

Bill of materials
Table 1. AEK-COM-10BASET bill of materials

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	7	C1, C2, C15, C85, C94, C108, C117	10uF	1206 - 50V - X5R	WE	885012108022
2	10	C3, C5, C124, C126, C129, C131, C134, C136, C139, C141	47pF	0603 - 50V - NP0 Class I	WE	885012006055
3	5	C4, C125, C130, C135, C140	4.7nF	0603 - 50V - X7R Class II	WE	885012206087
4	1	C6	220nF	0603 - 50V - X7R Class II	WE	885012206125
5	2	C7, C8	2.2uF	0805 - 25V - X7R Class II	WE	885012207079
6	42	C9, C11, C14, C17, C23, C27, C34, C37, C42, C45, C48, C50, C52, C54, C56, C58, C61, C72, C75, C78, C80, C81, C82, C83, C86, C88, C89, C93, C96, C100, C102, C103, C106, C109, C111, C112, C116, C119, C122, C127, C132, C137	100nF	0603 - 50V - X7R Class II	WE	885012206095
7	3	C10, C22, C33	22uF	0805 - 25V - X5R Class II	WE	885012107019
8	1	C12	1uF	0603 - 25V - X7R Class II	WE	885012206076
9	1	C13	220uF	Electrolytic Cap - 50V - 10x10.5	WE	865080657018
10	1	C16	3.3uF	1206 - 25V - X7R Class II	WE	885012208067
11	2	C19, C30	15nF	0603 - 50V - X7R Class II	WE	885012206090
12	29	C20, C41, C44, C47, C49, C51, C53, C55, C57, C59, C60, C64, C66, C68, C70, C73, C76, C79, C84, C87, C92, C95, C99, C101, C104, C105, C110, C115, C118	10nF	0603 - 50V - X7R Class II	WE	885012206089
13	1	C21	120pF	0603 - 50V - X7R	Vishay	VJ0603Y121KXACW1BC
14	2	C25, C26	47uF	1210 - 16V - X5R Class II	WE	885012109011

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15	6	C28, C38, C63, C65, C67, C69	47nF	0603 - 50V - X7R Class II	WE	885012206093
16	2	C29, C39	220pF	0603 - 50V - X7R Class II	WE	885012206079
17	1	C31	6.8nF	0603 - 50V - X7R Class II	WE	885012206088
18	1	C32	82pF	0603 - 50V - C0G	Murata	GRM1885C1H820JA01D
19	2	C35, C36	22uF	1210 - 25V - X7R Class II	WE	885012209074
20	2	C43, C46	1.5uF	1206 - 25V - X7R Class II	WE	885012208065
21	3	C62, C71, C74	2.2uF	1206 - 25V - X7R Class II	WE	885012208066
22	1	C77	4.7uF	1206 - 50V - X7R Class II	WE	885012208094
23	2	C90, C113	100nF	0805 - 100V - X7R Class II	WE	885012207128
24	4	C97, C98, C120, C121	22pF	0402 - 50V - NP0 Class I	WE	885012005057
25	1	C107	1uF	1206 - 50V - X7R Class II	WE	885012208093
26	4	C123, C128, C133, C138	10uF	0805 - 25V - X5R Class II	WE	885012107027
27	2	C142, C143	22pF	0603 - 50V - NP0 Class I	WE	885012006053
28	6	CN1, CN2, CN4, CN5, CN6, CN11	Con 2P	2.54mm - 1 row - KK254 - Male	WE	61900211121
29	1	CN3	610120249221	WR-PHD 2.54 mm PCB Socket Header - SMT Type - Double Row - Right Angle - 20pins	WE	610120249221
30	4	CN7, CN8, CN9, CN10	Con 8p	2.54mm - 1 row - KK254 - Male	WE	61900811121
31	2	D1, D2	STTH102AY, SMA	Automotive high efficiency ultrafast diode	ST	STTH102AY
32	8	D3, D4, D8, D9, D10, D11, D12, D14	Green	0805 - Led Green - 3.2V	WE	150080GS75000
33	2	D5, D17	Blue	0805 - Led Blue - 3.2V	WE	150080BS75000
34	1	D6	MMBZ5242BLT1G	12V Zener Voltage Regulators, 225mW	Onsemi	MMBZ5242BLT1G
35	1	D7	SMAJ24CA, SMA	SMA TVS - 24VDC - Bidirectional	ST	SMAJ24CA-TR
36	1	D13	Red	0805 - Led Red - 2V	WE	150080RS75000

