

Revision Record

Version Number	Document Number	Release Date	Revision Description	Drafted By	Reviewed By	Comment
0.1	ATD530D_EBOM_V0.1_20210623	6/23/2021	initialization	Sam Huang		
0.2	ATD530D_EBOM_V0.2_20210706	7/6/2021	Change P/N from RC0201JR-071KL to RC0402JR-071KL for R10, R13, R14 Change P/N from SHT40 to SHT40-AD1B-R2 for U3	Sam Huang		
0.3	ATD530D_EBOM_V0.3_20210809	8/6/2021	Add C79, C80, C81, C35, C65 Change P/N from CC0603ZRY5V7BB225 to JMK107BJ106MA-T for C57, C58 Delete F1 Change version from V0.1 to V0.2 for PCB Change P/N from RC0201JR-074KL to RC0603J220CS for R56 Add R70, R71 Change P/N from RC0402JR-071KL to RC0201JR-071KL for R10, R13, R14 Add R67, U9	Sam Huang		
0.4	ATD530D_EBOM_V0.4_20211014	10/14/2021	Change P/N from JMK107BJ106MA-T to CC0603MRX5R5B226 for C4, C57, C58 Change P/N from RC0402JR-070RL to UHQ0402H1N8BP01 for L6 Change P/N from RC0402JR-070RL to GJM1555C1H6R8B01D for R19 Change P/N from GJM1555C1H1R1WB01D to GJM1555C1HR80WB01D for C36 Add R20, R21, L5, C25, C28, C38, C27 Change P/N from EFR32BG13P532F512GM48-DR to EFR32BG13P732F512GM48-DR for U1 Delete P1, P2, U9	Sam Huang		
0.5	ATD530D_EBOM_V0.5_20211115	11/15/2021	Change P/N from BMA253 to BMA456 for U2 Delete R10, R67			
0.6			Change PCB version to V0.4 Change P/N from LIS2DW12TR to LIS2DH12TR for U9 (only option) Change P/N from UHQ0402H1N8BP01 to HQ1005C1N8ST for L6 Change P/N from UHQ0402H5N8BP01 to HQ1005C3N6ST for C25	Sam Huang		

Classification	Description	Manufacturer	Footprint	MPN	Designator	Quantity	Full	No WiFi	No WiFi/Sensor	Comment
Antenna	LTE_ANT 1004795	Ethertronics	ANTENNA-LTE-1004795 -	1004795	ANT1	1	1	1	1	
Antenna	ISM or ISM & BT or GPS Stamp Metal Embedded SMT Antenna	Ethertronics	Antenna_Ethertronics_10	1002427	ANT2	1	1	1	1	
Antenna	2.4GHz Bluetooth, Wi-Fi, WLAN, Zigbee™ Chip RF Ant	Ethertronics/AVX	ANT_1001013 - mirror	1001013	ANT3	1	1	0	0	
Capacitor	CAP CER 1UF 10V X5R 0402	Murata	C0402	GRM155R61A105KE15D	C1, C2, C6, C8, C17, C45, C51, C63, C79	9	9	9	9	
Capacitor	CAP CER 0.1UF 6.3V X5R 0201	AVX	CAPC0603N (0201)	02016D104KAT2A	C3, C5, C14, C15, C16, C18, C32, C40, C44, C66, C68, C71, C75, C77, C78, C80, C81	17	17	17	17	
Capacitor	CAP CER 10UF 6.3V X5R 0603	Taiyo Yuden	CAPC1608N (0603)	JMK107BJ106MA-T	C11, C61, C69	3	3	3	3	
