MCU pin:	Features	Sensor modules		Shield connector	MCU ressource	Software driver	Remarks
---	---	Module	Signal				
PA0	Digital I/O			J11-2			
PA1	Digital I/O			J11-1			
PA2	Digital I/O			J11-4			
PA3	Digital I/O			J11-3			
PA4	Digital I/O			J11-6			
PA5	Digital I/O			J11-5			
PA6	Digital I/O			J11-8			
PA7	Digital I/O	speaker		J11-7	Timer2	tone.c	
GND				J11-9			
+5V				J11-10			
PB0	SS/PCINT0	ADXL345	SCL	J9-3	PB0	adxl345.c	
PB1	SCK/PCINT1	ADXL345	CS	J9-8	PB1	adxl345.c	
PB2	MOSI/PCINT2	ADXL345	SDO/MISO	J9-7	PB2	adxl345.c	
PB3	MISO/PCINT3	ADXL345	SDA/MOSI	J9-6	PB3	adxl345.c	
PB4	LED 4 (shield)				PB4	leds.c	
PB5	LED 3 (shield)				PB5	leds.c	
PB6	LED 2 (shield)				PB6	leds.c	
PB7	LED 1 (shield)				PB7	leds.c	
PC0	Digital I/O			J12-2			
PC1	Digital I/O			J12-1			
PC2	Digital I/O			J12-4			
PC3	Digital I/O			J12-3			
PC4	Digital I/O			J12-6			
PC5	Digital I/O			J12-5			
PC6	Digital I/O			J12-8			
PC7	Digital I/O			J12-7			
GND				J12-9			

+5V				J12-10			

PD0	SCL/INT0			J13-4		
PD1	SDA/INT1			J13-3		
PD2	RXD1/**INT2**	HC-SR501	Dout	J6-2	INT2_vect	pir.c
PD3	TXD1/INT3			J14		

PE0	RXD0		USB	USART0	PC_Comm.c	Programming/PC communication
PE1	TXD0		USB	USART0	PC_Comm.c	Programming/PC communication
PE3	OC3A		~5	PE3	servo.c	
PE4	?					
PE5	Buzzer (shield)			PE5	buzzer.c	

PF0	Potentiometer					
PF1	Button 1 (shield)			PF1	Buttons.c	
PF2	Button 2 (shield)			PF2	Buttons.c	
PF3	Button 3 (shield)			PF3	Buttons.c	
PF4	DS1820					Temperature sensor (onboard)
PF5	TMS		A5			
PF6						
PF7						

PG5	Display latch			Timer1	display.c

PH0	RXD2	ESP-01	TX	J5-3	USART2	wifi.c
PH1	TXD2	ESP-01	RX	J5-4	USART2	wifi.c
PH3	OC4A			~6		
PH4	Display clock				Timer1	display.c
PH5	Display data				Timer1	display.c
PH6	OC2B			~9		

PJ0	RXD3/PCINT9		J13-2	USART3	uart.c
PJ1	TXD3/PCINT10		J13-1	USART3	uart.c

Pin	Function	Sensor	Signal	Connector	MCU	Source
PK0	ADC8/PCINT16	Soil Moist	AOUT	J10-1	ADC8	soil.c
PK1	ADC9/PCINT17			J10-2		
PK2	ADC10/PCINT18			J10-3		
PK3	ADC11/PCINT19			J10-4		
PK4	ADC12/PCINT20			J10-5		
PK5	ADC13/PCINT21	ADXL345	INT1	J9-4, J10-6	PK5	
PK6	ADC14/PCINT22	ADXL345	INT2	J9-5, J10-7	PK6	
PK7	ADC15/PCINT23	KY-018	S	J4-1/J10-8	ADC15	light.c
GND		Soil Moist	GND	J10-9		
+5V		Soil Moist	VCC	J10-10		

Pin	Function	Sensor	Signal	Connector	MCU	Source
PL0	ICP4			J8-2		
PL1	ICP5	DHT11	Data	J14	PL1	dht11.c
PL2	T5			J14		
PL3	OC5A			J14		
PL4	OC5B			J14		
PL5	OC5C			J14		
PL6		HC-SR04	Echo	J7-2	PL6	hc_sr04.c
PL7		HC-SR04	Trig	J7-3	PL7	hc_sr04.c

GND	J4-3, J5-1, J6-3, J7-4, J8-3, J9-1, J10-9, J11-9, J12-9
+5V	J4-2, J5-2, J6-1, J7-1, J8-1, J9-2, J10-10, J11-10, J12-10

Colours

Arduino board
Multi Function Shield
Sensor extension board
Sensor/module

Other features   Timer3   periodic_task.c

HC-SR501
KY-018

[ESP-01](#)
[HC-SR04](#)
[DHT11](#)
[ADXL345](#)