

IONX LLC
300 Willowbrook Lane, Suite 320
West Chester, PA 19382

Run by

Name: Carl Swartz

Email: cswartz@ionxlive.com

Workspace: IONX Production

Date: Jul 19, 2019

2ADEPCMUE5-B PartsLst1.pdf

Run Description: Item Number: CMU-E5S, Item Name: Edge E5S Asset Monitoring Device, Revision: D

level	item_number	item_name	revision	description	quantity	unit of measure	line number	reference_designator	bom_notes
0	CMU-E5S	Edge E5S Asset Monitoring Device	D	Edge E5S Asset Monitoring Device		EA			
1		213285 Enclosure lid, CMU, E Series - S Case	G	Enclosure lid, CMU, E Series - S Case	1	EA	2		IS Part
1		213464 Box, Edge S Series, Outer Carton	D	Box, Edge S Series, Outer Carton (10 Pack)	0.1	EA	16		
1		213465 Box, Edge T4S / T5S, Large Partition	A	Box, Edge T4S / T5S, Large Partition	0.1	EA	17		
1		213466 Box, Edge T4S / T5S, Pad	A	Box, Edge T4S / T5S, Pad	0.1	EA	18		
1		213467 Box, Edge T4S / T5S, Small Partition	A	Box, Edge T4S / T5S, Small Partition	0.4	EA	19		
1		213622 Silicone Foam Pad, .75" x .75"x.032" Thk w/ PSA backing	C	Silicone Foam Pad, .75" x .75"x.032" Thk w/ PSA backing Continuous operating temperature range -40C to 105C (min.)	2	EA	12		
1		213623 Silicone Foam Pad, .75" x .75"x.063" Thk w/ PSA backing	B	Silicone Foam Pad, .75" x .75"x.063" Thk w/ PSA backing Continuous operating temperature range -40C to 105C (min.)	4	EA	5		
1		214570 Label, IS, substitution warning	C	Label, IS, substitution warning	1	EA	20		IS Part
1		258464 Label, AAR compliance, yellow	E	Label, AAR compliance, yellow	1	EA	10		
1		300842 Screw, Plastite 48-2, 8-16 x .75, Pan Head, Torx, 18-8 SS	B	Screw, Plastite 48-2, 8-16 x .75, Pan Head, Torx, 18-8 SS	4	EA	9		
1		301269 Label, blank, 2"x1", White, Thermal transfer imprintable polyester	A	Label, blank, 2"x1", White, Thermal transfer imprintable polyester with extra aggressive 2 mil Heavy Coat Weight (HCW) acrylic adhesive. UL file MH16411. Maximum operating temperature 100C.	1	EA	23		IS Part
1		303382 Battery Pack, LiSOCL2, 7.2V 19Ahr, IS, Ed6	G	Battery Pack, LiSOCL2, 7.2V 19Ahr, IS, Ed6 (2 D-Cells)	1	EA	7		IS Part
2		303375 PCBA, Battery Board Ed6	D	PCBA, Battery Board Ed6	1	EA	1		IS part
3		300753 Res, thick film, 0.33 ohm, 1W, 1%, 1210	A		8	EA		R1,R2,R3,R4,R5,R6,R7,R8	IS PART
3		303374 FAB, Battery Board Ed6	C3	Fabrication Files for the Battery Board upgrades to meet the Edition 6 standards	1	EA			IS PART
3		303378 FUSE BOARD MNT 630MA 125VAC/VDC	B	FUSE BOARD MNT 630MA 125VAC/VDC	1	EA		F1	IS PART
3		303524 DIODE SCHOTTKY 40V 2A SMA	A	3A parts acceptable	12	EA		D1,D2,D3,D4,D5,D6,D7,D8,D9,D10,D11,D12	IS PART
3	740-00014	IS and RoHS Requirements	G	IS and RoHS Requirements	1	EA			
3	780-00034	SCH, Battery Board, Ed6	C5	Schematic for the Battery Board to meet Edition 6 of IEC 60079-11 Standard	0	EA			IS DOCUMENT
2		303376 Cable Assembly, Battery Pack, 7.2V, E-Series	B	Cable Assembly, Battery Pack, 7.2V, E-Series	1	EA	2		IS part
3		300871 Connector, Receptacle, 3mm, 2pos, Mate-n-lok	A	UL File E28476 COT is -40C to 105C.	1	EA			

