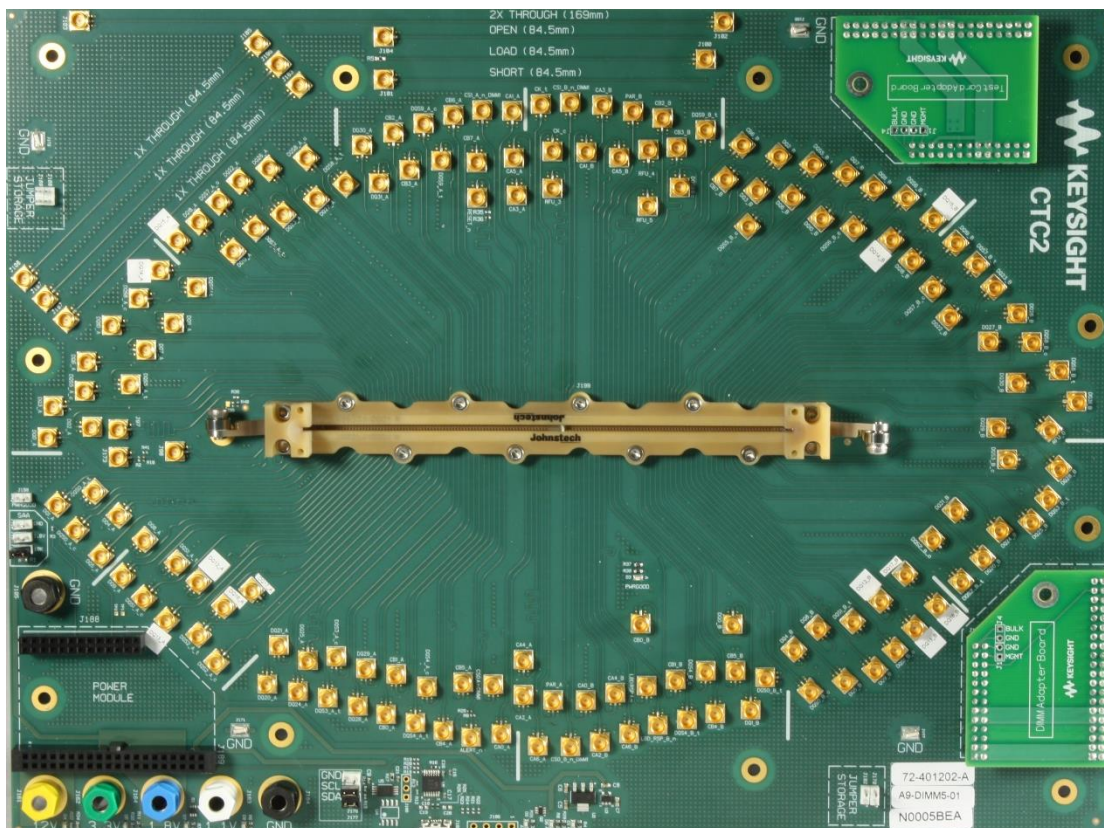




DDR5 CTC2 Test Fixture

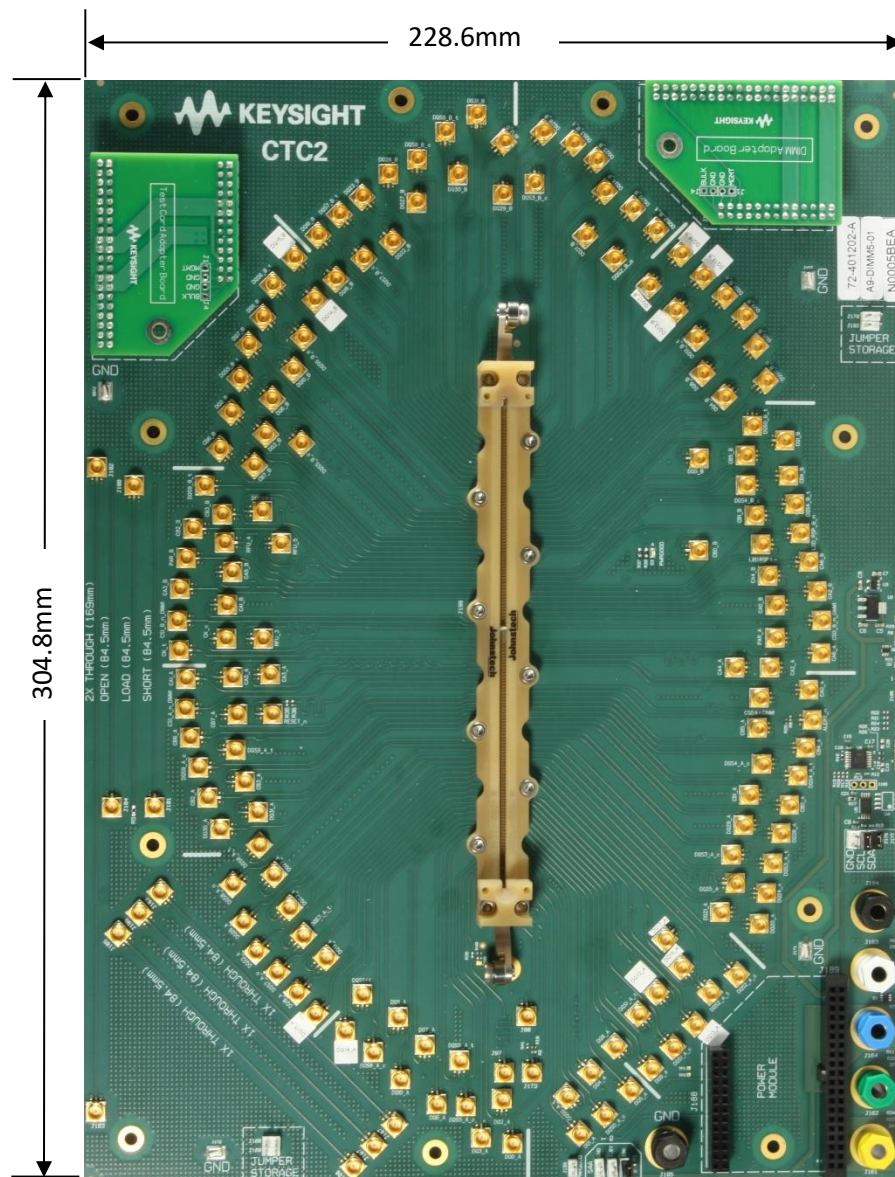
Quick Start Guide



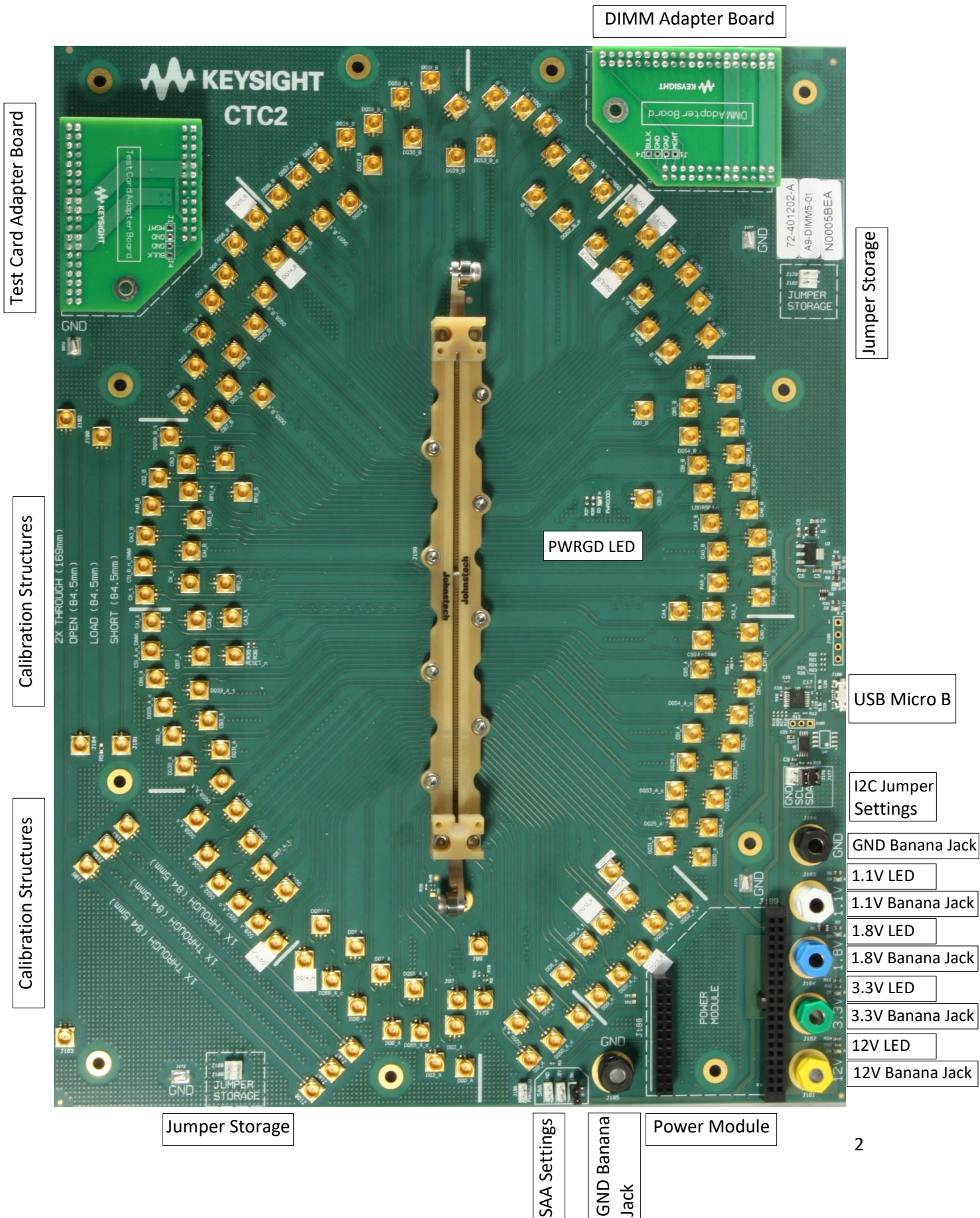
Introduction

