

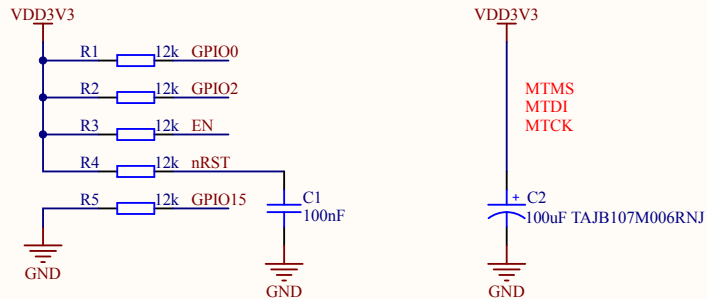
NODE MCU DEVKIT V1.0

Logo1
Logo
Logo_NodeMCU



VER	DATE
1.0	25/01/2015
ORGANIZATION	
NODE MCU TEAM	
WEBSITE	
WWW.NODEMCU.COM	

ESP-12 CORE



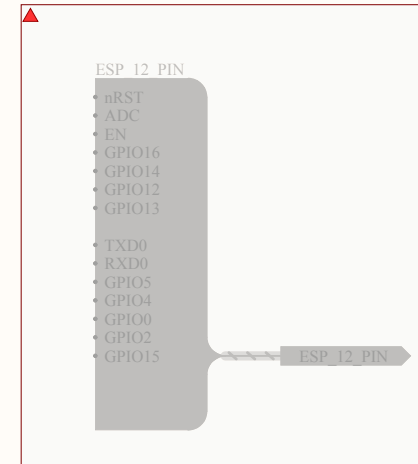
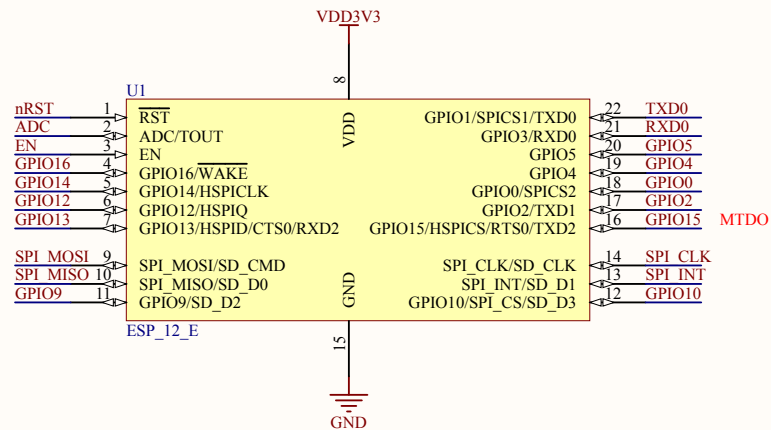
MATTERS NEEDING ATTENTION

On every boot/reset/wakeup,

GPIO15 MUST keep LOW, GPIO2 MUST keep HIGH.

GPIO0 HIGH -> RUN MODE, LOW -> FLASH MODE.

When you need to use the sleep mode, GPIO16 and RST should be connected, and GPIO16 will output LOW to reset the system at the time of wakeup.



	VER	DATE
	1.0	20/11/2014
	ORGANIZATION	
	NODE MCU TEAM	
	WEBSITE	
	WWW.NODEMCU.COM	

AUTO PROGRAM CIRCUIT

DTR	RTS	RST	GPIO0
1	1	1	1
0	0	1	1
1	0	0	1
0	1	1	0

CP2102 Pin Connections:

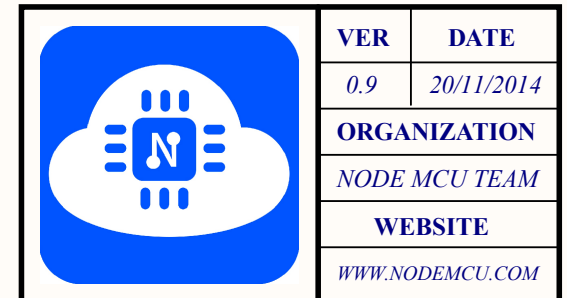
- Pin 1: DCD
- Pin 2: RI
- Pin 3: GND
- Pin 4: D+ P
- Pin 5: D- N
- Pin 6: VDD
- Pin 7: REGIN
- Pin 8: VBUS
- Pin 9: RST
- Pin 10: NC
- Pin 11: SUSPEND
- Pin 12: SUSPEND
- Pin 13: NC
- Pin 14: NC
- Pin 15: NC
- Pin 16: NC
- Pin 17: NC
- Pin 18: NC
- Pin 19: NC
- Pin 20: NC
- Pin 21: NC