3	300872	Connector, Socket, 20-24 AWG, Gold Crimp	A	UL File E28476 COT is -40C to 105C.	2 EA			
3	303546	SILICON WIRE 24AWG BLK 500'	A	0.55mm insulation thickness, UL3239 style, REI HSING WIRE CO LTD UL file E108485, Continuous operating temperature -50C to 150C.	100 EA			EA = mm IS Part
3	303547	SILICON WIRE 24AWG RED 500'	A	0.55mm insulation thickness, UL3239 style, REI HSING WIRE CO LTD UL file E108485, Continuous operating temperature -50C to 150C.	100 EA			EA = mm IS Part
2	303413	ITW Formex GK Polypropylene Sheet, 0.45mm (.017") Thick, Black	B	ITW Formex GK Polypropylene Sheet, .017" Thick. UL file E121855. Maximum operating temperature 115C.	1 AR		5	
2	303420	Heat Shrink, PVC, 96mm x 6mil, Clear	B	Heat Shrink, PVC, 96mm x 6mil, Clear, UL File E129478, Continuous operating temperature -40C to 185C.	1 AR		8	
2	303546	SILICON WIRE 24AWG BLK 500'	A	0.55mm insulation thickness, UL3239 style, REI HSING WIRE CO LTD UL file E108485, Continuous operating temperature -50C to 150C.	1 EA		6	IS part
2	303547	SILICON WIRE 24AWG RED 500'	A	0.55mm insulation thickness, UL3239 style, REI HSING WIRE CO LTD UL file E108485, Continuous operating temperature -50C to 150C.	1 EA		7	IS part
2	303553	Epoxy, Potting Compound, EP1282 Clear, 2-part, 50ml Tubes	A	Epoxy, Potting Compound, EP1282 Clear, 2-part, 50ml Tubes UL File E186034. Continuous Operating Temperature -40C to 140C. 1.5mm thickness, HB rated, RTI for mechanical impact is 90C	1 ML		3	IS part
2	303583	Heatshrink, 1/8", 1/16"R, Black, LSZH Polyolefin	A	Heatshrink, 3.2mm (1/8"), 1.6mm (1/16"R), Black, LSZH Polyolefin, UL file E38155. Continuous operating temperature -40C to 125C.	1 FT		0	
2	303602	Label, blank, 2"x2", White, Thermal transfer imprintable polyester	A	Label, blank, 50.8mm X 50.8mm [2"x2"], White, Thermal transfer imprintable polyester with extra aggressive 2 mil Heavy Coat Weight (HCW) acrylic adhesive. UL file MH16411. Maximum operating temperature 100C.	1 EA		10	
2	303623	Battery, Li-SOCl2, 3.6V, 19Ah, D-cell	A		2 EA		4	IS part
2	303665	Miscellaneous Packaging Materials for CMU Battery Assemblies	A	As required adhesive and insulating materials suitable for use in battery packs 303382 and 303406	1 EA		14	As Required
3	303656	Heat Shrink, Polyolefin, 3.18mm (0.125"), Black	B	Heat Shrink, Polyolefin, 3.18mm (0.125"), Black, UL File E38155, Continuous operating temperature -55C to 125C.	1 AR			SHRINK1 For battery terminals
3	303657	Tape, Kapton polyamide film, 19.1mmW (3/4"W), Amber	A	Tape, Kapton polyamide, 19.1mm W (3/4"W), Amber, UL file E124809, Continuous operating temperature -73 to 260C	1 AR			TAPE2 Potting dam

