Rboard

- 4 Channel Relays Dev Platform based on Arduino

Overview

Rboard is a unique Arduino board which features 4 channels isolated relays, an XBee socket, and an ATMega328. This board will add wireless XBee control as well as relay control to your projects. It's great for anything from home automation to robot control. The possibilities are endless!

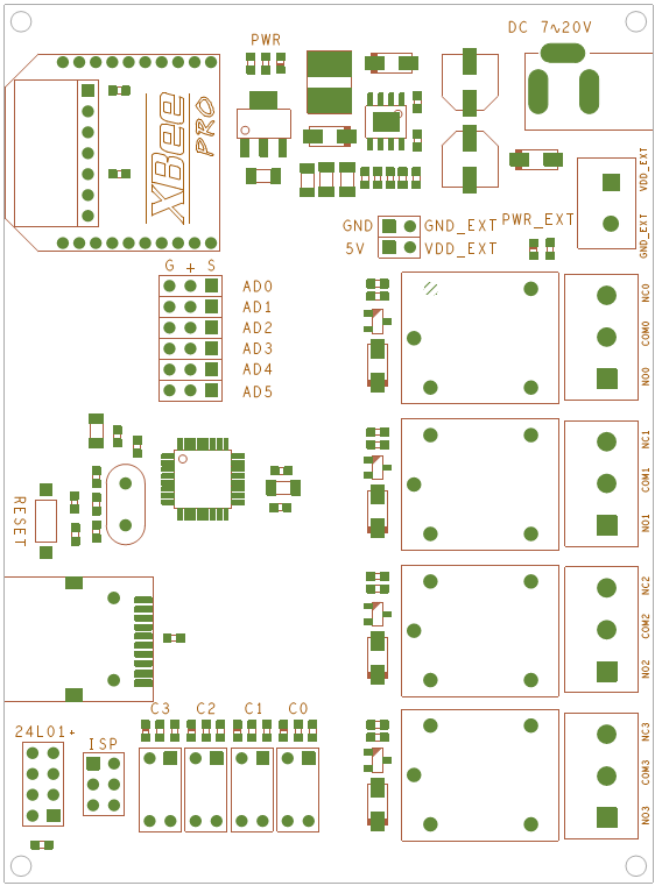
Specifications

PCB size	78.74mm X 106.08mm X 1.6mm
Power supply	6~20V DC
Microprocessor	Atmega328
Indicators	PWR, PWR_EXT, C0, C1, C2, C3
Communication Interface	XBee, nRF24L01+, UART
RoSH	Yes

Electrical Characteristics

Specification		Min	Type	Max	Unit
Power Voltage		6	-	20	VDC
Input Voltage VH	Target Voltage = 3.3V	3	3.3	3.6	V
Input Voltage VL:		-0.3	0	0.5	V
Current Consumption		-	100	500	mA

Hardware



Top View Map

Pin Map List

Pin of Arduino	Description
D0	RxD
D1	TxD
D2	XBee Reset
D3	nRF24L01+_IRQ
D4	R0

D5	R1
D6	R2
D7	R3
D8	nRF24L01+_CE
D9	nRF24L01+_CS
D10	SD_CS
D11	SPI_MOSI
D12	SPI_MISO
D13	SPI_SCK
A0	AD0
A1	AD1
A2	AD2
A3	AD3
A4	AD4/IIC_SCL
A5	AD5/IIC_SDA

4 channel relays with photocouple isolated, Micro-SD Socket, XBee interface, nRF24L01+ interface, many analog/digital electronic brick interfaces and so on, many interfaces are designed and broke out for many projects as wireless communication, mass storage, digital control and signal sample.

PWR_EXT Setting

Rboard is designed for isolating industrial application with external power supply. So when remove the jumpers on PWR_EXT, use the DC 7-20 terminal to for ATMega328 and all digital circuit power supply, and supply the 5V relay by the PWR_EXT terminal with 5V, there are 2 completely isolated power systems for controller part and relay part.

If you don't need so stringent electrical isolation, put the jumpers on PWR_EXT, then you don't need an extra power supply, the relays will supply by the DC 7-20 terminal the same as controller part - but there also the opto-isolation between the relay and controller I/Os.

Revision History

Rev.	Description	Release date
v1.0	Initial version	2012-06-13