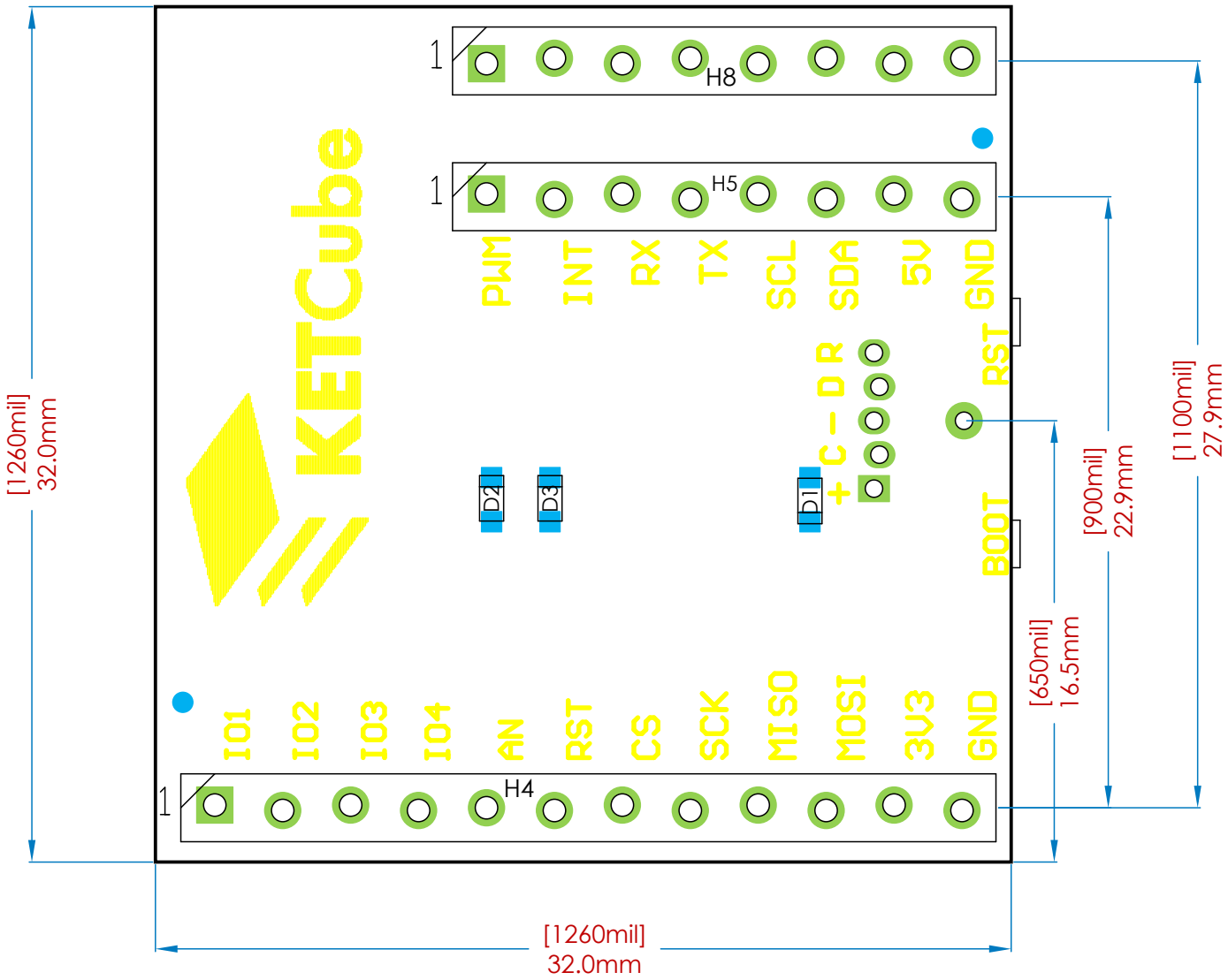