3		303658	Tape, Acrylic adhesive transfer tape 9082, Clear	A	Tape, Ultra High Temperature Acrylic adhesive transfer tape 9082, Clear, UL file MH17478, Maximum operating temperature 120C	1	AR		Tape1	As required. For positioning parts before potting
2	740-00018		E Series Battery Pack Serialization	A	Drawing defining the requirements for serial numbers for E series battery packs	1	EA	0	N/A	Serial number includes supplier number and code for battery manufacturer
1		303417	Enclosure Base, CMU, E Series - S case	D	Enclosure Base, CMU, E Series - S case	1	EA	1		IS Part
1		303446	Screw, Plastite 48-2, 6-19 x .38, Pan Head, Torx, 18-8 SS	A	Screw, Plastite 48-2, 6-19 x .38, Pan Head, Torx, 18-8 SS	6	EA	8		
1		303456	Label, IS-Warning, E Series, French	C	Label, IS-Warning, E Series, French	1	EA	24		IS Part
1		303457	Label, IS, Substitution Warning, French	B	Label, IS, Substitution Warning, French	1	EA	20		IS Part
1		303458	Label, IS, E-Series	E	Label, IS, E-Series	1	EA	11		IS Part
1		303493	Imprint Spec, Label, Serial Number	B	Imprint Spec, Label, Serial Number	1	EA	22		IS Part
1		303550	Intrinsic Safety Manual E-series CMU	N	Intrinsic Safety Manual, E4S, E5S, E4X, E5X, E6S	1	EA	27		IS Part User Manual One copy with each shipment
1		303551	Label, IS-Warning, E Series	C	Label, IS-Warning, E Series	1	EA	21		IS Part
1		303588	O-Ring, 3/32 Thk x 6-1/2 ID, 30 Durometer, Silicone	A	O-Ring, 3/32 Thk x 6-1/2 ID, 30 Durometer, Silicone	1	EA	3		IS Part
1		303589	Breather, GoreTex, 14mm dia, self adhesive, Black	A	Breather, GoreTex, 14mm dia, self adhesive. Continuous operating temperature -40C to 100C. UL file E332853.	1	EA	4		IS Part
1	740-00014		IS and RoHS Requirements	G	IS and RoHS Requirements	0	EA	100		IS Part all manufacturers of system shall read document prior to assembly.
1	XX = 05 Option		PCBA, EMU, XX = 05 Option	C	This is the PCBA for the Primary Cell Phone Communication Type, with the Smart Mesh Internet Protocol Manager Option Installed.	1	EA	6		IS Part
2	PCBAC3-05-NA-4-0-1		PCBA, EMU, E5 4G/2G GG0 NA Configuration	A	This is the PCBA for the E-series CMU-E5, Primary Cell Phone, SMIP Manager, North American SIM, 2G/4G Cell Modem, Giant Gecko Rev 0, and External memory populated.	1	EA			E-series CMU-E5, Primary Cell Phone, SMIP Manager, North America SIM, 2G/4G Cell Modem, Giant Gecko Rev 0, and External memory populated
3	PCBAC3-XX-UU-T-P-M		PCBA, CMU3, Main Board w/ options	D	PCBA, CMU, Main Board w/ options XX is Aux Comm UU is SIM card Installation T-cell modem chip P - processor M - memory	1	EA			PCBA to be assembled per options defined in Item part number
4	128M Flash Option U210 or U211 - NOT Both		IC FLASH 128M 133 MHz	B	Stuff either U210 or U211. Other part is NOPOP.	1	EA	67		Two footprints - only one gets stuffed
4		300291	Sealant, Silicone-Fast Tack 3165 Grey	A	Old P/N 415-00002, Continuous operating temperature -45C to 200C. UL File E40195.	1	AR	40	RTV	Seal around and over C611 and L720 to trap air inside part.
4		300795	Cap, MLC, 1uF, 16V, X7R, 0805, +/-10%	D		2	EA	6	C701, C725	
4		300800	CAP CER 47UF 16V 20% X5R 1210	D		3	EA	7	C342, C700, C724	
4		300810	Diode, Schottky, 20V, 2A, SOD-323	B		1	EA	33	D720	
4		300816	Inductor, 4.7uH, 5.6A, 20%, 10.2x10.2x4.5mm	C	metal composite, shielded	1	EA	59	L720	

