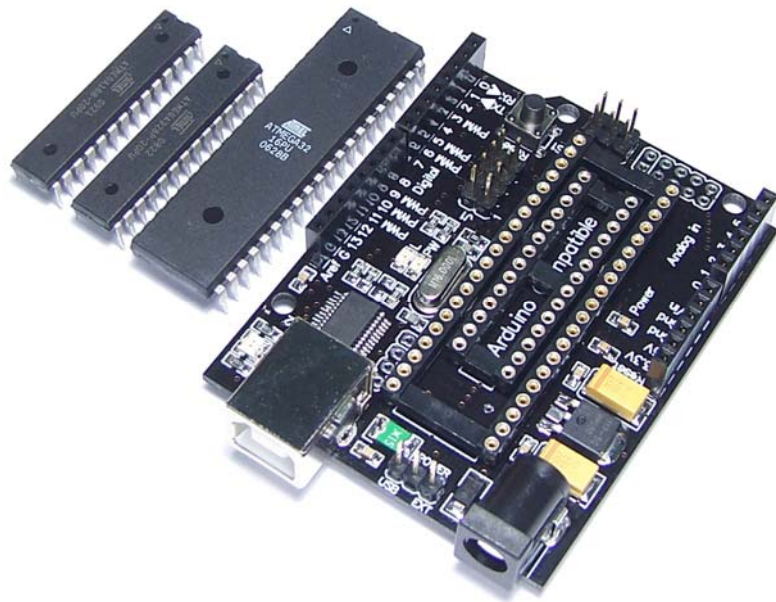


The Arduino Diecimila Compatible™ (DIP-28/40)



Overview

The Arduino **Diecimila Compatible™** is a microcontroller board based on the ATmega168/ATmega328/ATmega328. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with an AC-to-DC adapter or battery to get started.

Features Summary

Microcontroller	ATmega 168/328/32
Operating Voltage	5V
Input Voltage (recommended)	7-12V
Input Voltage (limits)	6-20V
Digital I/O Pins	14 (6 PWM /ATmega168/328 or 4 PWM /ATmega32)
Analog Input Pins	6
DC Current per I/O Pin	40 mA
DC Current for 3.3V Pin	50 mA
Flash Memory	16 KB (ATmega168) or 32 KB (ATmega328/32) of which 2 KB used by bootloader
SRAM	1 KB (ATmega168) or 2 KB (ATmega328/32)
EEPROM	512 bytes (ATmega168) or 1 KB (ATmega328/32)
Clock Speed	16 MHz

Signal Interface Power

The Arduino Duemilanove can be powered via the USB connection or with an external power supply. The power source is selected automatically.

External (non-USB) power can come either from an AC-to-DC adapter (wall-wart) or battery. The adapter can be connected by plugging a 2.1mm center-positive plug into the board's power jack. Leads from a battery can be inserted in the Gnd and Vin pin headers of the POWER connector.

The board can operate on an external supply of 6 to 20 volts. If supplied with less than 7V, however, the 5V pin may supply less than five volts and the board may be unstable. If using more than 12V, the voltage regulator may overheat and damage the board. The recommended range is 7 to 12 volts.