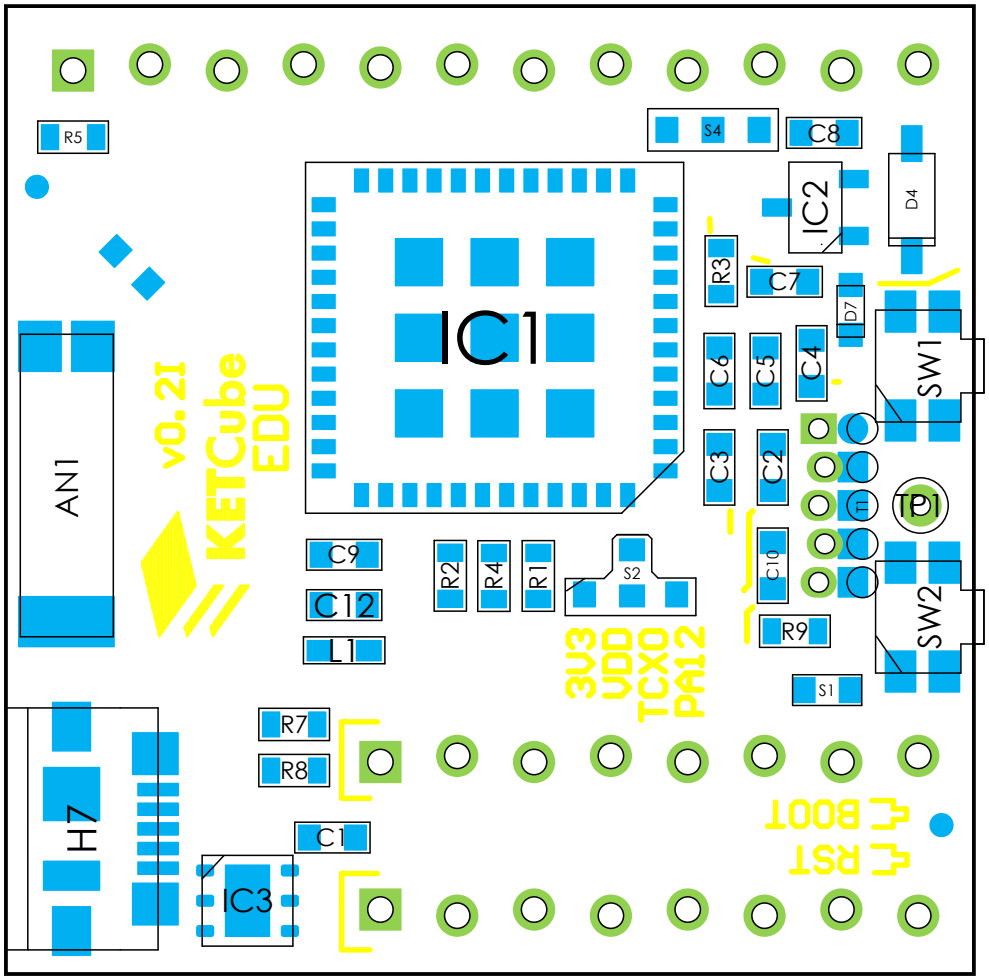
View from Top side (Scale 4)



