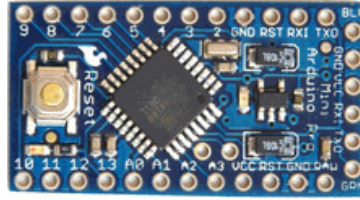# 31355-MP

Arduino ProMini 16MHz Microcontroller

DISCRIPTION

Arduino PRO MINI AVR Core Development Board with Headers & Installed Bootloader
Arduino ProMini Clone with headers & Wider Voltage Range. Get the same power as the UNO, or Nano in a low cost and small footprint. Features a Atmega328, 8bit, 16mHz processor, built in 5V regulator, 8 analog inputs and up to 14 digital I/O pins. This module does not have a USB connector. There are 5 dedicated 100 mil spaced pads for connecting the FTDI cable (DTR,TXO,RXI,VCC,GND) or a USB/TTLconverter module. The ProMini is ideal for use after you have perfected your idea on a Nano or Uno and want to embed it in the final project. Intended for advanced users. 1st. time Users should take advantage of the Arduino Nano to gain skills. Information & Freeware available through www. arduino.cc.en and others on-line.
The pre loaded Bootloader, allows Programming with an (off board) USB to TTL converter (our Stock # 31573) or a FTDI smart cable
Features:
Processor: 16 MHz ATmega328
Power: 3.3-12VDC On-Board Regulator (Operating 5 VDC)
Note: for 3.3-5V input Use the Vcc Pin
        for 5.5-12V input Use the RAW pin NOT BOTH
Digital I/O : 14 (with PWM available on 6)
Analog Input: 8
Memory: Flash: 32K (-2K for bootloader)
        SRAM: 2K
        EEPROM: 1K
Ports: Arduino I/O Pins   6 Pins for direct wiring to off Board USB connector (Not Supplied)
Manual Reset Button
.1in. pitch holes for headers (Supplied) or direct connection to functions
L: 1-5/16" O/A   W: 11/16" **H:** 1/2" O/A   **WT:** .012

FEATURES

ATMEL 16MHz ATMega328 microcontroller (www.atmel.com/Images/doc8151/pdf)
0.1in. pitch holes for header pins or hard wiring
USB Communication
Supports Auto Reset
On Board Power and Status LEDs
Reverse Polarity Protected
Open Source designs and applications available on-line, forums & blogs (www. arduino.cc.en)
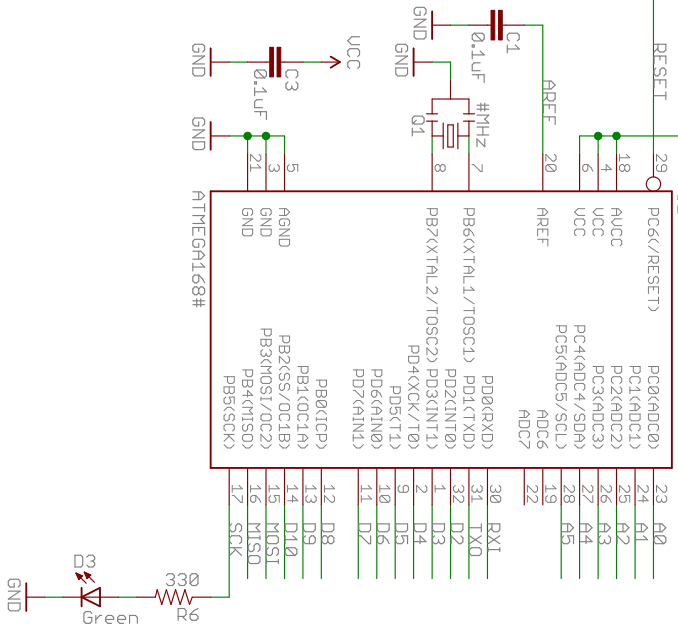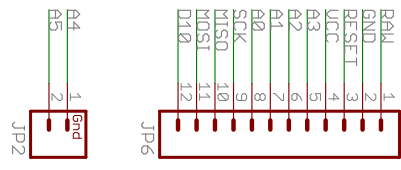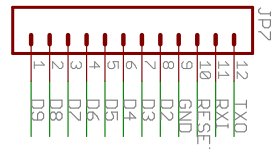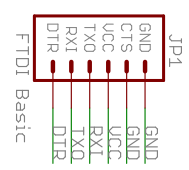Hundreds of application specfic Sensor Boards available (Temp, sound, pressure, Motor control)

JP1
FTDI Basic
GND
CTS
VCC
TXO
RXI
DTR

GND
GND
VCC
RXI
TXO
DTR

JP7
1 D9
2 D8
3 D7
4 D6
5 D5
6 D4
7 D3
8 D2
9 GND
10 RESET
11 RXI
12 TXO

JP2
1 A4
2 A5
Gnd

JP6
1 RAW
2 GND
3 VCC
4 A3
5 A2
6 A1
7 A0
8 SCK
9 MISO
10 MOSI
11 D10
12 D13
RESET

RAW
GND
GND
C19
10uF

U2
LG50
IN OUT
EN GND
BP

GND
GND
C13
10uF
C10
0.1uF

GND
R11
10K
LED1
Red
VCC

Original Arduino Mini Design by Team Arduino
Arduino Pro Mini Design by Spark Fun Electronics

DTR
C2
0.1uF
S2
Reset
1 2 3 4
R2
10K
VCC

GND
C1
0.1uF
Q1
#MHz
AREF
VCC
RESET

GND
C3
0.1uF
VCC

U1
ATMEGA168#
21 GND
3 GND
5 AGND
8 PB7(XTAL2/TOSC2)
7 PB6(XTAL1/TOSC1)
20 AREF
6 AVCC
4 VCC
18 VCC
29 PC6(/RESET)
23 PC0(ADC0)
24 PC1(ADC1)
25 PC2(ADC2)
26 PC3(ADC3)
27 PC4(ADC4/SDA)
28 PC5(ADC5/SCL)
19 ADC6
22 ADC7
30 PD0(RXD)
31 PD1(TXD)
32 PD2(INT0)
1 PD3(INT1)
2 PD4(XCK/T0)
9 PD5(T1)
10 PD6(AIN0)
11 PD7(AIN1)
12 PB0(ICP)
13 PB1(OC1A)
14 PB2(SS/OC1B)
15 PB3(MOSI/OC2)
16 PB4(MISO)
17 PB5(SCK)

A0
A1
A2
A3
A4
A5
RXI
TXO
D2
D3
D4
D5
D6
D7
D8
D9
D10
D13
MISO
SCK

D3
Green
330
R6
GND
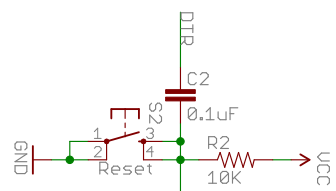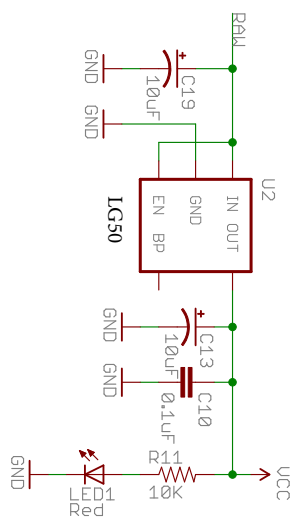
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