The DDR5 CTC2 Test Fixture is a rigid only PCB that allows probing of the signals from a DDR5 DIMM. Each signal is 50 ohms and matched to within +/- 1 mil tolerance. Every signal is either brought out to SMP connectors or headers.

Board Dimensions



Board Features



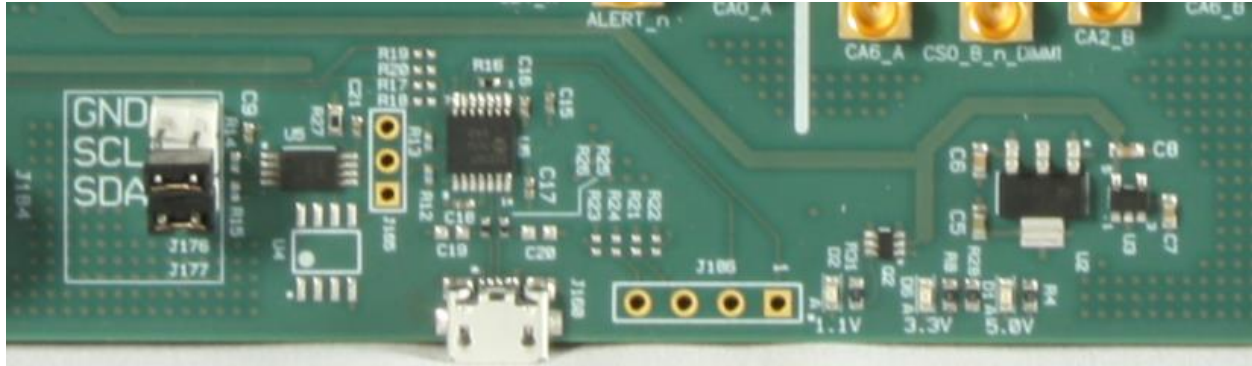
Signals Probed

The following signals are brought out to SMP Connectors.