RICE Regional Innovation Centre for Electrical Univerzitni 8 306 14 Plzen Czech	Size: A4	Date: 5/31/2021	Title: KETCube TOP
	Author: Jiri Cengery		Subtitle: ASM view Variant: EDU
	Checked by: Jan Belohoubek		Nr: KETCube2 Revision: 0.2I
	Aprooved by: Petr Kaspar		Type: Final Sheet 1 of 5
			File: KETCube_EDU.PCBDwf

View from Bottom side (Scale 4)



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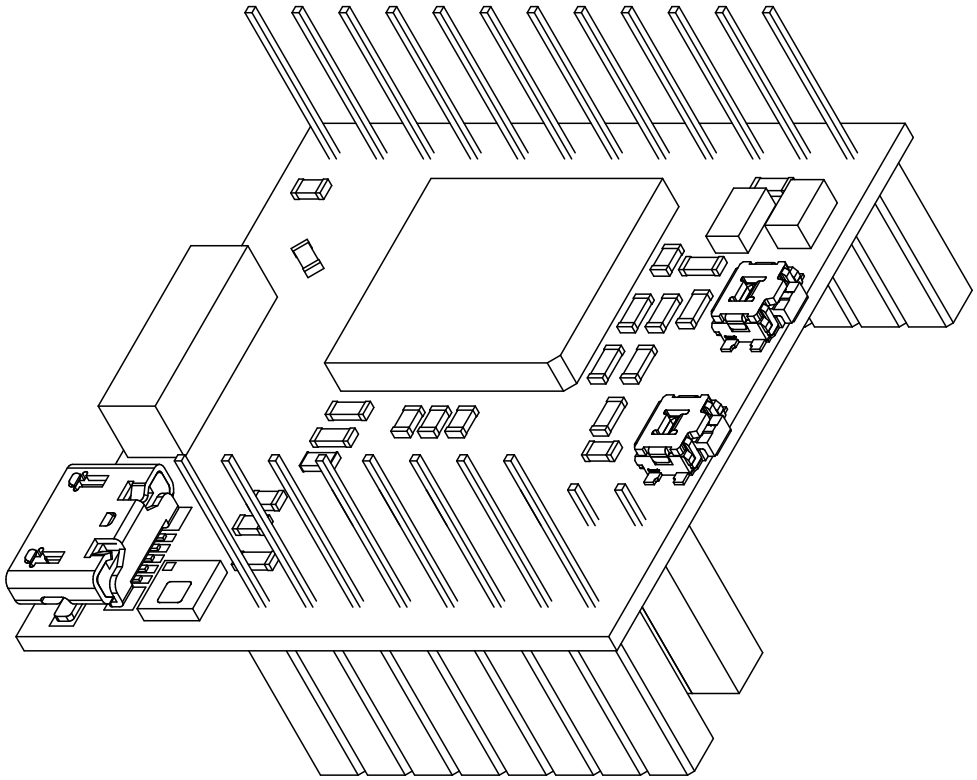
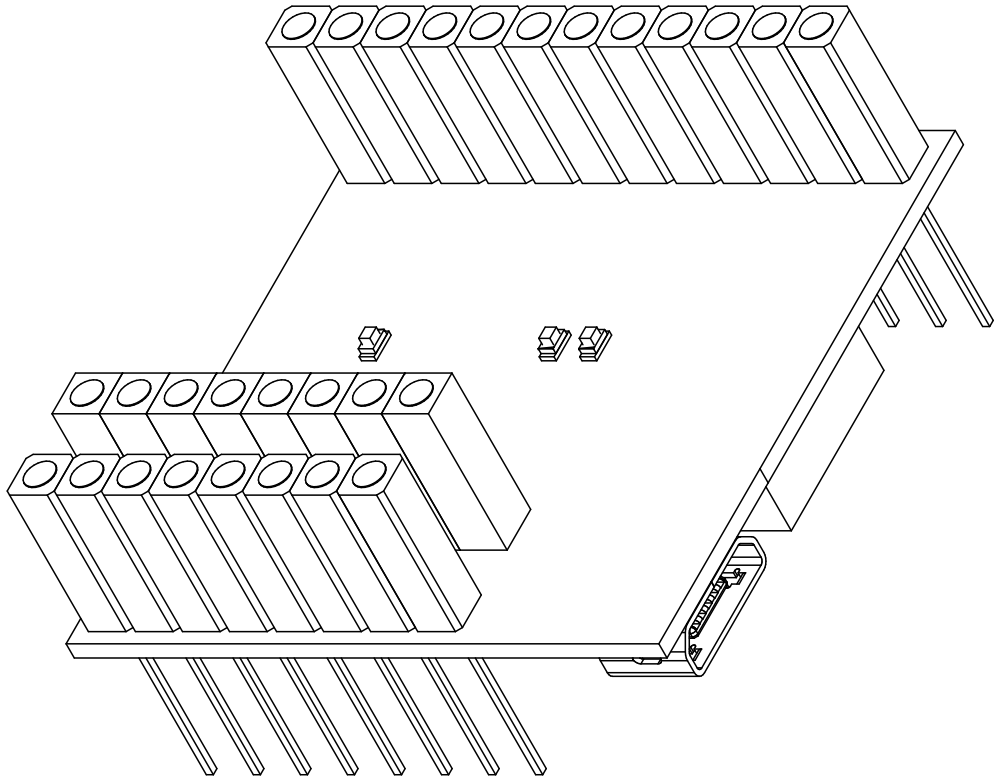
Author: Jiri Cengery		Subtitle: ASM view	Variant: EDU
Checked by: Jan Belohoubek		Nr: KETCube2	Revision: 0.2I
		Type: Final	Sheet 2 of 5
Aprooved by: Petr Kaspar		File: KETCube_EDU.PCBDwf	

View from Bottom side (Scale 3)



View from Top side (Scale 3)



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Checked by: Jan Belohoubek		Nr: KETCube2	Revision: 0.21
		Type: Final	Sheet 3 of 5
Aprooved by: Petr Kaspar		File: KETCube_EDU.PCBDwf	

