Assembly	g	2.73
<b>Dimensions</b>		
Length	mm	30
Width	mm	18
Height	mm	5.6
<b>Power Reqmnts (@5v)</b>		
Input Voltage	v	5
RAM Retention Voltage	v	2.5
Disabled	uA	4
Enabled (Rx w/ No Signal)	mA	77
Enabled (Active Tx)	mA	307
<b>Comm. Limits (@7.3728MHz)</b>		
Usable Beam Spread @ 1m	deg	48
Link Distance	m	1
IrDA Data Rate (S/W options)	kbps	115.2
UART Data Rate (Jumpers)	kbps	9.6-115.2
Standard UART (16550)		Yes
IrDA Comliant	ver	1.3
<b>Temperature Range</b>		
Complete Assembly	degC	-25 to 85

MCP2120 Baud Rate Jumper Settings

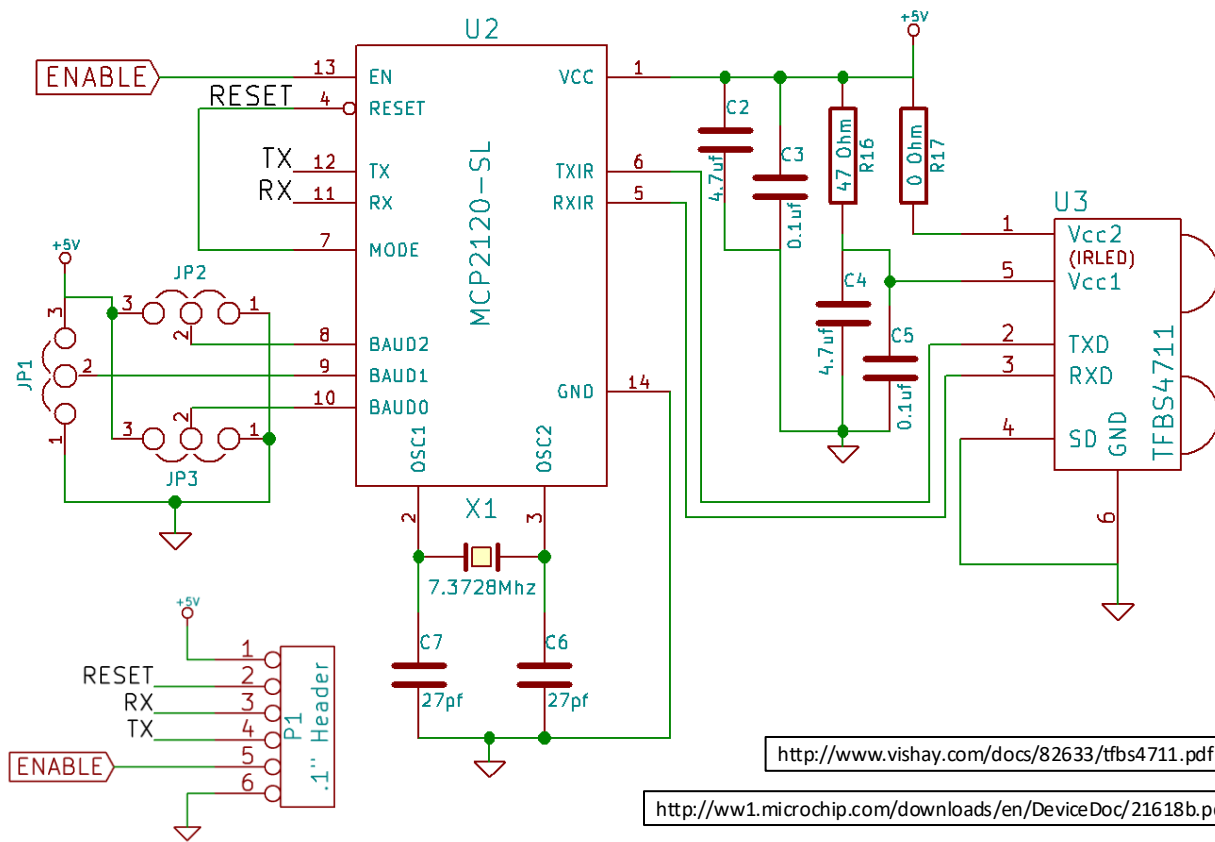
Jumpers adhere to the following rules

B0-B2 000 Baud 9600	JP3 (Baud0)	JP2 (Baud2)	JP1 (Baud1)
B0-B2 100 Baud 19200	JP3	JP2	JP1
B0-B2 010 Baud 38400	JP3	JP2	JP1
B0-B2 110 Baud 57600	JP3	JP2	JP1
B0-B2 001 Baud 115200	JP3	JP2	JP1

NOTE: Baud rates coincide with a 7.3728Mhz crystal



## Serial IrDa Communications Board



### Example Arduino Code

```

//This is the enable pin for the IrDa Serial Port
const int IrDaEnablePin = 5;
//This is the Rx/Tx pins for the IrDa Serial Port
#define RxIR A0
#define TxIR A1
//Create the SoftSerial interface object
SoftwareSerial infraredSerial(RxIR, TxIR);

void setup() {
  initIrDa();
}

void initIrDa(){
  //Turn on the IrDa Transcoder
  pinMode(IrDaEnablePin, OUTPUT);
  digitalWrite(IrDaEnablePin, LOW); //Off!
  delay(1000);
  digitalWrite(IrDaEnablePin, HIGH); //On!
  delay(5000); //Delay while chip resets
  infraredSerial.begin(9600);
}

```

```

void loop() {
  // if serial data available, process it
  processIncomingIrDa();
}

void processIncomingIrDa(){
  String content = "";
  char character;
  // if serial IR data available, process it
  while(infraredSerial.available() > 0) {
    character = infraredSerial.read();
    content.concat(character);
  }
  if (content != "") {
    //Do something if we have content!
  }
}

```