

Brand name:Aperia Technologies

Model name:GW-10,GW-20

Bom list

No	Reference	Part	Description	Mfg Part#
1	C132	4.7uF	4.7uF 10V Ceramic Capacitor X5R 0603 (1608 Metric) 0.063" L x 0.032" W (1.60mm x 0.80mm)	CL10A475MP5LNNC
2	C10,C322	4.7uF	4.7uF 10V Ceramic Capacitor X5R 0603 (1608 Metric) 0.063" L x 0.032" W (1.60mm x 0.80mm)	CL10A475MP5LNNC
3	C11	10nF	CAP CER 10000PF 50V COG/NPO 0805	GCM2195C1H103JA16D
4	C12,C17,C18,C35,C36,C53,C238,C239,C247,C248,C254,C255,C287,C296	22uF	CAP CER 22UF 10V X5R 0603	GRM188R61A226ME15D
5	C13	0.1uF	CAP CER 0.1UF 200V X7R 1206	C1206X104K2RACAUTO
6	C195,C196	10pF	CAP CER 10PF 50V COG/NPO 0603	C0603C100J5GACTU
7	C15,C16	47uF	Polymer Capacitors 47uF 63V 20% 8 x 10 AEC-Q200	HHXC630ARA470MHA0G
8	C19	0.1uF	CAP CER 0.1UF 10V X5R 0402	GRM155R61C104KA88D
9	C20,C21	6.8uF	CAP CER 6.8UF 100V X7S 2220	C5750X7S2A685K200KB
10	C22	27pF	CAP CER 27PF 50V COG/NPO 0603	C0603C270F5GACTU
11	C23	47uF	CAP TANT POLY 47UF 10V 1411	10TPE47MAZB
12	C24	1.2nF	CAP CER 1200PF 50V COG/NPO 0603	CL10C122JB8NNNC
13	C29,C64,C69,C179,C284,C280,C329,C194,C246	10uF	CAP CER 10UF 10V X5R 0603	GRM188R61A106KE69D

14	C26,C28,C316,C317, C325,C326,C118,C1 28,C167,C282,C237, C241,C244,C258,C2 61,C269,C332	1uF	CAP CER 1UF 10V X5R 0402	CGB2A1X5R1A105K033BC
15	C27,C107,C108,C11 1,C112,C113,C114,C 115,C117,C127,C13 3,C134,C135,C142,C 143,C144,C149,C15 3,C155,C159,C175,C 176,C180,C181,C18 6,C189,C190,C242,C 250,C252,C256,C26 5,C270,C279,C318,C 324,C328,C183,C27 6,C309,C313,C331, C323,C177,C234,C3 27	0.1uF	CAP CER 0.1UF 10V X5R 0402	CL05A104MP5NNNC
16	C30	47uF	CAP TANT 47UF 10V 20% 0805	F981A476MSA
17	C39,C44,C45,C48,C5 0,C51,C52,C62,C63, C68,C72,C73,C110,C 123,C124,C125,C12 6,C203,C275	0.22uF	CAP CER 0.22UF 6.3V X5R 0201	GRM033R60J224ME15D
18	C41,C116,C61,C109, C168,C243,C249,C2 51,C257,C259,C264, C281	4.7uF	CAP CER 4.7UF 10V X5R 0402	CL05A475MP7NRB8
19	C105,C106,C140,C1 41,C277,C278	18pF	CAP CER 18PF 50V COG/NPO 0402	GRM1555C1H180FA01D