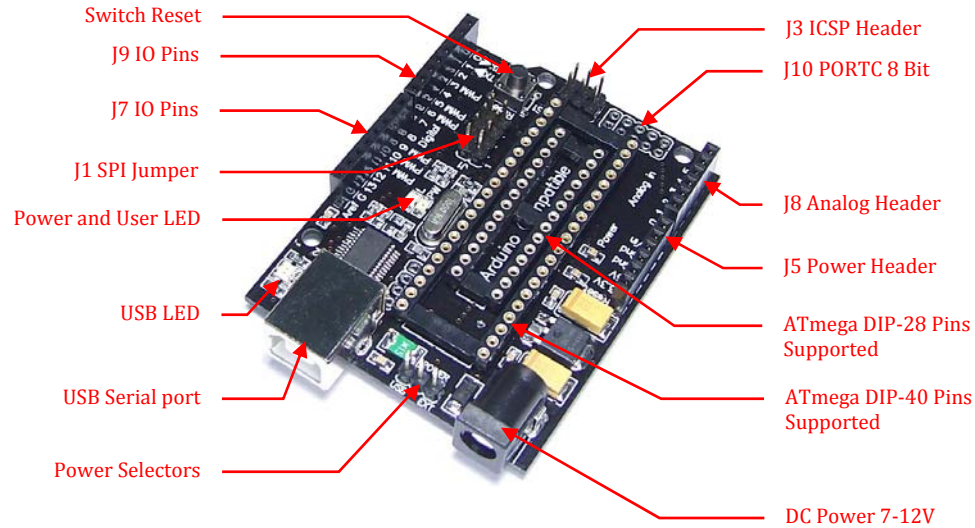
The power pins are as follows:

- **VIN.** The input voltage to the Arduino board when it's using an external power source (as opposed to 5 volts from the USB connection or other regulated power source). You can supply voltage through this pin, or, if supplying voltage via the power jack, access it through this pin.
- **5V.** The regulated power supply used to power the microcontroller and other components on the board. This can come either from VIN via an on-board regulator, or be supplied by USB or another regulated 5V supply.
- **3V3.** A 3.3 volt supply generated by the on-board FTDI chip. Maximum current draw is 50 mA.
- **GND.** Ground pins.

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Interface supported:

- used the Board Interface



Digital	Analog	PWM	Serial	ATmega (DIP-28)	Connector Header
Digital 0			RXD	PD0	J9
Digital 1			TXD	PD1	J9
Digital 2				PD2	J9
Digital 3		PWM		PD3	J9
Digital 4				PD4	J9
Digital 5		PWM		PD5	J9
Digital 6		PWM		PD6	J9
Digital 7				PD7	J9
Digital 8				PB0	J7
Digital 9		PWM		PB1	J7
Digital 10		PWM	SPI-SS	PB2	J7
Digital 11		PWM	SPI-MOSI	PB3	J7
Digital 12			SPI-MISO	PB4	J7
Digital 13			SPI-SCK	PB5	J7
Digital 14	Analog 0			PC0	J8
Digital 15	Analog 1			PC1	J8
Digital 16	Analog 2			PC2	J8
Digital 17	Analog 3			PC3	J8
Digital 18	Analog 4		I2C-SDA	PC4	J8
Digital 19	Analog 5		I2C-SCL	PC5	J8

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Arduino Diecimila Pins mapping:

Digital Pins	Analog	PWM	Serial	ATmega (DIP-40)	Connector Header
Digital 0			RXD	PD0	J9
Digital 1			TXD	PD1	J9
Digital 2				PD2	J9
Digital 3				PD3	J9
Digital 4		PWM		PD4	J9
Digital 5		PWM		PD5	J9
Digital 6				PD6	J9
Digital 7		PWM		PD7	J9
Digital 8				PB0	J7
Digital 9				PB1	J7
Digital 10			SPI-SS	PB4	J7
Digital 11			SPI-MOSI	PB5	J7
Digital 12			SPI-MISO	PB6	J7
Digital 13			SPI-SCK	PB7	J7
Digital 14	Analog 0			PA5	J8
Digital 15	Analog 1			PA4	J8
Digital 16	Analog 2			PA3	J8
Digital 17	Analog 3			PA2	J8
Digital 18	Analog 4			PA1	J8
Digital 19	Analog 5			PA0	J8
Digital 20				PC0	J10
Digital 21				PC1	J10
Digital 22				PC2	J10
Digital 23				PC3	J10
Digital 24				PC4	J10
Digital 25				PC5	J10
Digital 26			I2C-SDA	PC6	J10
Digital 27			I2C-SCL	PC7	J10

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Arduino Diecimila Compatible (DIP-28/40) Schematic.