Name	Pin	Name	Pin	Name	Pin	Name	Pin	Name	Pin	Name	Pin	Name	Pin	Name	Pin
ALERT_n	62	CB0_A	51	CK_c	218	DQ0_A	7	DQ10_A	163	DQ21_A	38	DQS0_A_c	12	DQS5_A_c/TDQS5_A_c	156
CA0_A	66	CB0_B	89	CK_t	217	DQ0_B	100	DQ10_B	256	DQ21_B	131	DQS0_A_t	11	DQS5_A_t/TDQS5_A_t/DBI0_A_n	157
CA0_B	78	CB1_A	53	CS0_A_n	64	DQ1_A	9	DQ11_A	165	DQ22_A	181	DQS0_B_c	105	DQS5_B_c/TDQS5_B_c	249
CA1_A	211	CB1_B	91	CS0_B_n	76	DQ1_B	102	DQ11_B	258	DQ22_B	274	DQS0_B_t	104	DQS5_B_t/TDQS5_B_t/DBI0_B_n	250
CA1_B	223	CB2_A	196	CS1_A_n	209	DQ2_A	152	DQ12_A	25	DQ23_A	183	DQS1_A_c	23	DQS6_A_c/TDQS6_A_c	167
CA2_A	68	CB2_B	234	CS1_B_n	221	DQ2_B	245	DQ12_B	118	DQ23_B	276	DQS1_A_t	22	DQS6_A_t/TDQS6_A_t/DB11_A_n	168
CA2_B	80	CB3_A	198	PAR_A	74	DQ3_A	154	DQ13_A	27	DQ24_A	40	DQS1_B_c	116	DQS6_B_c/TDQS6_B_c	260
CA3_A	213	CB3_B	236	PAR_B	229	DQ3_B	247	DQ13_B	120	DQ24_B	133	DQS1_B_t	115	DQS6_B_t/TDQS6_B_t/DB11_B_n	261
CA3_B	225	CB4_A	58	RESET_n	207	DQ4_A	14	DQ14_A	170	DQ25_A	42	DQS2_A_c	34	DQS7_A_c/TDQS7_A_c	178
CA4_A	70	CB4_B	96	LBD/RSP_A_n	86	DQ4_B	107	DQ14_B	263	DQ25_B	135	DQS2_A_t	33	DQS7_A_t/TDQS7_A_t/DB12_A_n	179
CA4_B	82	CB5_A	60	LBS/RSP_B_n	87	DQ5_A	16	DQ15_A	172	DQ26_A	185	DQS2_B_c	127	DQS7_B_c/TDQS7_B_c	271
CA5_A	215	CB5_B	98	RFU_0	144	DQ5_B	109	DQ15_B	265	DQ26_B	278	DQS2_B_t	126	DQS7_B_t/TDQS7_B_t/DB12_B_n	272
CA5_B	227	CB6_A	203	RFU_1	149	DQ6_A	159	DQ16_A	29	DQ27_A	187	DQS3_A_c	45	DQS8_A_c/TDQS8_A_c	189
CA6_A	72	CB6_B	241	RFU_2	150	DQ6_B	252	DQ16_B	122	DQ27_B	280	DQS3_A_t	44	DQS8_A_t/TDQS8_A_t/DB13_A_n	190
CA6_B	84	CB7_A	205	RFU_3	220	DQ7_A	161	DQ17_A	31	DQ28_A	47	DQS3_B_c	138	DQS8_B_c/TDQS8_B_c	282
		CB7_B	243	RFU_4	231	DQ7_B	254	DQ17_B	124	DQ28_B	140	DQS3_B_t	137	DQS8_B_t/TDQS8_B_t/DB13_B_n	283
				RFU_5	232	DQ8_A	18	DQ18_A	174	DQ29_A	49	DQS4_A_c	56	DQS9_A_c/TDQS9_A_c	200
				FAIL_n	147	DQ8_B	111	DQ18_B	267	DQ29_B	142	DQS4_A_t	55	DQS9_A_t/TDQS9_A_t/DB14_A_n	201
						DQ9_A	20	DQ19_A	176	DQ30_A	192	DQS4_B_c	94	DQS9_B_c/TDQS9_B_c	238
						DQ9_B	113	DQ19_B	269	DQ30_B	285	DQS4_B_t	93	DQS9_B_t/TDQS9_B_t/DB14_B_n	239
								DQ20_A	36	DQ31_A	194				
								DQ20_B	129	DQ31_B	287				