20	C240	4.7uF	CAP CER 4.7UF 10V X5R 0402	CL05A475MP7NRB8
21	C136	1nF	CAP CER 1000PF 6.3V X7R 0402	C0402C102K9RACTU
22	C121,C122,C192,C193	18pF	CAP CER 18PF 50V NPO 0402	GRM1555C1H180FA01D
23	C148	0.1uF	CAP CER 0.1UF 6.3V X7R 0805	C0805C104K9RACTU
24	C14,C151,C152	10pF	CAP CER 10PF 10V COG/NPO 0603	C0603C100J8GAC7867
25	C154,C160	100uF	CAP TANT 100UF 6.3V 20% 1411	F930J107MBA
26	C158,C161,C164,C165,C166	33pF	CAP CER 33PF 50V COG/NPO 0402	CL05C330JB5NNNC
27	C162	100pF	CAP CER 100PF 100V NPO 0603	06031U101GAT2A
28	C182	4.7nF	CAP CER 4700PF 25V X7R 0402	TMK105B7472KV-F
29	C178,C184,C187,C188	0.1uF	CAP CER 0.1UF 50V Y5V 0603	CC0603ZRY5V9BB104
30	C185	47uF	CAP TANT POLY 47UF 10V 1411	10TPE47MAZB
31	C197,C202	0.1uF	CAP CER 0.1UF 100V JB 1206	C3216JB2A104M160AA
32	C200	33pF	CAP CER 33PF 100V COG/NPO 0603	C0603C330J1GACTU
33	C201	4.7uF	CAP CER 4.7UF 100V X7S 1210	C3225X7S2A475M200AE
34	C274	0.1uF	CAP CER 0.1UF 10V X5R 0402	CL05A104MP5NNNC
35	C236,C253	2.2uF	CAP CER 2.2UF 10V X5R 0402	GRM155R61A225KE95D
36	C245,C273	2.2uF	CAP CER 2.2UF 10V X5R 0402	GRM155R61A225ME95D
37	C260,C285,C286,C288,C289,C290,C291,C292,C293,C294,C295,C297,C298,C299,C300,C301,C302,C303,C304,C305,C306,C307,C308	0.22uF	CAP CER 0.22UF 10V X5R 0201	CL03A224MP3NNNC
38	C262,C263,C267,C268	47uF	CAP CER 47UF 10V X5R 0805	GRM21BR61A476ME15L
39	C266,C271	0.47uF	CAP CER 0.47UF 25V X5R 0402	CGB2A3JB1A474M033BB
40	C272	1uF	CAP CER 1UF 25V X5R 0402	CL05A105KA5NQNC

41	C283	10nF	CAP CER 10000PF 100V NP0 0805	C2012NP02A103J125AA
42	C310	4.7uF	CAP CER 4.7UF 10V X5R 0402	C1005X5R1A475M050BC
43	C311,C312,C314,C315	2.2pF	CAP CER 2.2PF 50V NP0 0402	CL05C2R2CB5NNNC
44	C330	4.7pF	CAP CER 4.7PF 10V COG/NP0 0402	C0402C479D8GAC7867
45	C334	1nF	CAP CER 1000PF 100V X7R 0805	CL21B102KCANNNC
46	C333	1uF	CAP CER 1UF 10V X5R 0402	CGB2A1X5R1A105K033BC
47	C59	0.1uF	CAP CER 0.1UF 10V X5R 0402	GRM155R61C104KA88D
48	C60	0.47uF	CAP CER 0.47UF 10V X7S 0402	CGA2B3X7S1A474M050BB
49	D6,D40	RSX501LAM20TR	DIODE SCHOTTKY 20V 5A PMDTM	RSX501LAM20TR
50	D8,D10	SD12C-01FTG	TVS DIODE 12V 23V SOD323	SD12C-01FTG
51	D31,D32	SD12C-01FTG	TVS DIODE 12V 23V SOD323	SD12C-01FTG
52	D9	CDSOT23-T24CAN	TVS DIODE 24VWM 50VC SOT23	CDSOT23-T24CAN
53	D11	SLD8S36A	TVS DIODE 36.5V 58.1V SMTO-263	SLD8S36A
54	D12	SS36	DIODE SCHOTTKY 60V 3A SOD123FA	SS36FA
55	D13	VF@lo= 700.0 mV	DIODE SCHOTTKY 60V 5A SMC	B560C-13-F
56	D14	150120GS75000	LED GREEN CLEAR 1206 SMD	150120GS75000
57	D16,D37	DIODE_SCHTKY	DIODE SCHOTTKY 30V 100MA SSMINI2	DB2S31600L
58	D19	4.2V Zener	DIODE ZENER 4.3V 350MW SOD523	BZT585B4V3T-7
59	D20	150120RS75000	LED RED CLEAR 1206 SMD	150120RS75000
60	D21	150120BS75000	LED BLUE CLEAR 1206 SMD	150120BS75000
61	D22	ESD9L3.3ST5G	TVS DIODE 3.3VWM 9VC SOD923	ESD9L3.3ST5G
62	D26	VS-16EDU06-M3/I	DIODE GEN PURP 200V 1A TO263AC	VS-16EDU06-M3/I

