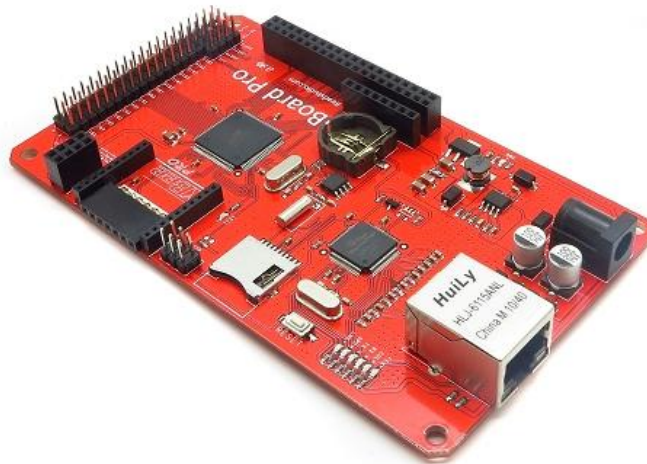


# IBoard Pro

- **Enhanced Ethernet Development Platform  
based on Arduino**

## Overview



The Iboard Pro is a unique Arduino board which features a WIZnet Ethernet port with POE, an XBee socket, ITDB02 Serial/Parallel LCD module interface, RTC, nRF24L01+ module interface, Micro SD socket and an ATmega2560. This board will add wireless XBee control as well as internet connectivity to your projects. It's great for anything from home automation to robot control. The possibilities are endless!

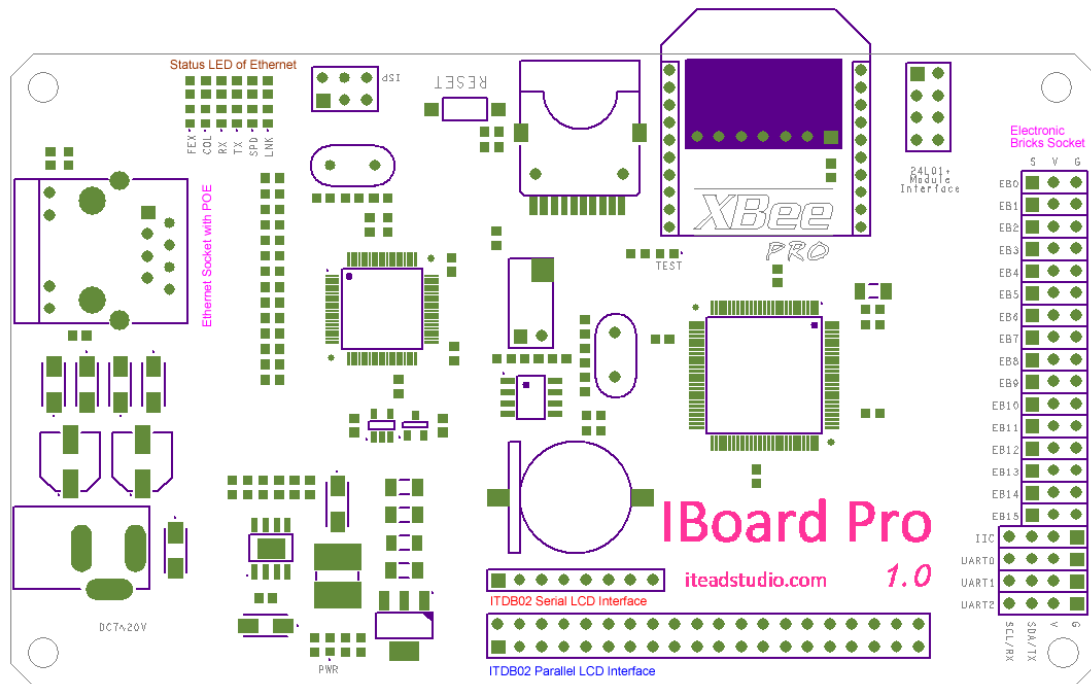
## Specifications

PCB size	124.46mm X 72.39mm X 1.6mm
Power supply	7~23V DC
POE supply	7~23V
Microprocessor	Atmega2560
Indicators	PWR, Tx, Rx, COL, FDX, SPD, LINK, TEST
Communication Interface	Ethernet RJ45, XBee, nRF24L01+, UART, IIC
RoHS	Yes

