

Table 1  
Pin assignment of the hybrid connector.

1	+bias(HV)	10	analog ground	19	digital ground	28	com0-bar
2	+bias(HV)	11	V <sub>CC</sub>	20	digital ground	29	clock0
3	NC	12	analog ground	21	V <sub>DD</sub>	30	clock0-bar
4	NC	13	(digital ground)	22	V <sub>DD</sub>	31	led
5	-bias(ag)	14	select	23	digital ground	32	led-bar
6	-bias(ag)	15	com1	24	digital ground	33	ledx
7	calib0	16	com1-bar	25	reset	34	ledx-bar
8	analog ground	17	clock1	26	select	34	temp1
9	V <sub>CC</sub>	18	clock1-bar	27	com0	36	temp2

Table 2  
List of components

parts No.	# of pieces	dimensions (mm)	specifications	products
U1 ~ U12	12	6.550 x 8.400	ABCD2T chip (V2.1)	
C1 ~ C28	28	1.6 x 0.8 x 0.8	Ceramic capacitor 100 nF, 25 V,	Murata GRM39-X7R-104-K-25
C51 ~ C58	8	3.2 x 1.6 x 1.25	Ceramic capacitor 330 nF, 25 V,	Murata GRM42-6-X7R-334-K-25
C71 ~ C72 (C73 ~ C75)	2 (+3)	3.2 x 1.6 x 1.25	Ceramic capacitor 10 nF, 630 V,	Murata GHM1530-B-103-K-630
R27 ~ R30	4	1.6 x 0.8 x 0.8	Resistor, 100Ω	
R33, R34	2	1.6 x 0.8 x 0.8	Resistor, 5.1 kΩ	
R35	1	1.6 x 0.8 x 0.8	Resistor, 1 kΩ	
R36	1		jumper wire	
TM1, TM2	2		Temperature sensor	Semitec 103KT1608-1P
CON	1		connector, 2x18pins, 1.27mm pitch,	Samtec SFMC-120-L3-S-D or 0.05"x0.05" 40 square-pins female
PA	1		pitch adapter	