63	D28	MMSZ5258BT1G	DIODE ZENER 36V 500MW SOD123	MMSZ5258BT1G
64	D29	CUS05S40,H3F	DIODE SCHOTTKY 40V 500MA 2DSN	CUS05S40,H3F
65	D30	ESD9L3.3ST5G	TVS DIODE 3.3VWVM 9VC SOD923	ESD9L3.3ST5G
66	D33, D35,D36	DB2S31000L	DIODE SCHOTTKY 30V 200MA SSMINI2	DB2S31000L
67	D38,D39	PESD5V0C1BSFYL	TVS DIODE 5V 6.5V DSN0603-2	PESD5V0C1BSFYL
68	D41	PDZ5.6BGWJ	Zener Diode 5.6V 400mW $\pm 2\%$ Surface Mount SOD-323	PDZ5.6BGWJ
69	F2	OZCF0100AF2A	PTC RESET FUSE 60V 1A 2920	OZCF0100AF2A
70	J1	MOLEX-39301080	CONN HEADER 8POS 4.2MM R/A TIN	39301080
71	J2	CON3	CONN HEADER XH TOP 3POS 2.5MM	B3B-XH-A(LF)(SN)
72	J8	RP-SMA R/A Jack	RP-SMA Female Connector PCB Mount	DOSIN-806-0003
73	J7	SMA R/A JACK	SMA connector PCB mount female	DOSIN-806-0532
74	J13	USB_FLASHING header	Connector Header Through Hole 10 position 0.100" (2.54mm)	69190-410HLF
75	J9	EXT_USB	CONN HDR 1.27MM T/H AU 4POS	M50-3530442
76	J14	HEADER 2	2.54MM HEADER	
77	J15	IPEX cable with SMA connector	SMA Female R/A to IPEX 1.13 Cable 5.2CM	DOSIN-811-1041
78	J16	HEADER 5X2	2.54mm pitch header	
79	U13 (xBR)	Female header 10X1	CONN RECEPT 2MM SINGLE STR 10POS	NPPN101BFCN-RC
80	L1	1uH	FIXED IND 1UH 6.2A 11.7 MOHM SMD	NRS8030T1R0NJGJ

81	L2,L5,L6,L23	10ohm, 3A	FERRITE BEAD 100 OHM 0603 1LN	MPZ1608S101ATAHO
82	L3	BNX022-01	FILTER LC 1UF SMD	BNX022-01L
83	L4	15uH	FIXED IND 15UH 4.9A 65.3 MOHM	IHLP3232DZER150M11
84	L10,L18,L19,L21	MAF1005GAD352 AT000	FERRITE BEAD 500 OHM 0402 1LN	MAF1005GAD352AT000
85	L13	47nH	FIXED IND 47NH 230MA 1 OHM SMD	HK100547NJ-T
86	L15,L16,L17	1.5uH	FIXED IND 1.5UH 1.75A 54 MOHM	BRL3225T1R5M
87	L24	SRF2012A-121YA	CMC 400MA 2LN 120OHM SMD AECQ200	SRF2012A-121YA
88	L25	4-2176075-7	7.4nH Unshielded Thin Film Inductor 0201	4-2176075-7
89	P1	S8421-45R	HOLDER BATT COIN CR2032/20MM	S8421-45R
90	P2	CR2032 MFR FH1	Coin Cell Battery 3V 2-PIN HORZ 225mAh 20.0 x 3.9mm	CR2032 MFR FH1
91	Q1	DMG2305UX-13	MOSFET P-CH 20V 4.2A SOT23	DMG2305UX-13
92	Q2	DMG2305UX-13	MOSFET P-CH 20V 4.2A SOT23	DMG2305UX-13
93	Q3,Q5,Q6,Q11,Q12, Q17,Q18,Q20	MMBT3904-7-F	TRANS NPN 40V 0.2A SMD SOT23- 3	MMBT3904-7-F
94	Q15	MMBTA55-7-F	TRANS PNP 60V 0.5A SOT23-3	MMBTA55-7-F
95	Q16	PMPB15XP,115	MOSFET P-CH 12V 8.2A 6DFN	PMPB15XP,115
96	Q19	SI3127DV-T1-GE3	MOSFET P-CHAN 60V TSOP6S	SI3127DV-T1-GE3
97	RT1	205K	205 KOhms 1% 0.05W, 1/20W Chip Resistor 0201	RC0201FR-07205KL
98	R8	100K	RES SMD 100K OHM 1% 1/16W 0402	RC0402FR-07100KL
99	R9	316K, 1%	RES 316K OHM 1% 1/16W 0402	RMCF0402FT316K

