

## Hapkit Board Pin Mapping (version 11.14.2013)

ATmega 328 chip pin #	ATmega 328 pin name	Typical Arduino function	Special Hapkit function	Pin name printed on Hapkit Board	Pin number to use in Arduino program
1	PC6 (PCINT14/Reset)	Reset	Reset	RST	
2	PD0 (PCINT16/RXD)	Digital Pin 0 (RX)		D0	0
3	PD1 (PCINT17/TXD)	Digital Pin 1 (TX)		D1	1
4	PD2 (PCINT18/INT0)	Digital Pin 2		D2	2
5	PD3 (PCINT19/OC2B/INT1)	Digital Pin 3 (PWM)		D3	3
6	PD4 (PCINT20/XCK/T0)	Digital Pin 4	SD card Slave Select Line	D4	4
7	VCC	VCC			
8	GND	GND		GND	
9	PB6 (PCINT6/XTAL1/TOSC1)	Crystal			
10	PB7 (PCINT7/XTAL2/TOSC2)	Crystal			
11	PD5 (PCINT21/OC0B/T1)	Digital Pin 5 (PWM)	PWM Output for Motor 1	D5	5
12	PD6 (PCINT22/OC0A/AIN0)	Digital Pin 6 (PWM)	PWM Output for Motor 2	D6	6
13	PD7 (PCINT23/AIN1)	Digital Pin 7	Direction Output for Motor 2	D7	7
14	PB0 (PCINT0/CLKO/ICP1)	Digital Pin 8	Direction Output for Motor 1	D8	8
15	PB1 (OC1A/PCINT1)	Digital Pin 9 (PWM)	Grove Connector Output	D9	9
16	PB2 (SS/OC1B/PCINT2)	Digital Pin 10 (PWM)	Grove Connector Output	D10	10
17	PB3 (MOSI/OC2A/PCINT3)	Digital Pin 11 (PWM)	Data In for SD Card	D11	11
18	PB4 (MISO/PCINT4)	Digital Pin 12	Data Out for SD Card	D12	12
19	PB5 (SCK/PCINT5)	Digital Pin 13	Serial Clock Line for SD Card	D13	13
20	AVCC	VCC			
21	AREF	Analog Reference		AREF	
22	GND	GND		GND	
23	PC0 (ADC0/PCINT8)	Analog Input 0	Grove Connector Output	A0	A0
24	PC1 (ADC1/PCINT9)	Analog Input 1	Grove Connector Output	A1	A1
25	PC2 (ADC2/PCINT10)	Analog Input 2	MR Sensor Output	A2	A2
26	PC3 (ADC3/PCINT11)	Analog Input 3	FSR Output	A3	A3
27	PC4 (ADC4/SDA/PCINT12)	Analog Input 4		A4	A4
28	PC5 (ADC5/SCL/PCINT13)	Analog Input 5		A5	A5

Special Hapkit Function

Typical Arduino function

ATmega 328 Pin Mapping

Typical Arduino function

Special Hapkit Function

Slave Select for SD Card

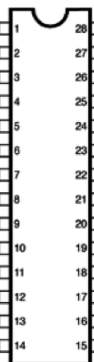
Motor Enable A

Motor Enable B

Motor Direction B

Motor Direction A

reset (PCINT14/RESET) PC6  
 digital pin 0 (RX) (PCINT16/RXD) PD0  
 digital pin 1 (TX) (PCINT17/TXD) PD1  
 digital pin 2 (PCINT18/INT0) PD2  
 digital pin 3 (PWM) (PCINT19/OC2B/INT1) PD3  
 digital pin 4 (PCINT20/XCK/T0) PD4  
 VCC  
 GND  
 crystal (PCINT6/XTAL1/TOSC1) PB6  
 crystal (PCINT7/XTAL2/TOSC2) PB7  
 digital pin 5 (PWM) (PCINT21/OC0B/T1) PD5  
 digital pin 6 (PWM) (PCINT22/OC0A/AIN0) PD6  
 digital pin 7 (PCINT23/AIN1) PD7  
 digital pin 8 (PCINT0/CLKO/ICP1) PB0

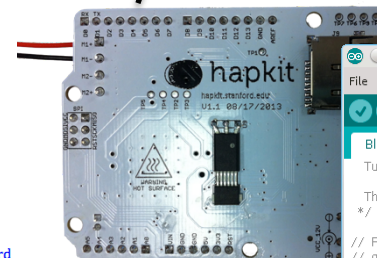


PC5 (ADC5/SCL/PCINT13)  
 PC4 (ADC4/SDA/PCINT12)  
 PC3 (ADC3/PCINT11)  
 PC2 (ADC2/PCINT10)  
 PC1 (ADC1/PCINT9)  
 PC0 (ADC0/PCINT8)  
 GND  
 AREF  
 AVCC  
 PB5 (SCK/PCINT5)  
 PB4 (MISO/PCINT4)  
 PB3 (MOSI/OC2A/PCINT3)  
 PB2 (SS/OC1B/PCINT2)  
 PB1 (OC1A/PCINT1)

analog input 5  
 analog input 4  
 analog input 3  
 analog input 2  
 analog input 1  
 analog input 0  
 GND  
 analog reference  
 VCC  
 digital pin 13  
 digital pin 12  
 digital pin 11 (PWM)  
 digital pin 10 (PWM)  
 digital pin 9 (PWM)

FSR Sensor Output  
 MR Sensor Output  
 Grove Connector Output  
 Grove Connector Output

Serial Clock line for SD Card  
 Data Out for SD Card  
 Data In for SD Card  
 Grove Connector Output  
 Grove Connector Output



```

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// Blink
// Turns on an LED on for one second, then off for one second
// This example code is in the public domain.
//
// Pin 13 has an LED connected on most Arduino boards.
// give it a name:
int led = 13;

// the setup routine runs once when you press reset:
void setup() {
  // initialize the digital pin as an output.
  pinMode(led, OUTPUT);
}
  
```