USB Micro 5S_B Pin Connections:

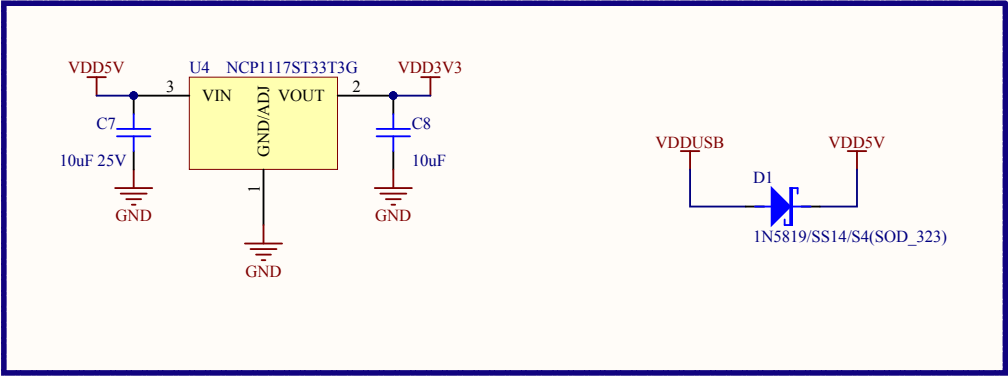
- Pin 1: D- N
- Pin 2: VCC MH4
- Pin 3: D+ MH3
- Pin 4: ID MH2
- Pin 5: OTG MH1
- Pin 6: GND
- Pin 7: GND
- Pin 8: GND
- Pin 9: GND

Other Components:

- Resistors: R7 (12k), R8 (12k), R6 (470)
- Capacitors: C3 (10uF), C4 (100nF), C5 (10uF), C6 (100nF)
- Transistors: VT1, VT2 (S8050)
- Diodes: S8050



POWER



Working Output: 3.3V 800mA
Working Current Limit: 1000mA
Max Current: 1000mA
Max Supply Voltage: 20V
Voltage Dropout: 1.2V@800mA