4	300884	Cable Assembly, Power, 3.2A, 250V	C	Cable Assembly, Power, 3.2A, 250V Red wire Alpha Wire 6712 UL Style 11028, UL File E163869, COT -40C to 105C. 2. Black wire Alpha Wire 6712 UL Style 11028, UL File E163869, COT -40C to 105C Connector housing TE connectivity P/N 1445049-2 UL File E28476 COT is -40C to 105C. Connector contact TE connectivity P/N 1-794612-2 UL File E28476 COT is -40C to 105C	1	EA	5	CA1	Attach to P70, RED 1, BLK 2
4	301159	CAP CER 47PF 50V 5% NP0 0402	B		21	EA	25	C220, C223, C229, C600, C601, C605, C606, C616, C631, C632, C633, C641, C707, C709, C710, C732, C734, C783, C785, C789, C791	
4	301200	Loctite 401 Cyanoacrylate Adhesive, .7oz (20g) bottle, Clear	B	401 PRISM is a low viscosity, fast curing, single component cyanoacrylate adhesive. It is specifically formulated for difficult to bond substrates and is less dependent on surface moisture for cure speed than other standard CA grades. 20 gram bottle. Continuous operating temperature -40 to 85C.	0.001	AR	0		2 drops for NFC antenna
4	301487	CAP CER 0.1UF 50V 10% X7R 0402	C	CAP CER 0.1UF 50V 10% X7R 0402	43	EA	10	C103, C104, C105, C106, C107, C108, C117, C118, C130, C201, C203, C216, C221, C249, C302, C304, C321, C322, C330, C331, C343, C345, C347, C400, C402, C410, C412, C421, C422, C453, C630, C640, C690, C691, C706, C708, C722, C723, C731, C733, C784, C788, C790	NOPOP C211
4	301523	IC ACCEL 8G DIG LO PWR 3AX 16LGA	B	IC ACCEL 8G DIG LO PWR 3AX 16LGA	1	EA	46	U400	
4	301537	Tape, VHB 4905 Clear, 3/4 in x 72 yd 20.0 mil	A	3M VHB Tape 4905 Clear, 3/4 in x 72 yd 20.0 mil	1.25	IN	43		Apply 1.25" tape to separate C780-C782 from modem U600, before applying low pressure mold
4	301759	FUSE BOARD MNT 125MA 125VAC/VDC	A	FUSE BOARD MNT 125MA 125VAC/VDC	1	EA	41	F70	IS PART
4	301762	IC ACCEL 200G DIG LO PWR 3AX 16LGA	C	IC ACCEL 200G DIG LO PWR 3AX 16LGA	1	EA	47	U410	
4	301765	FILTER CHIP 1000 OHM 250MA 0402	B	FILTER CHIP 1000 OHM at 100MHz 250MA 0402	22	EA	62	FB94, FB95, FB96, FB97, FB98, FB99, FB119, FB120, FB420, FB801, FB802, FB803, FB804, FB805, FB806, FB807, FB808, FB809, FB810, FB811, R401, R410	
4	301775	RES SMD 1K OHM 1% 1/10W 0402	B	RES SMD 1K OHM 1% 1/10W 0402	3	EA	80	R130, R199, R431	
4	301778	RES SMD 18.7K OHM 1% 1/10W 0402	B	RES SMD 18.7K OHM 1% 1/10W 0402	1	EA	82	R721	
4	301781	RES SMD 63.4K OHM 1% 1/10W 0402	B	RES SMD 63.4K OHM 1% 1/10W 0402	2	EA	84	R720, R723	
4	301782	RES SMD 845K OHM 1% 1/16W 0402	B	RES SMD 845K OHM 1% 1/16W 0402	1	EA	85	R722	
4	301783	CAP CER 22PF 50V 5% NP0 0402	B	CAP CER 22PF 50V 5% NP0 0402	2	EA	14	C222, C726	
4	301785	CAP CER 68PF 50V 5% NP0 0402	B	CAP CER 68PF 50V 5% NP0 0402	3	EA	15	C70, C703, C729	
4	301788	CAP CER 6.2PF +/-0.25pF 50V NP0 0402	B	CAP CER 6.2PF +/-0.25pF 50V NP0 0402	4	EA	16	C307, C308, C608, C615	
4	301789	CAP CER 100UF 10V 20% X5R 1210	B	CAP CER 100UF 10V 20% X5R 1210	7	EA	17	C341, C603, C604, C609, C610, C612, C730	
4	301791	CAP CER 56nF 16V 10% X7R 0402	B	CAP CER 56nF 16V 10% X7R 0402	1	EA	19	C182	
4	301792	CAP CER 1nF 25V 5% NP0 0402	C	CAP CER 1nF 25V 5% NP0 0402	1	EA	20	C728	