100	R10,R187	100K, 1%	RES SMD 100K OHM 1% 1/16W 0402	RC0402FR-07100KL
101	R11,R12,R13,R46,R 52,R72,R76,R237,R2 38,R239,R106,R107, R133,R139,R151,R1 53,R155,R159,R160, R164,R167,R168,R1 69,R181,R222,R256, R262,R263,R266,R1 30,R138,R141,R134, R152,R156,R166,R3 00,R161	10K	RES SMD 10K OHM 5% 1/16W 0402	RC1005J103CS
102	R290	5.1K	RES SMD 5.1K OHM 1% 1/8W 0603	MCT06030C5101FP500
103	R291	18K	RES 18K OHM 1% 1/10W 0603	RMCF0603FT18K0
104	R15,R24,R63,R74,R 116,R121,R122,R12 3,R124,R125,R126,R 127,R128,R129,R13 1,R132,R135,R136,R 137,R140,R142,R14 3,R144,R157,R158,R 162,R163,R165,R21 9,R260,R154,R296,R 193,R194,R195,R27 1,R272,R280,R282,R 302,R274,R241,R24 6,R77,R78	10K	RES SMD 10K OHM 5% 1/16W 0402	RC1005J103CS
105	R16	60.4K	RES 60.4K OHM 1% 1/16W 0402	RMCF0402FT60K4
106	R17	18.7K	RES SMD 18.7K OHM 1% 1/16W 0402	RC0402FR-0718K7L

107	R19	11.5K	RES 11.5K OHM 1% 1/16W 0402	RMCF0402FT11K5
108	R145,R146,R147,R148,R149,R150,R215,R216	100K	RES SMD 100K OHM 5% 1/16W 0402	RC0402JR-07100KL
109	R20,R21,R174,R261,R264	100K	100 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J100K
110	R23	1.13K 1%	RES 1.13K OHM 1% 1/16W 0402	RMCF0402FT1K13
111	R25	2K, 1%	RES SMD 2K OHM 1% 1/10W 0402	ERJ-2RKF2001X
112	R26	1K, 1%	RES SMD 1K OHM 1% 1/10W 0402	ERJ-2RKF1001X
113	R47	20K	RES SMD 20K OHM 1% 1/16W 0402	RC0402FR-0720KL
114	R49,R50,R51	10R	RES SMD 10 OHM 5% 1/16W 0402	RC0402JR-0710RL
115	R54,R227,R231,R232,R233,R201	0E	RES SMD 0.0OHM JUMPER 1/16W 0402	RC0402JR-070RL
116	R55,R230,R119,R120	0E	RES SMD 0.0OHM JUMPER 1/16W 0402	RC0402JR-070RL
117	R18,R66,R67	4.7K	4.7 KOhms 5% 0.063W, 1/16W Chip 0402	CRGCQ0402J4K7
118	R245,R244	0E	RES SMD 0 OHM JUMPER 1/10W 0402	ERJ-2GE0R00X
119	R275,R277,R278,R279,R289,R281,R224	0E	RES SMD 0 OHM JUMPER 1/10W 0402	ERJ-2GE0R00X
120	R268,R269,R270,R273,R298,R213,R214	0E	RES SMD 0 OHM JUMPER 1/10W 0402	ERJ-2GE0R00X
121	R242,R243	0E	RES SMD 0 OHM JUMPER 1/10W 0402	ERJ-2GE0R00X