VER	DATE
1.0	28/01/2015
ORGANIZATION	
NODE MCU TEAM	
WEBSITE	
WWW.NODEMCU.COM	

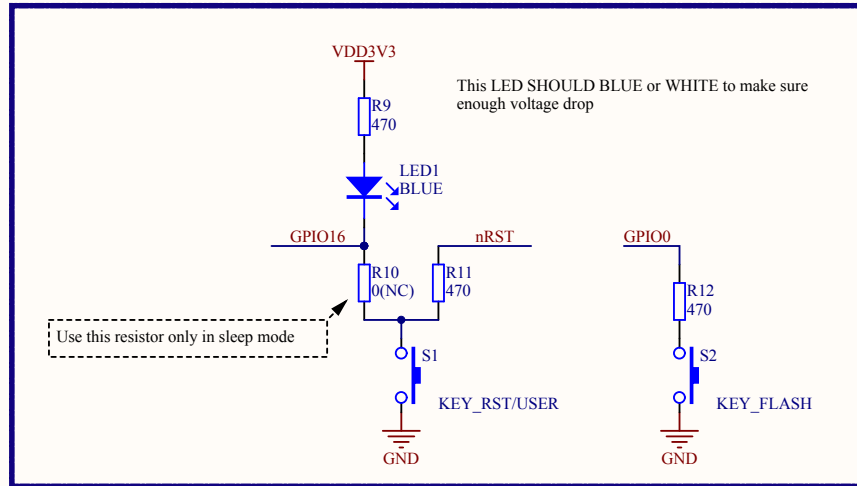
IO CONN

J1				J2			
ADC EX	A0	1	PIN1	PIN1	1	D0	GPIO16
ADC		2	PIN2	PIN2	2	D1	GPIO5
RESV		3	PIN3	PIN3	3	D2	GPIO4
SD D3	GPIO10	D12	4	PIN4	4	D3	GPIO0
SD D2	GPIO9	D11	5	PIN5	5	D4	GPIO2 TXD1
SD D1	SPI INT		6	PIN6	6		VDD3V3
SD CMD	SPI MOSI		7	PIN7	7		GND
SD D0	SPI MISO		8	PIN8	8	D5	GPIO14 HSPICLK
SD CLK	SPI CLK		9	PIN9	9	D6	GPIO12 HSPIC
GND		10	PIN10	PIN10	10	D7	GPIO13 RXD2 HSPID
VDD3V3		11	PIN11	PIN11	11	D8	GPIO15 TXD2 HSPICS
EN		12	PIN12	PIN12	12	D9	RXD0 GPIO3
nRST		13	PIN13	PIN13	13	D10	TXD0 GPIO1
GND		14	PIN14	PIN14	14		GND
VDD5V		15	PIN15	PIN15	15		VDD3V3

THT_Male_P_1x15 THT_Male_P_1x15

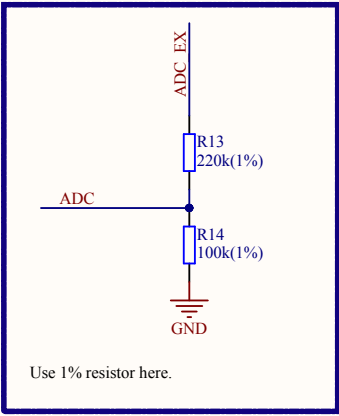
	VER	DATE
	0.9	20/11/2014
	ORGANIZATION	
	NODE MCU TEAM	
	WEBSITE	
	WWW.NODEMCU.COM	