Capacitor	CAP 100pF +/-5% 50V COG/NPO 0201	Yageo	C0201	CC0201JRNPO9BN101	C7	1	1	1	1	
Capacitor	CAP CER 10PF 50V COG/NPO 0201	Murata	CAPC0603N (0201)	GRM0335C1H100JA01D	C9, C12, C30	3	3	3	3	
Capacitor	CAP 10nF +/-10% 25V X5R-0201	WALSIN	C0201	0201X103K250CT	C10	1	1	1	1	
Capacitor	CAP CER 0.22UF +/-10% 10V X7R 0402	WALSIN	C0402	0402B224K100CT	C13	1	1	1	1	
Inductor	Inductor/5.6nH/+0.1nH/0.65ohm 0402	Sunlord	IND_0402_H0.35mm	HQ1005C5N6ST	C25	1	1	1	1	
Capacitor	CAP 0.3PF +/-0.05P 50V COG/NPO -0402	Murata	C0402	GJM1555C1HR30WB01D	C28, C38	2	2	2	2	
Capacitor	CAP-1uF +/-10% 6.3V X5R 0201	Yageo	C0201	CC0201MRX5R5BB105	C29	1	1	1	1	
Capacitor	CAP CER 33PF 50V COG/NPO 0201	Murata	CAPC0603N (0201)	GRM0335C1H330JA01D	C31, C62, C67, C72, C76	5	5	5	5	
Capacitor	Capacitor/100uF/+20%/6.3V/X5R/1206	Taiyo	C1206	JMK316ABJ107ML-T	C33, C34, C35, C50, C52	5	5	5	5	
Capacitor	CAP 0.8PF +/-0.05P 50V COG/NPO -0402	Murata	C0402	GJM1555C1HR80WB01D	C36, C27	2	2	2	2	
Capacitor	CAP 10nF +/-10%/16V X7R-0201	WALSIN	C0201	0201B103K160CT	C37	1	1	1	1	
Capacitor	CAP-22pF ±5% 50V COG_0402	SAMSUNG	C0402	CL05C220JB5NNNC	C41, C42, C43	3	3	3	3	
Capacitor	CAP-4.7uF ±20% 10V X5R_0402	EYANG	C0402	C0402X5R475M100NTC	C46	1	1	1	1	
Capacitor	CAP-1.2nF ±5% 50V X7R_0402	Eyang	C0402	C0402X7R122J500NTB	C47	1	1	1	1	
Capacitor	CAP 10nF +/-10%/10V X7R-0402	FH	C0402	0402B103K100NT	C48, C59, C60	3	3	3	3	
Capacitor	CAP-22uF +/-10% 6.3V X5R 0603	Yageo	C0603	CC0603MRX5R5BB226	C49, C53, C65, C4, C57, C58	6	6	6	6	
Capacitor	CAP-0.1uF +/-10% 16V X7R 0402	WALSIN	C0402	0402B104K160CT	C54, C56	2	2	2	2	
Capacitor	CAP-10uF +/-20% 10V X5R 0603	TAIYO	C0603	LMK107BBJ106MALT	C55	1	1	1	1	
Capacitor	CAP CER 22UF 6.3V X5R 0603	Yageo	CAPC1608N (0603)	CC0603MRX5R5BB226	C70	1	1	0	0	
Capacitor	CAP CER 5.6PF 50V NPO 0201	Murata	CAPC0603N (0201)	GRM0335C1H5R6CA01D	C73, C74	2	2	2	2	
LED	LED Blue Vf=2V If=5mA SMD-0603	Yonglin	LED0603	YLS191/B/21/06-T	D1	1	1	1	1	
LED	LED Green Vf=2V If=5mA SMD-0603	Yonglin	LED0603	YLS191/G/21/06-C	D2	1	1	1	1	
LED	LED RED Vf=2V If=5mA SMD-0603	Yonglin	LED0603	YLS191/R/21/06-H	D3	1	1	1	1	
ESD Diode	DIODE LESD8D5.0CT5G Vr=5V/Vc=18.6V Ipp=9.4A SO	LRC	ESD-DFN1006P2E	LES8D5.0CT5G	ESD1, ESD2, ESD3, ESD6, ESD7, ESD12, ESD13, ESD17, ESD18, ESD19, ESD20, ESD21, ESD22, ESD23	14	14	14	14	