## Electrical Characteristics

Specification	Min	Type	Max	Unit
Power Voltage	7	-	23	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

### ITDB02 Parallel LCD Module Interface

Index of Interface	Name of Interface	Index of Arduino	Pin of Atmega2560
1	GND	-	-
2	DB0	D37	PC0
3	5V	-	-
4	DB1	D36	PC1
5	NC	-	-
6	DB2	D35	PC2
7	LCD_RS	D38	PD7
8	DB3	D34	PC3
9	LCD_WR	D39	PG2
10	DB4	D33	PC4
11	LCD_RD	3V3	3V3
12	DB5	D32	PC5
13	DB8	D22	PA0
14	DB6	D31	PC6
15	DB9	D23	PA1
16	DB7	D30	PC7

17	DB10	D24	PA2
18	Touch_CLK	D6	PH3
19	DB11	D25	PA3
20	Touch_CS	D5	PE3
21	DB12	D26	PA4
22	Touch_DIN	D48	PL1
23	DB13	D27	PA5
24	Touch_BUSY	-	-
25	DB14	D28	PA6
26	Touch_DOUT	D3	PE5
27	DB15	D29	PA7
28	Touch_IRQ	D2	PE4
29	LCD_CS	D40	PG1
30	SD_MISO	D50	PB3
31	NC	-	-
32	SD_SCK	D52	PB1
33	LCD_RST	D41	PG0
34	SD_MOSI	D51	PB2
35	NC	-	-
36	SD_CS	D53	PB0
37	LED+	3V3	3V3
38	NC	-	-
39	LED-	GND	GND
40	NC	-	-

## ITDB02 Serial LCD Module Interface

Index of Interface	Name of Interface	Index of Arduino	Pin of Atmega2560
1	5V	5V	-
2	GND	GND	-
3	RESET	D37	PC0
4	RS	D36	PC1
5	SDA	D35	PC2
6	SCL	D34	PC3
7	CS	D33	PD4
8	NC	-	-

## ITDB02 EB Interface

Index of Interface	Name of Interface	Index of Arduino	Pin of Atmega2560
1	EB0	A0	PF0
2	EB1	A1	PF1
3	EB2	A2	PF2
4	EB3	A3	PF3
5	EB4	A4	PF4
6	EB5	A5	PF5
7	EB6	A6	PF6

8	EB7	A7	PF7
9	EB8	A8	PK0
10	EB9	A9	PK1
11	EB10	A10	PK2
12	EB11	A11	PK3
13	EB12	A12	PK4
14	EB13	A13	PK5
15	EB14	A14	PK6
16	EB15	A15	PK7

## nRF24L01+ Module Interface

Index of Interface	Name of Interface	Index of Arduino	Pin of Atmega2560
1	GND	-	-
2	3V3	-	-
3	CE	D12	PB6
4	CS	D11	PB5
5	SCK	D9	PH6
6	MOSI	D8	PH5
7	MISO	D7	PH4
8	IRQ	-	PE7

## Micro SD Socket

Index of Interface	Name of Interface	Index of Arduino	Pin of Atmega2560
2	SD_CS	D4	PG5
3	SD_MOSI	D51	PB2
4	3V3	-	-
5	SD_SCK	D52	PB1
6	GND	-	-
7	SD_MISO	D50	PB3

## W5100 Communication Interface

Index of Interface	Name of Interface	Index of Arduino	Pin of Atmega2560
1	W5100_CS	D10	PB4
2	SD_MOSI	D51	PB2
3	SD_SCK	D52	PB1
4	SD_MISO	D50	PB3
5	W5100_RESET	D47	PL2

## Software

IBoard Pro is compatible with SD and Wiznet libraries of Arduino.cc, and all demo codes could be downloaded directly and run on it.

With embedded bootloader, IBoard Pro is easy to use by Arduino IDE through Foca series. ISP of Atmega2560 is broke out for download firmware easily.

## Revision History

Rev.	Description	Release date
v1.0	Initial version	2012-09-18