4	301797	IC REG LDO 1.8V 0.15A TSOT23-5	B	IC REG LDO 1.8V 0.15A TSOT23-5	1 EA	48	U341	
4	301801	IC NFC/RFID TAG 64KB EEPROM 8SOI	B	IC NFC/RFID TAG 64KB EEPROM 8SOI	1 EA	50	U220	
4	301809	IC BUS TRANSCVR 4BIT 16-UQFN	B	IC BUS TRANSCVR 4BIT 16-UQFN	4 EA	53	U321, U331, U652, U691	
4	301812	IC LOAD SWITCH LV DUAL SOT23-8	A	IC LOAD SWITCH LV DUAL SOT23-8	2 EA	54	U240, U450	
4	301813	IC SWITCH SPDT SC70-6	C	IC SWITCH SPDT SC70-6	1 EA	55	U721	
4	301832	Supercap, 120mF, 20%, 5.5V	A	ESR = 140 mOhm 20x18x3mm -40 to +85C	1 EA	21	C611	
4	301837	RES SMD 226K OHM 1% 1/10W 0402	B	RES SMD 226K OHM 1% 1/10W 0402	1 EA	87	R725	
4	301838	CAP CER 0.22UF 10% 10V X7R 0402	B	CAP CER 0.22UF 10% 10V X7R 0402	1 EA	12	C424	
4	303335	0805 PROBE PAD	A	SMD 0805 TEST PROBE PAD	8 EA	69	TP101, TP240, TP340, TP445, TP450, TP520, TP606, TP700	
4	303346	CONN UMC JACK STR 50 OHM SMD	A	CONN UMC JACK STR 50 OHM SMD	0 EA	31		J620 - Only installed for design qualification testing.
4	303351	CAP CER 22UF 10V 20% X5R 0805	C	CAP CER 22UF 10V 20% X5R 0805	2 EA	24	C401, C411	
4	303371	Technomelt PA 678 Thermoplastic Polyamide	C	Technomelt PA 678 Thermoplastic Polyamide, UL file E182771, Continuous operating temperature -40C to 140C.	0.25 LB	70		Material Used for encapsulating Electronics IS PART
4	303389	Antennas LTE 700-LTE 2400MHz Max RL - 6dB	A	Antennas LTE 700-LTE 2400MHz Max RL - 6dB, Continuous operating temperature - 40C to 125C	1 EA	3	A620	
4	303390	CAP CER 0.5PF +/-0.05pF 50V NP0 0402	B	CAP CER 0.5PF +/-0.05pF 50V NP0 0402	1 EA	26	C622	
4	303391	RES SMD 100 OHM 1% 1/10W 0603	C	RES SMD 100 OHM 1% 1/10W 0603	3 EA	88	R605, R784, R789	
4	303392	CAP CER 2.2PF 50V NP0 0402	B	CAP CER 2.2PF 50V NP0 0402	1 EA	27	R624	
4	303393	FIXED IND 3.3NH 300MA 190 MOHM	A	FIXED IND 3.3NH 300MA 190 MOHM	1 EA	60	C623	
4	303394	FIXED IND 15NH 5% 300MA 460 MOHM	A	FIXED IND 15NH 5% 300MA 460 MOHM	1 EA	65	L620	L623 NOPOP
4	303395	RF Shield, E-Series CMU Board	G	RF Shield, E-Series CMU Board 0.3mm Thick Nickel Silver 770 Half Hard	0 EA	38		NOPOP SHLD700
4	303397	CAP CER 12PF 5% 50V NP0 0402	B	CAP CER 12PF 5% 50V NP0 0402	2 EA	28	C613, C614	
4	303483	Solid Silicone Pad, .75" x .75"x.031" Thk, Red,, 30 Durometer w/ PSA backing	A	Solid Silicone Pad, .75" x .75"x.031" Thk, Red, 30 Durometer w/ PSA backing, Continuous operating temperature range - 40C to 105C (min.)	1 EA	42		Place Pad over C611 to protect from high temperature molding process
4	303508	CAP CER 2.2UF 10% 10V X6S 0402	B	CAP CER 2.2UF 10% 10V X6S 0402	24 EA	11	C97, C98, C99, C100, C101, C102, C119, C120, C121, C202, C204, C212, C213, C244, C248, C301, C303, C323, C344, C423, C452, C602, C607, C642	
4	303512	CAP CER 0.022UF 10% 35V X7R 0402	A	CAP CER 0.022UF 10% 35V X7R 0402	1 EA	95	C702	
4	303513	FERRITE BEAD 26 OHM 0603	A	FERRITE BEAD 26 OHM 0603	2 EA	96	L721, L722	
4	303525	Res, thick film, 0 ohm, 1/16W, 1%, 0402	A	0 ohm 0402	4 EA	75	R342, R343, R344, R705	
4	303526	IC, switching regulator, buck-boost, LTC3112, TSSOP-20	A	LTC3112, TSSOP-20	1 EA	44	U720	
4	303530	FERRITE BEAD 220 OHM at 100 MHz 0603	A	FERRITE BEAD 220 OHM at 100 MHz 0603	3 EA	64	l80, L601, L602	
4	303531	Oscillator, 32.768KHz, 3.3V	B	'-40 to +85C	1 EA	71	X130	
4	303534	RES 100K OHM 1/16W 1% 0402 SMD	A	RES 100K OHM 1/16W 1% 0402 SMD	4 EA	77	R210, R211, R660, R663	
4	303535	RES 1K OHM 1/10W 1% 0603 SMD AUTOMOTIVE	A	RES 1K OHM 1/10W 1% 0603 SMD AUTOMOTIVE	9 EA	78	R320, R640, R654, R655, R656, R657, R692, R693, R694	IS PART
4	303536	RES SMD 10K OHM 1% 1/10W 0402	A	RES SMD 10K OHM 1% 1/10W 0402	7 EA	81	R224, R225, R308, R422, R423, R645, R704	
4	303537	RES SMD 274K OHM 1% 1/10W 0402	A	RES SMD 274K OHM 1% 1/10W 0402	2 EA	83	R703, R724	