ESD Diode	DIODE AZ5425-01F.R7G Vr=5V/Vc=24V Ipp=16A Cj=0	Amazing	ESD-DFN1006P2E	AZ5425-01F.R7G	ESD4, ESD5, ESD8, ESD9, ESD10, ESD11	6	6	6	6	
ESD Diode	DIODE ESD56131W-2/TR Vrw=4.6V/VBR=4.8V Ipp=	WILLSEMI	SOD-323F/SC-90	ESD56131W-2/TR	ESD15	1	1	1	1	
SIM CONN	SF15W00654BR2000	JAE	MircoSim Hinge	SF15W00654BR2000	J1	1	1	1	1	
Inductor	FERRITE BEAD 1kohm@100MHz/ld=0.5A DCR 0.55oh	FH	FB0603	CBW160808U102T	L1, L3	2	2	2	2	
Inductor	FERRITE BEAD 600ohm@100MHz/ld=0.5A 0603 1LN	Murata	FB0603	BLM18AG601SN1D	L2	1	1	1	1	
Inductor	Fixed Inductor 1.5uH ±20% 5.4A 6x6x4.5mm 12mΩ	Sunlord	SWPA60455	SWPA604551R5NT	L4	1	1	1	1	
Resistor	Jump Resistor/0ohm/lmax=2A 0402	Yageo	R0402	RC0402JR-070RL	R24, R26, R27, R66, R20, R21	6	6	6	6	
Inductor	Inductor/1.8nH/+0.1nH/0.23ohm 0402	Sunlord	IND_0402_H0.35mm	HQ1005C1N8ST	L6	1	1	0	0	
Capacitor	CAP-1.8PF +/-0.05P 50V COG/NPO -0402	Murata	C0402	GJM1555C1H1R8WB01D	L5	1	1	0	0	
Capacitor	CAP 6.8PF +/-0.1P 50V COG/NPO -0402	Murata	C0402	GJM1555C1H6R8BB01D	R19	1	1	1	1	
Connector 9.25	CONN HEADER SMD 10POS 1.27MM 9.25*5.6*6.6mm	Amphenol	CONN_SMT-2-2X5pin 1.27	20021121-00010C4LF	P1	0	0	0	0	For debugging
Connector	CONN USB MICRO B RECPT SMT R/A	Amphenol FCI	Mirco USB-B	10118194-0001LF	P2	0	0	0	0	For debugging
PCB	PCB version: V0.4, Size:70*52*1.6mm FR-4 4-Layer 沉金, Tg150				PCB1	1	1	1	1	
N-MOSFET	MOSFET N-CH Vgs=20V Vds=50V Id=0.2A Rds=5.6ohm	LRC	SOT23_N	LBSS138LT1G	Q1, Q2, Q3, Q4, Q7, Q9, Q11, Q12, Q13	9	9	9	9	
P-MOSFET	MOSFET P-CH Vds=-20V Id=-3.6A Rds=30mOhm PD=	DIODES	SOT23_P	DMP2035U-7	Q5, Q6, Q8, Q10	4	4	4	4	
Resistor	RES SMD 200 OHM 5% 1/20W 0201	Stackpole	RESC0603L(0201)	RMCF0201JT200R	R2, R4, R11, R12, R54, R55, R62	7	7	7	7	
Resistor	RES SMD 22 OHM 5% 1/20W 0201	Samsung	RESC0603L(0201)	RC0603J220CS	R3, R5, R39, R40, R41, R56	6	6	6	6	
Resistor	RES SMD 4.7K OHM 5% 1/20W 0201	Yageo	RESC0603L(0201)	RC0201JR-074K7L	R6, R7, R16, R17, R18, R28	6	6	6	6	
Resistor	Resistor RES SMD 100ohm 1/20W 1% 0201	Yageo	R0201	RC0201FR-07100RL	R8, R9, R25, R33, R34, R35, R36, R70, R71	9	9	9	9	
Resistor	Resistor RES SMD 1Kohm 1/16W 5% 0402	Yageo	R0402	RC0201JR-071KL	R13, R14	2	2	2	2	
Resistor	RES SMD 2K OHM 5% 1/20W 0201	Yageo	R0201	RC0201JR-072KL	R15	1	1	1	1	