122	R22,R48,R73,R82,R83,R84,R229,R240,R276,R297,R257,R265,R288	0E	RES SMD 0 OHM JUMPER 1/10W 0402	ERJ-2GE0R00X
123	R81	10E	10 Ohms 1% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402F10R
124	R85	15K	15 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J15K
125	R86	51K	RES 51K OHM 5% 1/16W 0402	RMCF0402JT51K0
126	R87,R88,R89	22E	22 Ohms ±5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J22R
127	R235	4.7K	4.7 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J4K7
128	R92,R93	4.7K	4.7 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J4K7
129	R94,R95	47K	47 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J47K
130	R104,R105	510R	RES SMD 510 OHM 5% 1/10W 0402	ERJ-2GEJ511X
131	R108,R109,R14	1K	RES SMD 1K OHM 5% 1/16W 0402	RC0402JR-071KL
132	R110,R114	60R4	RES 60.4 OHM 1% 1/16W 0402	RMCF0402FT60R4
133	R111,R112,R113,R173	2.2K	RES SMD 2.2K OHM 5% 1/10W 0402	ERJ-2GEJ222X
134	R117,R118	20K	RES 20K OHM 5% 1/16W 0402	RMCF0402JT20K0
135	R188,R247,R248,R251,R299	10K	RES SMD 10K OHM 1% 1/16W 0402	RC0402JR-0710KL
136	R170	220R	220 Ohms ±1% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Automotive AEC-Q200, Moisture Resistant Thick Film	CRGCQ0402F220R

137	R171,R172	11.5K	11.5 KOhms 1% 0.063W, 1/16W Chip Resistor 0402	RMCF0402FT11K5
138	R175	100K	100 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J100K
139	R176	2M2	2.2 MOhms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J2M2
140	R294	51K	51 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	RMCF0402JT51K0
141	R285,R286	51K	51 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	RMCF0402JT51K0
142	R295	51K	51 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	RMCF0402JT51K0
143	R178,R292,R283,R284	51K	51 KOhms 5% 0.063W, 1/16W Chip Resistor 0402	RMCF0402JT51K0
144	R186	2.2K	RES SMD 2.2K OHM 1% 1/10W 0402	ERJ-2RKF2201X
145	R189	4.7K	RES SMD 4.7K OHM 1% 1/16W 0402	RC1005F472CS
146	R192	33R	33 Ohms 5% 0.063W, 1/16W Chip Resistor 0402	CRGCQ0402J33R
147	R217,R223,R228	0E	RES SMD 0.0 OHM JUMPER 1/8W 0805	RC2012J000CS
148	R236	0E	RES SMD 0.0 OHM JUMPER 1/8W 0805	RC2012J000CS
149	R220,R287,R293	0E	RES SMD 0.0 OHM JUMPER 1/8W 0805	RC2012J000CS
150	R226	0E	RES SMD 0 OHM JUMPER 1/10W 0603	CR0603-J/-000ELF
151	R249,R250,R252	240R	RES SMD 240 OHM 1% 1/16W 0402	RC0402FR-07240RL
152	R253	470R	RES SMD 470 OHM 1% 1/16W 0402	RC0402FR-07470RL

