

HOCHSCHULE ULM
UNIVERSITY OF APPLIED SCIENCES

PROJECT BUMBLEBEE

CURCUIT BOARD

Yvette Groner

Hannes Heinisch

Daniel Klitzke

Simon Kraus

Christoph Löser

Christian Müller

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1 List of Component Parts

The following table contains all parts which are required for the circuit board.

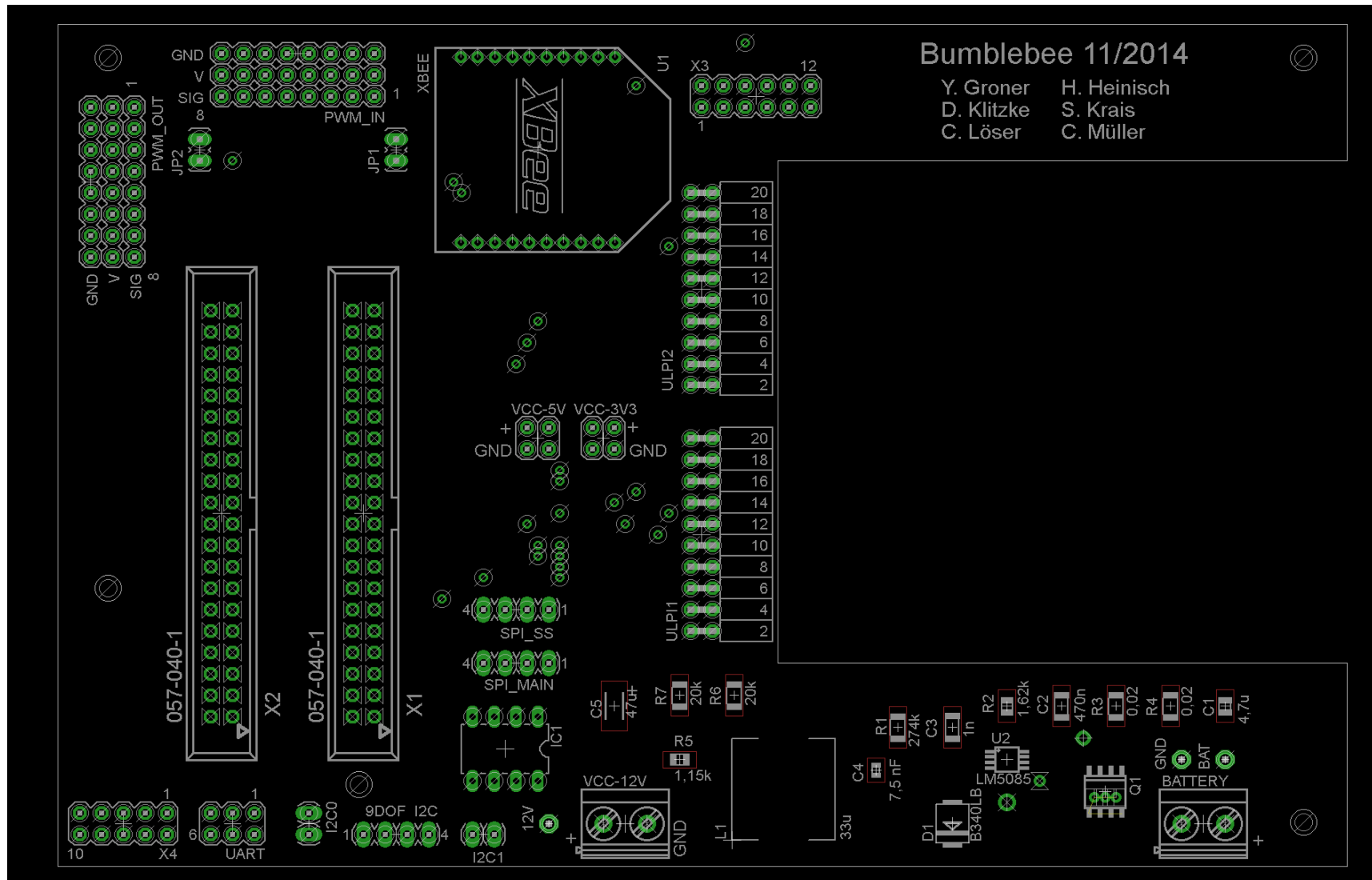
Group	Manufacturer	Manufacturer designation	Name	Construction	Type	Value
Generally	Würth Elektronik		PWM_OUT		1x8 Pin-Header Male	
Generally	Würth Elektronik		PWM_IN		1x8 Pin-Header Male	
Generally	Samtec	MMS-110-02-L-SV	U1		1x10 Pin-Header Female	
Generally	TE connectivity	4-1634688-0	X1		2x20 Pin-Header Male	
Generally	TE connectivity	4-1634688-0	X2		2x20 Pin-Header Male	
Generally	Würth Elektronik	61301221121	X3		2x6 Pin-Header Male	
Generally	TE connectivity	5-146254-5	X4		2x5 Pin-Header Male	
Generally	Würth Elektronik		VCC-5V		2x2 Pin-Header Male	
Generally	Würth Elektronik		VCC-3V3		2x2 Pin-Header	