Bill Of Materials - TOP

Line #	Designator	Value	Description	Footprint	Quantity	Manuf Part Number
6	D1, D3	KPTD-1608LVZGCK	OPT LED green 525nm 2mA 220mcd 2.65V 0603	sm_opt_led0603_h37	2	KPTD-1608LVZGCK
7	D2	KPTD-1608LVSECK-J3-PF	OPT LED red 625nm 2mA 50mcd 1.8V 0603	sm_opt_led0603_h37_opp	1	KPTD-1608LVSECK-J3-PF
10	H4	SSQ-112-03-F-S	CON Receptacle 1x10 100 mils, leads length 10mm	TH_CON_REC1x12_PIT100_L400	1	SSQ-112-03-F-S
11	H5	2212S-08SG-85	CON Receptacle 1x8 100 mils, hight 8.5mm	TH_CON_REC1x8_PIT100	1	2212S-08SG-85
13	H8	SSQ-108-03-F-S	CON Receptacle 1x8 100 mils, leads length 10mm	TH_CON_REC1x8_PIT100_L400	1	SSQ-108-03-F-S

Bill Of Materials - BOT

Line #	Designator	Value	Description	Footprint	Quantity	Manuf Part Number
1	AN1	W3214	MOD antenna CHIP 863-873 MHz, ISM, IoT, 10x3.2x5mm	SM_ANT_W3214	1	W3214
2	C1, C3, C6, C10, C12	100n	CAP CER .10UF 50V X7R 10% 0603	sm_cap_0603	5	C1608X7R1H104K080AA
3	C2, C4	10u	CAP CER 10uF 6.3V X5R 10% 0603	sm_cap_0603	2	GRM188R60J106KE47D
4	C5, C7, C8, C9	1.00u	CAP CER 1.0UF 16V X7R 10% 0603	sm_cap_0603	4	C1608X7R1C105K
5	C11	10.0p	CAP CER 10.0p 50V C0G 5% 0603	sm_cap_0603	1	GRM1885C1H100JA01D
8	D4	MBR0520LT	DIO schottky 20V 0.5A SOD123	SM_DIO_SOD123	1	MBR0520LT1G
12	H7	47346-1001	CON USB micro B, USB 2; 5 pins; righ angle, PCB mount SMT	SM_CON_USB_MICRO_B_FEMALE_47346_1001	1	47346-1001
14	IC1	CMWX1ZZABZ-078	Lora modul Murata (STM32L, 868 MHz, 915 MHz) 12 x 12 mm	TH_MOD_PIN48_LoRa_Murata	1	CMWX1ZZABZ-078
15	IC2	MCP1700T-3302E	ICS LDO regulator Vout=3.3V, 250mA, Vin=6V, SOT23-3, Vdrop = 200mV	sm_io_sot23_pin3	1	MCP1700T-3302E/TT
16	IC3	HDC2080	ICS Digital humidity and temperature sensor, I2C, +-0,2°C, +-2%RH, supply 1.62 - 3.6 V, protect IP67	SM_IO_WSON6_PIT40	1	HDC2080DMBT
17	L1	1000R	EMI 0603 1000R/ 100MHz 300mA 0,6R	sm_emi_0603	1	742792664
18	R1, R5, R9	10.0k	RES 0603 10.0k 1% 100ppm SMD thick film	sm_res_0603	3	ERJ3EKF1002V
19	R2	750	RES 0603 750R 1% 100ppm SMD thick film	sm_res_0603	1	ERJ3EKF7500V
20	R3, R4	330	RES 0603 330R 1% 100ppm SMD thick film	sm_res_0603	2	ERJ3EKF3300V
21	R7, R8	2.20k	RES 0603 2.20k 1% 100ppm SMD thick film	sm_res_0603	2	ERJ3EKF2201V
22	SW1, SW2	EVQP7J01P	SWI Tactile Switch SPST-NO Side Actuated Surface Mount, travel 0.-2 mm, Right Angle	SM_SWI_EVQP7J	2	EVQP7J01P

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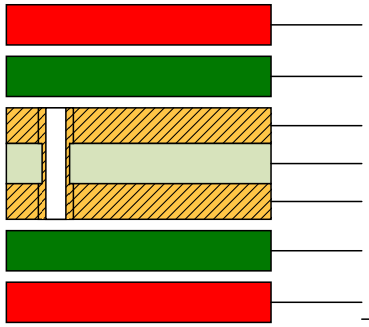
Layer Stack Legend



Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
Surface Material	Top Solder	0.010mm	Solder Resist	Solder Mask	GTS
Copper	Top Layer	0.042mm		Signal	GTL
Core		*0.800mm*	*FR-4*	*Dielectric*	
Copper	Bottom Layer	0.042mm		Signal	GBL
Surface Material	Bottom Solder	0.010mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

Total thickness: 0.904mm

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