KEY

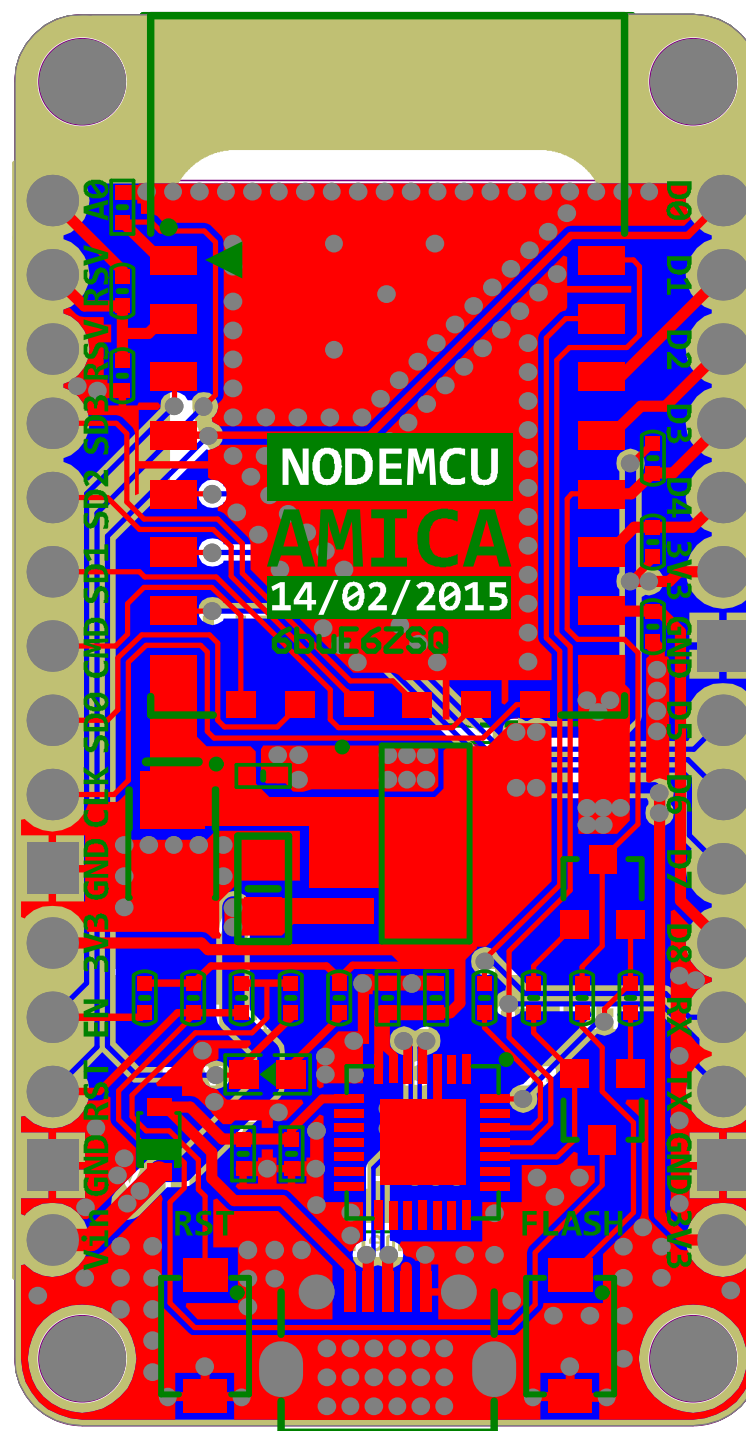


	VER	DATE
	0.9	20/11/2014
	ORGANIZATION	
	NODE MCU TEAM	
	WEBSITE	
	WWW.NODEMCU.COM	

ADC



	VER	DATE
	0.9	20/11/2014
	ORGANIZATION	
	NODE MCU TEAM	
	WEBSITE	
WWW.NODEMCU.COM		



2.5400x4.8260cm

Bill of Materials

NODE MCU DEVKIT V1.0

Source Data From: NODEMCU_DEVKIT_V1.0.PrjPCB

Project: NODEMCU_DEVKIT_V1.0.PrjPCB

Variant: None

Creation Date: 2015/3/3 16:07:47

Print Date: 03-Mar-15 4:07:55 PM

Footprint	Comment	LibRef	Designator	Description	Quantity
SMT_C_0402	100nF	SMT_C_0402	C1, C4, C6	Surface mount capacitor 0402	3
SMT_C_Tantalum_B	100uF TAJB107M006R NJ	SMT_C_Tantalum_B	C2	Capacitor, SM Tantalum; Body 3.5 x 2.8 mm (LxW typ)	1
SMT_C_0402	10uF	SMT_C_0402	C3, C5, C8	Surface mount capacitor 0402	3
SMT_C_0805	10uF 25V	SMT_C_0805	C7	Surface mount capacitor 0805	1
SMT_DIODE_SOD_323	1N5819/SS14/S 4(SOD_323)	SMT_DIODE_SCHOTTKY_SOD_323	D1	Surface mount schottky diode SOD-323(0805) Package	1
THT_Male_P_1x15-2.54mm	THT_Male_P_1x15	THT_Male_P_1x15	J1, J2	THT Male pin header strip 1x15	2
SMT_LED_0603	BLUE	SMT_LED_0603	LED1	SMT LED	1
Logo_NodeMCU_700x992	Logo_NodeMCU	Logo_NodeMCU	Logo1	Logo NodeMCU	1
SMT_R_0402	12k	SMT_R_0402	R1, R2, R3, R4, R5, R7, R8	Surface mount resistor 0402	7
SMT_R_0402	470	SMT_R_0402	R6, R9, R11, R12	Surface mount resistor 0402	4
SMT_R_0402	0(NC)	SMT_R_0402	R10	Surface mount resistor 0402	1
SMT_R_0402	220k(1%)	SMT_R_0402	R13	Surface mount resistor 0402	1
SMT_R_0402	100k(1%)	SMT_R_0402	R14	Surface mount resistor 0402	1
SMT_SW_PT_S_820	KEY_RST/USER	SMT_SW_PT_S_820	S1	SMT Tactile ?Switch PTS 820 Series	1
SMT_SW_PT_S_820	KEY_FLASH	SMT_SW_PT_S_820	S2	SMT Tactile ?Switch PTS 820 Series	1
ESP_12_E_L	ESP_12_E	ESP_12_E	U1	ESP-12 Wi-Fi Module by AI-Thinker	1
CP2102	CP2102	CP2102	U2	CP2102	1
USB_MICRO_5S_B	USB_Micro_5S_B	USB_Micro_5S_B	U3	USB micro female SMT with 4 fixed foot	1
SOT-223	NCP1117ST33T3G	NCP1117	U4	NCP1117, NCV1117. 1.0 A Low-Dropout Positive Fixed and Adjustable Voltage Regulators	1
SMT_TRIODE_NPN	S8050	SMT_TRIODE_NPN	VT1, VT2	Surface mount NPN transistor, package SOT-23	2
					35

Approved	Notes