

Part	Value	Board ID	Digikey Number	Vendor Number
* = changes for this board version 10_2e				
CPU Parts				
IC MCU 8BIT 256KB FLASH 100TQFP	8 MHz ATMEGA2560 for 3.3 volt	CPU	ATMEGA2560V-8AU-ND	ATMEGA2560V-8AU
CRYSTAL 8.0000MHZ 18PF SMD	8 MHZ for 3.3 volt	Q1	535-13477-1-ND	ABMM2-8.000MHZ-D1-T
Capacitor 0603 Ceramic	22pf 50V	C1,C2	490-1411-1-ND	GRM1885C1H220JA01D
Capacitor 0603 Ceramic	0.1uf 16V	C3,C4,C5,C6,C7,C8	490-1532-1-ND	GRM188R71C104KA01D
Reset Switch	SPST_TACT-KMR2	SW2	CKN10684CT-ND	KMR621NG LFS
Resistor 0603	10K 1/10W	RRES	311-10KGRCT-ND	RC0603JR-0710KL
Resistor 0603	10K 1/10W	RSCL, RSDA	311-10KGRCT-ND	RC0603JR-0710KL
Resistor 0603	1K 1/10W	RPB7, RPA0	311-1.0KGRCT-ND	RC0603JR-071KL
LED 0805	Yellow	LED PB7	160-1428-1-ND	LTST-C171KSKT
LED 0805	Green	LED PA0	160-1426-1-ND	LTST-C171KGKT

Power Reg Parts				
IC REG LINEAR 3.3V 800MA DPAK-3	MC33269	MC33269	MC33269DT-3.3GOS-ND	MC33269DT-3.3G
* DIODE SCHOTTKY 40V 2A	SS24FA	D1,D2,D3	SS24FLCT-ND	SS24FA
Digikey no longer has SS22FA diode				
CONN TERM BLOCK 2.54MM 2POS PCB	Power Jack	CN1	ED10561-ND	OSTVN02A150
Resistor 0603	1 Meg 1/10W	RPD2	311-1.0MGRCT-ND	RC0603JR-071ML
* Capacitor Tantalum 2312	47uf 16V Low ESR	C10	478-1773-1-ND	TPSC476K016R0350
* Capacitor Ceramic 1210	10uf 25V Low ESL	C9	445-3946-1-ND	C3225X5R1E106K250AA
Resistor 0603	1K 1/10W	RPWR	311-1.0KGRCT-ND	RC0603JR-071KL
LED 0805	Yellow	LED Power	160-1428-1-ND	LTST-C171KSKT

USB Parts				
IC SGL USB-TO-UART BRIDGE	CP2104	CP2104	336-2008-5-ND	CP2104-F03-GM
TVS DIODE 5.5VWM 8.5VC	SP5030	SP5030	F2715CT-ND	SP0503BAHTG
PTC RESET FUSE 16V 500MA 1812	PPTC	F1	283-3150-1-ND	PTS181216V050
Micro USB Jack, Right Angle; Through Hole	MicroUSB	USB	670-2675-1-ND	DX4R005JJ2R1800
Resistor 0603	1 Meg 1/10W	RFG	311-1.0MGRCT-ND	RC0603JR-071ML
Capacitor 0603 Ceramic	100 pf 25V	CFG	399-8980-1-ND	C0603C101J3GACTU
Capacitor 0603 Ceramic	1uf 50V	CV2	445-12510-1-ND	CGA3E3X5R1H105M080AB
Capacitor 0603 Ceramic	0.1uf 16V	CV1	1276-1939-1-ND	CL10B104KO8NNWC
Capacitor 0603 Ceramic	1 uf 50V	CREG	445-12510-1-ND	CGA3E3X5R1H105M080AB
Capacitor 0603 Ceramic	4.7uf 25V	CVPP	490-7203-1-ND	GRM188R6
Resistor 0603	4.7K 1/10W	RRST	YAG1317CT-ND	RC0603JR-074K7P
Resistor 0603	1K 1/10W	RTX	311-1.0KGRCT-ND	RC0603JR-071KL
Resistor 0603	1K 1/10W	RRX	311-1.0KGRCT-ND	RC0603JR-071KL
* Resistor 0603	680	RUTX	YAG3356CT-ND	RT0603FRE07680RL
* Resistor 0603	680	RURX	YAG3356CT-ND	RT0603FRE07680RL
LED 0805	Red	LED LTX	160-1427-1-ND	LTST-C171KRKT
LED 0805	Green	LED LRX	160-1426-1-ND	LTST-C171KGKT

Parts for 5 volt version of MiniMega2560:				
	16 Mhz ATMEGA2560 for 5 volt	CPU	ATMEGA2560-16AURCT-ND	ATMEGA2560-16AUR
	16 MHz crystal for 5 volt	Q1	535-9634-1-ND	ABMM2-16.000MHZ-E2-T
	IC REG LINEAR 5V 800MA DPAK-3	MC33269	MC33269DT-5.0GOS-ND	MC33269DT-5.0G

Spare parts of interest:				
Very handy to have. -->	DESOLDER BRAID FOR SMT		473-1060-ND	423
	SOLDER PASTE LOW TEMP		SMDLTLFP10-ND	SMDLTLFP10
	STENCIL 4X4MM .5MM		IPC0014-S-ND	IPC0014-S
	VQFP-100/TQFP-100 STENCIL		PA0109-S-ND	PA0109-S

Pins		Vendor		
Long Pin Stacking Header 1x24	24 pin jacks (2) .100	Adafruit #3366	Cut down - 36-pin Stacking header - pack of 5!	
Long Pin Stacking Header 1x24	6 pin jack, Pin Spacing: 0.1"	Adafruit #3366	Cut down - 36-pin Stacking header - pack of 5!	
	3 pin jack, Pin Spacing: 0.1"	Pin Spacing: 0.1"	Break Away Male Headers	
	2 pin jack, Pin Spacing: 0.1"	Pin Spacing: 0.1"	Break Away Male Headers	

Notes:

For USB LEDs to flash you need to program the CP2104 RX TX option,

I used Simplicity Studio from <https://www.silabs.com/products/development-tools/software/simplicity-studio>

To use Arduinio with the ATMEGA2560V-8AU-ND 3.3 volt 8 MHz cpu you need to set the boot loader 8 MHz fuse,it very easy to use

I used MegaCore from <https://github.com/MC Udude/MegaCore>

To build a 5 volt version of the MiniMega2560, change the CPU, Crystal and Voltage Reg, also solder jumper the 5 volt option

<https://www.silabs.com/documents/public/data-sheets/cp2104.pdf>

<https://www.silabs.com/products/development-tools/software/simplicity-studio>

<https://www.silabs.com/products/interface/usb-bridges/classic-usb-bridges/device.cp2104>

<http://www.microchip.com/atmega2560>

<https://www.microchip.com/wwwproducts/en/ATmega2560>

<https://www.onsemi.com/pub/Collateral/MC33269-D.PDF>