4	303538	RES 1.2M OHM 1% 1/10W 0402	A	RES 1.2M OHM 1% 1/10W 0402	16	EA	86	R430, R601, R602, R603, R604, R701, R780, R781, R782, R783, R785, R786, R787, R788, R790, R791	
4	303540	Switch, Reed, 0.5A, 10-15 AT, SMT	B		1	EA	92	S430	
4	303541	TRANS 2NPN 65V 0.1A SOT363	A	TRANS 2NPN 65V 0.1A SOT363	1	EA	93	T660	
4	303542	IC OPAMP GP 3KHZ RTOR TSOT23-5	A	'-40 to 125C	3	EA	45	U601, U780, U781	
4	303544	IC REG BUCK ADJ 0.3A SYNC 10MSOP	A	IC REG BUCK ADJ 0.3A SYNC 10MSOP	1	EA	49	U700	
4	303545	Res, thick film, 10.0K, 1/10W, 1%, 0603	A		20	EA	74	R321, R322, R323, R324, R325, R326, R327, R329, R331, R332, R661, R662, R717, R718, R727, R728, R729, R730, R731, R732	IS PART
4	303557	RES 35.7 Ohm 1% 2W 2512	A	RES 35.7 Ohm or 36 Ohm 1% 2W 2512	2	EA	76	R70, R71	IS PART
4	303565	Diode, Schottky, 40V, 3A, SMB	B	Diode, Schottky, 40V, 3A, SMB	4	EA	32	D70, D71, D72, D73	IS PART
4	303615	Wire, 26AWG, 7/34, 150V, IR XLPVC, White, 1000 FT	A	0.25mm insulation thickness, UL1429 style, Alpha Wire UL file E163869, CSA AWM I A/B FT1, Continuous operating temperature -55C to 80C	1	ROL	4	Cable1	Two 4.75 inch length wires, +/- 0.25 inch, strip per antenna A220
4	303617	RF ANTENNA GPS/Glonass, Patch, 18x18x4mm	A	RF ANTENNA 1.56-1.61GHz, Patch, 18x18x4mm, Continuous operating temperature is -40C to 85C.	1	EA	1	A300	
4	303621	CAP CER 10UF 10V 10% X5R 0805 AUTOMOTIVE	B	CAP CER 10UF 10V 10% X5R 0805 AUTOMOTIVE	1	EA	13	C705	
4	303632	FAB, CMU3 board	C	Fabrication files for the CMU3 Main circuit board with LTE-2G Cellular modem	1	EA	72	FAB	IS PART
4	303637	IC MAGNETOMETER IIS2MDC XYZ DIGITAL 12DFN	A	IC MAGNETOMETER XYZ DIGITAL 12DFN	0	EA	51		NOPOP U420
4	303638	MOSFET N-CH 50V 0.2A SOT-23	A	MOSFET N-CH 50V 0.2A SOT-23 Thermal resistance 380 C/W	1	EA	94	Q702	
4	303639	MOSFET P-CH 20V 8A 8-SOIC	A	MOSFET P-CH 20V 8A 8-SOIC. Thermal resistance with copper under part is 105 C/W	1	EA	98	Q701	
4	303640	CAP FEEDTHRU 0.01UF 100V 1206	A	CAP FEEDTHRU 0.01UF 100V 1206	1	EA	61	EMI1	
4	303642	IND 10UH 20% 700MA 380 MOHM 1210	A	Shielded Inductor for Power Line	1	EA	63	L700	
4	303671	MOD RX SE873Q5 GNSS 24LCC	A	MOD RX SE873Q5 GNSS 24LCC	1	EA	57	U302	
4	303672	DIODE ZENER 6.2V 5% 200MW SMINI2	A	DIODE ZENER 6.2V 5% 200MW SMINI2	18	EA	34	D303, D304, D305, D306, D307, D308, D309, D310, D311, D312, D717, D718, D727, D728, D729, D730, D731, D732	IS PART
4	303677	DIODE ZENER 6.2V 5% 5W DO214AA(SMB)	A	DIODE ZENER 6.2V 5W 5% DO214AA(SMB)	6	EA	36	D301, D302, D701, D702, D721, D722	IS PART
4	303689	CAP CER 0.01uF 500V 20% X7R 0805	A	CAP CER 0.01UF 500V 20% X7R 0805, -55 to 125C, 1.4mm thick	4	EA	9	C225, C226, C227, C228	IS PART
4	303690	CAP CER 47PF 10% 500V X8G 0603 Hi-Q	B	47pF ±10% 500V Ceramic Capacitor X8G 0603 (1608 Metric) High Reliability	4	EA	23	C305, C306, C620, C621	IS PART C625 only installed for Design qualification
4	303691	Supercap, 10F-12F, 2.7V, 10x30mm, radial, -20/+10%	A	DCRmax <= 85mohm ACRmax <= 60mohm Ileak <= 30uA Icont(max) >= 3.5A Ipeak(max) >= 7.7A Temp = -40 to 70C	3	EA	8	C780, C781, C782	
4	303725	FIXED IND 13nH 3% 400mA 260 mOHM	A	FIXED IND 13nH 3% 400mA 260 mOHM	1	EA	66	L621	
4	303742	NFC STAMP FLEX ANTENNA 55X45MM	A	NFC STAMP FLEX ANTENNA 55X45MM, without ferrite, Continuous operating temperature is -30C to 85C. 13.56 MHz, 2.59 uH, 0.17mm thick	1	EA	2	A220	Attach with Cable1