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37	4	D15, D16, D18, D19	EZA-EG3W11AV	ESD Suppressor, High Withstanding Type	Panasonic	EZA-EG3W11AV
38	1	F1	0437003.WRA	437 Series – 1206 Fast-Acting Fuse	LittleFuse	0437003.WRA
39	1	J2	Con 2p 5.08_green	5.08mm - WR- TBL Series 2135 - Horizontal Entry Modular	WE	691213510002
40	1	J3	JTAG PORT	2.54mm - IDC, Male Box Header WR-BHD, THT, Vertical	WE	61201421621
41	4	JP1, JP2, JP6, JP7	Jumper 2p Closed	2mm - WR-PHD 2.00 mm THT Pin Header Single Row, Vertical, 2p, Closed	WE	62000211121
42	7	JP3, JP4, JP5, P3, P4, P5, P6	Jumper 2p, Jumper 2p Closed, Header 2p 2.54	THT Vertical 2 pins Header, Pitch 2.54 mm, Single Row, 2.54mm - Pin Header, THT, pitch 2.54mm, Single Row, Vertical, 2p, Closed, 2.54mm - WR-PHD Pin Header, THT, pitch 2.54mm, Single Row, Vertical, 2p	WE	61300211121
43	5	JP11, JP12, JP13, JP14, JP15	Jumper 3p	THT Vertical 3 pins Header, Pitch 2.54 mm, Single Row	WE	61300311121
44	5	L1, L13, L16, L19, L22	51uH	WE-SLM SMT Common Mode Line Filter - 51uH	WE	744242510
45	2	L2, L3	33uH	WE-LHMI SMT Power Inductor – 6.6 x 6.6 x 4.8 - 2.45A	WE	74437349330
46	5	L4, L6, L7, L8, L10	300	WE-CBF SMT EMI Suppression Ferrite Bead. 300 Ohm, 300mA	WE	742792640
47	8	L11, L12, L14, L15, L17, L18, L20, L21	60	WE-CBF SMT EMI Suppression Ferrite Bead. 60 Ohm, 500mA	WE	74279267
48	2	P1, P2	Con 2p 5.00_blue	5.00mm - WR- TBL Serie 102 Horizontal Entry Modular	WE	691102710002
49	6	Q1, Q2, Q3, Q4, Q5, Q10	STR2N2VH5, SOT-23	N-channel 20 V, 0.025 Ω typ., 2.3 A STRipFET™ H5 Power MOSFET in a SOT-23 package	ST	STR2N2VH5

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50	1	Q6	STL42P4LLF6, PowerFLAT 5x6	P-channel -40 V, 0.0155 Ohm, -42 A, Power MOSFET in a PowerFLAT 5x6 package	ST	STL42P4LLF6
51	1	Q7	2STR1160, SOT-23	Low voltage fast- switching NPN power transistor	ST	2STR1160
52	1	Q8	2STN1360, SOT-223	Low voltage fast- switching NPN power transistors	ST	2STN1360
53	1	Q9	2STR2160, SOT-23	Low voltage fast- switching PNP power transistor	ST	2STR2160
54	26	R1, R5, R22, R43, R55, R56, R66, R71, R75, R100, R111, R112, R113, R114, R115, R122, R125, R127, R130, R132, R135, R137, R140, R141, R142, R144	N.M.	0603	N.M.	N.M.
55	10	R2, R4, R123, R124, R128, R129, R133, R134, R138, R139	60.4	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ3EKF60R4V
56	31	R3, R7, R20, R21, R24, R34, R36, R57, R58, R64, R67, R68, R70, R79, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R99, R101, R102, R104	10K	0603 - $\pm 1\%$ - 0.2W	Panasonic	ERJP03F1002V
57	31	R6, R8, R51, R52, R53, R54, R62, R65, R72, R94, R116, R117, R118, R119, R120, R145, SB1, SB2, SB3, SB4, SB5, SB6, SB7, SB8, SB9, SB10, SB11, SB12, SB13, SB14, SB15	0, Closed	0603 - $\pm 1\%$ - 0.1W, Circuit Breaker - 0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ3GEY0R00V
58	3	R9, R28, R73	0	0805 - jumper - 0.25W	Vishay	RCC08050000Z0EA
59	7	R10, R11, R12, R16, R17, R18, R19	100	0603 - $\pm 1\%$ - 0.125W	Panasonic	ERJH3EF1000V
60	3	R13, R14, R15	2.7K	0603 - $\pm 1\%$ - 0.1W	Vishay	MCT06030C2701FP500
61	1	R23	20K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF2002V
62	1	R25	464K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF4643V