153	R254,R255	1K	RES SMD 1K OHM 0.5% 1/16W 0402	RR0510P-102-D
154	R301	OR01	RES SMD 10 MOHM 1% 1/2W 0805	ERJ-6CWFR010V
155	R303,R304,R305,R306	0E	RES SMD 0 OHM JUMPER 1/10W 0402	ERJ-2GE0R00X
156	SW4	218-2LPST	SWITCH DIP HALF PITCH 2POS 50V	218-2LPST
157	SW5	5FS1S102M6QES	SWITCH SLIDE SPST 0.4VA 28V	5FS1S102M6QES
158	SW7	Through hole tactile switch	SWITCH TACTILE SPST-NO 0.05A 24V	1-1825027-1
159	U1	MIC35302WD-TR	Linear Voltage Regulator IC Positive Adjustable 1 Output 1.24 V ~ 5.4 V 3A TO-252-5	MIC35302WD
160	U2	TPS61230ARNSR	IC REG BOOST ADJ 6A SYNC 7VQFN	TPS61230ARNSR
161	U3	TPS54340DDAR	IC REG BUCK ADJ 3.5A 8SOPWRPAD	TPS54340DDAR
162	U4	BQ24081DRCR	IC LI-ION PWR MGMT 1CELL 10- SON	BQ24081DRCR
163	U8	MTFC8GAKAJCN-1M WT	8G-byte 3.3V Embedded MMC 153-Pin VFBGA	MTFC8GAKAJCN-1M WT
164	U10	E70-433T14S2	CC1310 433MHz IOT SMD rf Wireless uhf Module UART	E70-433T14S2
165	U11	W25Q64JVSSIQ	IC FLASH 64MBIT 104MHZ 8SOIC	W25Q64JVSSIQ
166	U13	XB24-BPIT-004	Xbee Znet 2.5 (Series 2), 1mw, Pcb Antenna, 250000 Bps, Rout	Dynamic and Legacy
167	U14	EG91-NA/EG91-E	QFN-68, - 0 - C to +85 - C, FCC/Verizon/AT&T/PTCRB certified	EG91-NA/EG91-E

168	U15	SF56S006V4BR2000	SIM CARD SOCKET	SF56S006V4BR2000
169	U16	TPD3F303DPVR	RC (Pi) EMI Filter 2nd Order Low Pass 3 Channel R = 47 Ohms, 100 Ohms, C = 20pF 8-UFDFN Exposed Pad	TPD3F303DPVR
170	U28	TPD4S012DRYR	IC 4CH ESD SOLUTION W/CLAMP 6SON	TPD4S012DRYR
171	U18	TRS3232EQPWRQ1	IC DVR/RCV RS232 MULTICH 16TSSOP	TRS3232EQPWRQ1
172	U19	TJA1057GT/3J	1/1 Transceiver Half CANbus 8-SOIC	TJA1057GT/3J
173	U20	LIS2HH12TR	Accelerometers MOTION MEMS CONSUMER	LIS2HH12TR
174	U21	PCF85263ATL	IC RTC CLK/CALENDAR I2C 10DFN	PCF85263ATL/AX
175	U23	MT41K128M16JT-125 IT:K	IC DDR3 SDRAM 2GBIT 800MHZ FBGA	MT41K128M16JT-125 IT:K
176	U24	MC34PF3001A7EP	PMIC 48-Pin QFN EP	MC34PF3001A7EP
177	U25	AP2202K-3.3TRG1	IC REG LDO 3.3V 0.15A SOT25	AP2202K-3.3TRG1
178	U26	MDBT42Q-P512K	MDBT42Q NRF52832 BASED BLE MODUL	MDBT42Q-P512K
179	U27	JN5169-001-M00-2	J5169 Module	JN5169-001-M00-2
180	U29,U32	AP22802AW5-7	IC LOAD SW PROGR SOT-25	AP22802AW5-7
181	U31	MCIMX6Y2CVM05AA	ARM [®] Cortex [®] -A7 Microprocessor IC i.MX6 1 Core, 32-Bit 528MHz 289-MAPBGA (14x14)	MCIMX6Y2CVM05AA

182	U33	MAX17055ETB+T	IC FUEL GAUGE MODELGAUGE 10TDFN	MAX17055ETB+T
183	X1	24MHz	24MHz 10ppm Crystal 8pF 80 Ohms 4-SMD, No Lead	ECS-240-8-37CKM
184	Y1,Y5	32.768KHz	32.768KHz 20ppm Crystal 12.5pF 70 KOhm -40- C ~ 85- C Surface Mount 2-SMD	ABS07-32.768KHZ-T
185	Y4,Y6	32.768KHz	32.768KHz 20ppm Crystal 12.5pF 70 KOhm -40- C ~ 85- C Surface Mount 2-SMD	ABS07-32.768KHZ-T