4	4G_AUX_COMM_MODULE-XX	4G Auxiliary Communications module for the EMU	A	Auxiliary Communications module for the EMU 04=Primary Cell Phone 05=Primary Cell Phone and Local WSN Manager 06=Primary Cell Phone, Local WSN Manager and Intra-Train Network 07=Primary Cell Phone, Local WSN Manager and Bluetooth Module 08=Primary Cell Phone, Local WSN Manager and WIFI Module 09=Primary Cell Phone, Local WSN Manager and Satellite Module	1	EA	91		IS PART - T5 components soldered to board, other configurations soldered to header AUX1
5	05_4G_COMM_OPTION	05_4G_Communications_Option for E-series CMU	B	05_4G_Communications_Option BOM structure	1	EA	5	Defined_In_Sub_Circuit	IS PART
6	4G_DUST_MANAGER_SUB-CIRCUIT	4G_Dust Mesh Network Manager Sub Circuit	A	4G_Dust Mesh Network Manager Sub Circuit	1	EA		Defined_In_SubCircuit	IS PART
7		301487 CAP CER 0.1UF 50V 10% X7R 0402	C	CAP CER 0.1UF 50V 10% X7R 0402	2	EA		C513, C514	
7		301761 Crystal 32.7680kHz 20ppm 12.5pF 90 kOhm -40°C - 85°C Surface Mount 2-SMD	A	Crystal 32.7680kHz 20ppm 12.5pF 90 kOhm -40°C - 85°C Surface Mount 2-SMD	1	EA		X530	
7		301765 FILTER CHIP 1000 OHM 250MA 0402	B	FILTER CHIP 1000 OHM at 100MHz 250MA 0402	6	EA		FB550, FB551, FB552, FB553, FB554, FB555	
7		301772 Crystal 20.0000MHz 10ppm 10pF 50 Ohm - 60°C - 105°C Surface Mount HC49/US	A	Crystal 20.0000MHz 10ppm 10pF 50 Ohm - 60°C - 105°C Surface Mount HC49/US	1	EA		X520	
7		301775 RES SMD 1K OHM 1% 1/10W 0402	B	RES SMD 1K OHM 1% 1/10W 0402	2	EA		R502, R503	
7		301781 RES SMD 63.4K OHM 1% 1/10W 0402	B	RES SMD 63.4K OHM 1% 1/10W 0402	4	EA		R505, R508, R509, R523	
7		301785 CAP CER 68PF 50V 5% NP0 0402	B	CAP CER 68PF 50V 5% NP0 0402	1	EA		C530	
7		301788 CAP CER 6.2PF +/-0.25pF 50V NP0 0402	B	CAP CER 6.2PF +/-0.25pF 50V NP0 0402	1	EA		C519	
7		301790 CAP CER 0.47UF 10V 10% X5R 0402	C	CAP CER 0.47UF 10V 10% X5R 0402	1	EA		C507	
7		301791 CAP CER 56nF 16V 10% X7R 0402	B	CAP CER 56nF 16V 10% X7R 0402	10	EA		C503, C504, C505, C506, C508, C509, C510, C511, C515, C516	
7		301807 SAW FILTER RF 2441.8MHZ SM3030-6	A	SAW FILTER RF 2441.8MHZ SM3030-6	1	EA		SAW580	
7		301812 IC LOAD SWITCH LV DUAL SOT23-8	A	IC LOAD SWITCH LV DUAL SOT23-8	1	EA		U520	
7		301838 CAP CER 0.22UF 10% 10V X7R 0402	B	CAP CER 0.22UF 10% 10V X7R 0402	1	EA		C517	
7		303508 CAP CER 2.2UF 10% 10V X6S 0402	B	CAP CER 2.2UF 10% 10V X6S 0402	3	EA		C512, C520, C521	
7		303525 Res, thick film, 0 ohm, 1/16W, 1%, 0402	A	0 ohm 0402	1	EA		R506	
7		303539 Inductor, 2.2uH, 120mA, 0603, +/-20%	A	Old P/N 155-00004	1	EA		L501	
7		303690 CAP CER 47PF 10% 500V X8G 0603 Hi-Q	B	47pF ±10% 500V Ceramic Capacitor X8G 0603 (1608 Metric) High Reliability	2	EA		C583, C584	IS PART
7	Mgr, SmartMesh IP, DUST	Manager, SmartMesh IP, DUST, Local Sensor Manager	A	Local Sensor Manager for the EMU series product	1	EA		U500	
8		301800 IC SMARTMESH IP MNGR 2.4GHZ 72QFN	A	IC SMARTMESH IP MNGR 2.4GHZ 72QFN	1	EA			
8	510-00037	Firmware, SmartMesh IP, DUST LTC5800 IPM Manager w/ FUSE TABLE	1.4.2.2	Firmware, SmartMesh IP, DUST LTC5800 IPM Manager w/ FUSE TABLE Created for the EMU project	1	EA			
9	510-00034	Firmware, SmartMesh IP, DUST LTC5800 IWR Manager	1.4.2.2	Firmware, SmartMesh IP, DUST LTC5800 IWR Manager	1	EA			
9	510-00036	FUSE_TABLE, SmartMesh IP, DUST LTC5800 IPM Manager EMU board	A	This is the FUSE TABLE for the DUST SmartMesh IP Manager on the EMU boards. This file defines the crystals and tuning for board stackup. This file may need to be created for different PCB boards.	1	EA			