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
63	1	R26	200K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF2003V
64	4	R27, R47, R48, R63	3.9K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ3EKF3901V
65	1	R29	8.2K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF8201V
66	1	R30	120	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F1200V
67	2	R31, R39	5.1K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF5101V
68	3	R32, R40, R143	4.7K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F4701V
69	1	R33	1.24K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF1241V
70	2	R35, R42	10	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F10R0V
71	1	R37	5.6K	0603 - $\pm 1\%$ - 0.2W	Panasonic	ERJ-P03F5601V
72	1	R38	180	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF1800V
73	1	R41	2.2K	0603 - $\pm 1\%$ - 0.1W	Panasonic	ERJ-3EKF2201V
74	1	R44	15K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJ-PA3F1502V
75	2	R45, R46	1.5K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJ-PA3F1501V
76	2	R49, R60	1K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F1001V
77	2	R50, R59	100K	0603 - $\pm 1\%$ - 0.2W	Panasonic	ERJP03F1003V
78	1	R61	680	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F6800V
79	4	R69, R76, R103, R109	0	0402 - 0.1W	Panasonic	ERJ-2GE0R00X
80	1	R74	N.M.	0805	N.M.	N.M.
81	4	R77, R78, R107, R108	49.9	1206 - $\pm 1\%$ - 0.66W	Panasonic	ERJP08F49R9V
82	2	R80, R110	12.4K	0603 - $\pm 1\%$ - 0.2W	Panasonic	ERJP03F1242V
83	1	R95	49.9	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJ-UP3F49R9V
84	1	R96	82	0603 - $\pm 0.5\%$ - 0.2W	Panasonic	ERJ-P03D82R0V
85	4	R121, R126, R131, R136	47K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F4702V
86	2	R146, R147	100K	0805 - $\pm 5\%$ - 0.25W	Panasonic	ERJT06J104V
87	2	S1, S4	ButtonSwitch	Switch	WE	430152043826
88	52	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP10, TP11, TP12, TP13,		Test point_hole	N.A.	N.A.

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
		TP14, TP15, TP16, TP17, TP18, TP19, TP21, TP22, TP23, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37, TP38, TP39, TP40, TP41, TP42, TP43, TP44, TP45, TP46, TP47, TP48, TP49, TP50, TP51, TP52, TP53, TP54, TP55				
89	1	U1	SPSB0813, QFN-32L WF	Automotive power management IC with LIN and CAN-FD	ST	SPSB0813-TR
90	1	U2	L5963DN-EHT, PowerSSO 36	Automotive dual monolithic switching regulator with LDO and HSD	ST	L5963DN-EHT
91	1	U3	SPC58EC80E5Q MC1Y, TQFP 144 20x20x1.0	32-bit Power Architecture MCU for Automotive General Purpose Applications - Chorus family	ST	SPC58EC80E5QMC1Y
92	1	U4	STM6315RDW13 F, SOT-143 4	STMICROELECTRONICS - STM6315SSDW13 F - Reset Circuit, Active-Low, Open-Drain, 1V to 5.5V, 2.93V Threshold, 1 Monitor	ST	STM6315RDW13F
93	1	U5	LAN8670	10BASE-T1S Ethernet PHY Transceiver	Microchip	LAN8670C2T-E/LMX
94	1	U6	LAN8650	10BASE-T1S MAC-PHY Ethernet Controller with SPI	Microchip	LAN8650B1T-E/LMX
95	4	U7, U8, U9, U10	MCP2542WFD	CAN FD Transceiver with Wake-up Pattern (WUP) Option	Microchip	MCP2542WFD
96	2	X1, X2	25Mhz	WE-XTAL Quartz Crystal, SMT, CFPX-104, 25MHz, +/-50ppm	WE	830033075
97	1	X3	40Mhz	WE-XTAL Quartz Crystal, SMT, CFPX-104, 40MHz, +/-20ppm	WE	830059537
98	4	for blister	970150365	WA-SPAIE Plastic Spacer Stud, metric, internal/external	WE	970150365

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
99	4	for blister	97790603211	WA-SCRW Pan Head Screw w. cross slot M3	WE	97790603211
100	4	for blister	61900811621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900811621
101	6	for blister	61900211621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900211621
102	44	for blister	61900113722	WR-WTB 2.54 mm Female Crimp Contact	WE	61900113722
103	16	for blister	609002115121	WR-PHD 2.54 mm Jumper with Test Point & Pullback	WE	609002115121
104	4	for blister	60800213421	WR-PHD 2.00 mm Jumper with Test Point	WE	60800213421

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