Resistor	Resistor RES SMD 10Kohm 1/16W 5% 0201	WALSIN	R0201	WR02X103JAL	R38	1	1	1	1	
Resistor	Resistor RES SMD 715Kohm 1/16W 1% 0402	Yageo	R0402	RC0402FR-07715KL	R42	1	1	1	1	
Resistor	Resistor RES SMD 510Kohm 1/16W 1% 0402	WALSIN	R0402	WR04X5103FTL	R43, R50, R57	3	3	3	3	
Resistor	Resistor RES SMD 470ohm 1/16W 5% 0402	Yageo	R0402	RC0402JR-07470RL	R44, R58	2	2	2	2	
Resistor	Resistor RES SMD 1Mohm 1/16W 1% 0402	Yageo	R0402	RC0402FR-0711ML	R45	1	1	1	1	
Resistor	Resistor RES SMD 390Kohm 1/16W 1% 0402	Yageo	R0402	RC0402FR-07390KL	R46	1	1	1	1	
Resistor	Resistor RES SMD 51Kohm 1/16W 5% 0402	WALSIN	R0402	WR04X513JTL	R47, R51, R59	3	3	3	3	
Resistor	RES SMD 4.7K OHM +/-5% 1/16W -55~155C 0402	WALSIN	R0402	WR04X472JTL	R48, R53, R61	3	3	3	3	
Resistor	Resistor RES SMD 100Kohm 1/16W 1% 0402	Yageo	R0402	RC0402FR-07100KL	R49, R52	2	2	2	2	
Resistor	RES SMD 12.1K OHM 1% 1/20W 0201	Yageo	RESC0603L(0201)	RC0201FR-0712K1L	R60	1	1	1	1	
Resistor	RES SMD 15K OHM 1% 1/20W 0201	Yageo	RESC0603L(0201)	RC0201FR-0715KL	R63	1	1	1	1	
Resistor	RES SMD 200K OHM 1% 1/20W 0201	Yageo	RESC0603L(0201)	RC0201FR-07200KL	R64	1	1	1	1	
Switch	SWITCH TACTILE SPST-NO 0.05A 12V	ESWITCH	TL3340	TL3340AF160QG	S1	1	1	1	1	
ANT CONN	RF Connector 2*2*0.9mm	Murata	RF_SWITCH	MM8030-2610RJ3	S2	1	1	1	1	
IC	IC RF TXRX+MCU BLUETOOTH QFN48	Silabs	QFN50P700X700X100-49	EFR32BG13P732F512GM48-DR	U1	1	1	1	1	
IC	IC 2g-16g PROG BMA425 12pin LGA 2*2mm	BOSCH	BMA250	BMA456	U2	1	1	1	1	
IC	Combined humidity and pressure sensor	Sensirion	HVSSOP4	SHT40-AD1B-R2	U3	1	1	1	0	
Module	LTE_Module_SIM7070G_SIMCOM	SIMCOM	QFP68P 24X24X2.3	SIM7070G	U4	1	1	1	1	
IC	IC Boost Switch Controller 2.5-5.5V 5A FSW=500KHz	Silergy	QFN2X2-10	SY7065AQMCMC	U5	1	1	1	1	
IC	IC LDO SSP6206-18NR SOT23-3 1.8V 300mA	Siproin	SOT-23- 3	SSP6206-18NR	U6	1	1	1	1	
IC	Expressif Wifi Chip w/ 1M Flash	Epressif	QFN50P500X500X90_HS-	ESP8285N08	U7	1	1	0	0	
IC	IC TXRX TRANSLATING 4BIT 12XQFN	Ti	QFN40P170X200X50-12M	TXBN0304RUTR	U8	1	1	0	0	
Crystal	CRYSTAL 38.4000MHZ 6PF SMD 2520 2.5*2*0.6mm	Abracon	SMD-Crystal-Taiten-2520	ABM10W-38.4000MHZ-6-D1X-T3	Y1	1	1	1	1	
Crystal	Crystal Oscillator, 2.5 x 2.0mm 10ppm	Taitien	SMD-Crystal-Taiten-2520	XYDBPLNANF-40.000000	Y2	1	1	0	0	
IC	IC 2g-16g PROG LIS2DW12TR 12pin LGA-12 2*2mm	ST	LIS2DH12TR	LIS2DH12TR	U9	0	0	0	0	Option