4	CELL_MODEM-T	Cell modem, GSM, quad band, 910 family	C	This is an item used as a placeholder for various 910 modem configurations offered by	1	EA	73	U600	T designates what item in the sub-assembly to install.
5	4_CELL_MODEM_OPTION	4_Cell_Modem_Option for E-series CMU	A	4_Cell_Modem_Option for 2G/4G Modem place holder for BOM structure	1	EA		U600	4 Option is 4G/2G cellular module
6	ME910C1-WW	Cell modem, LTE-GSM, ME910C1-WW	B	Cell modem, LTE-GSM, ME910C1-WW Without GNSS AT+CGMR Firmware version M0B.800003	1	EA		U600	3 Option is Universal 2/3G Chip
4	Memory_8SOIC-M	Memory_RAM_8SOIC	B	This is a placeholder for various RAM memory configurations.	2	EA	68	U201, U202	
5	1_MEMORY_OPTION	1_Memory_Option for E-series CMU	A	1_Memory_Option place holder for BOM structure	1	EA			Memory Populated U201, U202
6		301756 IC SRAM 1MBIT 20MHZ 8SOIC	B	IC SRAM 1MBIT 20MHZ 8SOIC	2	EA		U201, U202	Option 1 populates these parts
4	Processor_100LQFP14x14-P	Processor with a 100LQFP 14x14mm package size	B	This is a place holder for the possibility of changing processors out depending on required functionality.	1	EA	58	U101	
5	0_PROCESSOR_OPTION	0_Processor_Option for E-series CMU	A	0_Processor_Option place holder for BOM structure	1	EA		U101	
6		301773 IC MCU 32BIT 1024KB FLSH 100LQFP	A	IC MCU 32BIT 1024KB FLSH 100LQFP COT -40C to 85C	1	EA		U101	0 Option is for Giant Gecko Rev 0
4	SIM_CARD-UU	SIM CARD-UU for Cell Modem	C	This is a placeholder for the SIM Card selection on the EMU product.	1	EA	90	U630	UU in the part number defines what country code will go into the product.
5	NA_SIM_OPTION	NA SIM Option for E-series CMU	B	North American SIM_Option for E-series CMU	1	EA			U630 North America SIM
6	301701-NA3	NA3 SIM Option for E-series CMU	E	North American Option, 2G-3G SIM Card, Embedded, SLM76CF5120P, 8 pin, VQFN-8-1	1	EA		U630	North American SIM