Group	Manufacturer	Manufacturer designation	Name	Construction	Type	Value
					Male	
Generally	Preci-Dip	803-87-020-20-001101	ULPI1		2x10 Pin-Header Female 90°	
Generally	Preci-Dip	803-87-020-20-001101	ULPI2		2x10 Pin-Header Female 90°	
Generally	Würth Elektronik		UART		2x3 Pin-Header Male	
Generally	Würth Elektronik		9DOF		1x4 Pin-Header Male	
Generally	Würth Elektronik		I2C0		1x2 Pin-Header Male	
Generally	Würth Elektronik		I2C1		1x2 Pin-Header Male	
Generally	Würth Elektronik		JP2		1x2 Pin-Header Male	
Generally	Würth Elektronik		JP2		1x2 Pin-Header Male	
Generally	TE connectivity	0-0142270-3	JP1		Jumper	
Generally	TE connectivity	0-0142270-3	JP2		Jumper	
Generally	Würth Elektronik		SPI_SS		1x4 Pin-Header Male	
Generally	Würth		SPI_MAIN		1x4 Pin-	

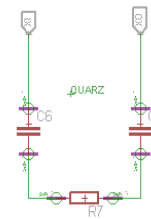
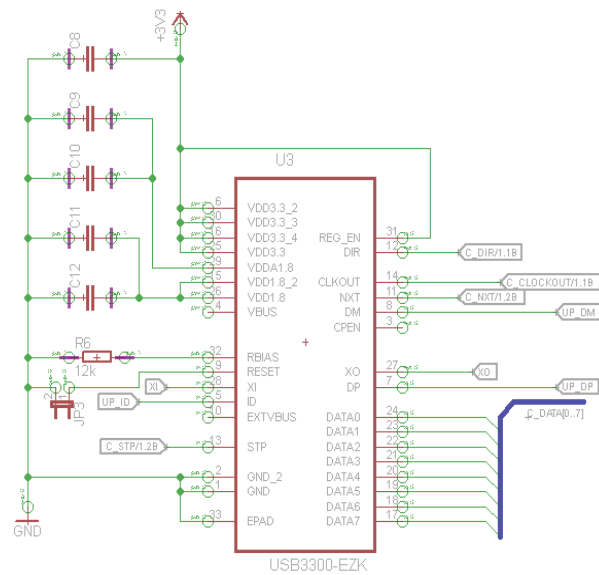
Group	Manufacturer	Manufacturer designation	Name	Construction	Type	Value
	Elektronik				Header Male	
Generally	Microship	24FC1026-I/P	IC1		I2C-EEPROM	
Generally	TE connectivity	808-AG11D-ESL-LF	IC1		DIL Sockel, 8 Pollig	
V_CC_12V	Phoenix Contact	SMKDSN1,5/2-5.08	VCC-12V		Screw terminal	
V_CC_12V	Phoenix Contact	SMKDSN1,5/2-5.08	BATTERY		Screw terminal	
V_CC_12V	Panasonic	ERA8AE-B2743V	R1	1206	Resistor	274k
V_CC_12V	Panasonic	ER-JP06F1621V	R2	0805	Resistor	1.62k
V_CC_12V	BOURNS	CRL 1206-FU-R020ELF	R3	1206	Resistor	0.02
V_CC_12V	BOURNS	CRL 1206-FU-R020ELF	R4	1206	Resistor	0.02
V_CC_12V	PANASONIC	ER-JP06F1151V	R5	0805	Resistor	1.15k
V_CC_12V	KOA SPEAR ELECTRONICS	SG73P2BTDD 2002F	R6	1206	Resistor	20k
V_CC_12V	KOA SPEAR ELECTRONICS	SG73P2BTDD 2002F	R7	1206	Resistor	20k
V_CC_12V	AVX	08053D475K AT2A	C1	0805	Capacitor	4.7u
V_CC_12V	Syfer Technology	V 1206Y02504 74KXT	C2	1206	Capacitor	470n

Group	Manufacturer	Manufacturer designation	Name	Construction	Type	Value
V_CC_12V	AVX	12065A102-FAT2A	C3	1206	Capacitor	1n
V_CC_12V	KEMET	C0603C752J3GACTU	C4	0603	Capacitor	7.5n
V_CC_12V	VISHAY	293D476X96R3A2TE3	C5	1206	Capacitor	47u
V_CC_12V	Vishay Siliconix	SI4401BDY-T1-E3	Q1			SI4401BDY
V_CC_12V	Texas Instruments	LM4054MY/NOPB	U2			LM5085MY/NOPB
V_CC_12V	Diodes Inc.	B340LB-13-F	D1		Diode	B349LB (SMB)
V_CC_12V	Coilcraft	MSS1210-333MEB	L1		Inductor	33uH

2 Device Plan



3 USB Controller



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