I2C

The CTC2 uses a Micro B USB connector to access the I2C pins (SDA – Pin 5, SCL – Pin 4) on the DDR5 socket.



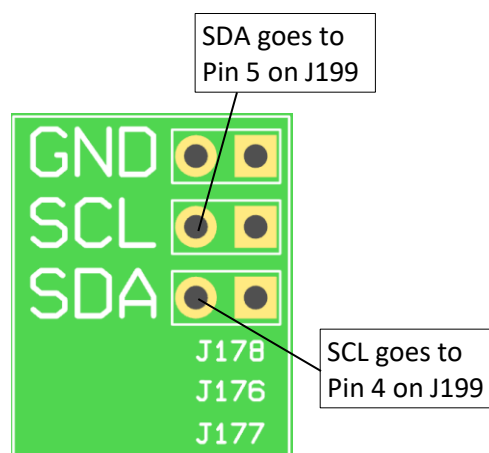
I2C Jumper
Settings

USB Micro B

The I2C_VCC voltage can be set by attaching the Test Card Adapter Board or the DIMM Adapter Board or by applying a voltage to Pin 21 on J188.

Test Card Adapter Board	1.8V
DIMM Adapter Board	1.1V

To access the I2C pins directly on the DDR5 DIMM, remove jumpers on J176 and J177 and attach directly to the following



Alternate Pin Functions

The CTC2 allows for different uses of the pins based on the version of the DIMM that is inserted into the socket and the resistor population options.

V0.22		V0.23	
2	PWR_GOOD	2	RFU
147	FAIL_n	147	RFU
148	SAA	148	RFU
149	RFU	149	SAA
150	RFU	150	PWR_GOOD, FAIL_n

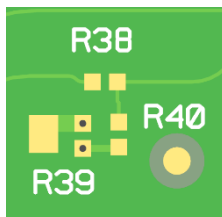
For V0.22, populate the following to bring out the signals to SMP connectors.

V0.22			Connector
2	PWR_GOOD	R39	J198 (2 Pin Header)
147	FAIL_n	NA	J173
148	SAA	R43	J179-J181 (2 Pin Headers)
149	RFU	NA	J98
150	RFU	R38	J97

For V0.23, populate the following to bring out the signals to SMP connectors.

V0.23			Connectors
2	RFU	NA	Pad off R39*
147	RFU	NA	J173
148	RFU	NA	Pad off R43**
149	SAA	R42	J179-J181 (2 Pin Headers)
150	PWR_GOOD, FAIL_n	R40	J198 (2 Pin Header)

* Top Side



** Bottom side



VIN BULK/ VIN MGMT

The CTC2 Board allows for different voltage levels to be applied to VIN BULK and VIN MGMT. The following table shows the necessary connections to apply the correct voltage levels.

Voltage Pin	Voltage Level	Adapter Board	Banana Jack
VIN BULK	12V	DIMM Adapter Board	12V @ J161
VIN MGMT	3.3V		3.3V @ J162
VIN MGMT	1.8V	Test Card Adapter Board	1.8V @ J164
VIN Bulk	1.1V		1.1V @ J163