

**Product Name:** ZX180V-LPC FMC Vita 57.1 test module – accessing all Vita 57.1 LPC signals

**Product Description:** FPGA Mezzanine card , FMC , passive test module meeting VITA 57.1 standard bus interface. Includes 4 rows x 40 pins, totaling 160 pins, Low Pin Count , LPC, housing both SEAM and SEAF connectors. Fully compatible with High Pin Count, HPC connector interface. ONLY rows 3, 4, 7, 8 (C, D, G, H rows ) are available.

**Full access to all ( excluding the GND signals )** Vita 57.1 LPC signals via onboard 0402 SMD footprint. Please see **Page 2** for full list of accessible signals as listed by Vita 57.1 standard. The Vita57.1 assigned GND signals are not accessible individually, they are connected to inner GND planes as well as top/bottom layers fill. The GND access point is offered by 2 onboard GND test points interfacing with test equipment, host and target.

Mates with Samtec Molex HI-SPEED HI-DENSITY SEARRAY design connectors.

**Fully** compatible with 4 rows x 40 pins per row single ended or differential pairs design configuration  
Designed in 8 layer PCB stackup

**All** signals are accessible via onboard standard 0402 SMD footprint.

All signals ( via 0402 SMD package ) are pass through, enabling user to implement design changes ( cut signal path ), if design changes are required.

Improved signal integrity and crosstalk

Multiple GND test points connecting directly to inner layers GND planes as well as ALL Vita 57.1 GND signals.

Includes both LPC MC ( SEAM ) and CC ( SEAF ) connectors

Matching connector's **50Ω** trace impedance on all signals – Reference plane impedance 50Ω for DC to 10GHz bandwidth applications

**Application:** FPGA Mezzanine Card ( daughter) FMC, VITA 57.1 , FPGA Bringup, testing, emulation, Xilinx development Virtex 6 Virtex 7 interface testing daughter board to host, modular design evaluations

**Pitch:** 1.27mm (0.05") High Speed connector

**Access:** SMD 0402 Package footprint.  
Default : All conductors are enabled

**Mates with :** Mechanically compatible with HPC connectors, ONLY 4 listed signal rows are available. Xilinx FPGA development systems Virtex 6 Virtex 7. Any and all FMC LPC VITA 57.1 compliant design. SEAM SADL SEAMP SEAR SEAMI SEAC FMC HPC LCP SEAF-040-08.0-L-10-2-A SEAF-040-08-L-10-2-A SEAFP-40 SEAMP-040 SEAMI-040 SEAR-040-10-10- SEAM-040

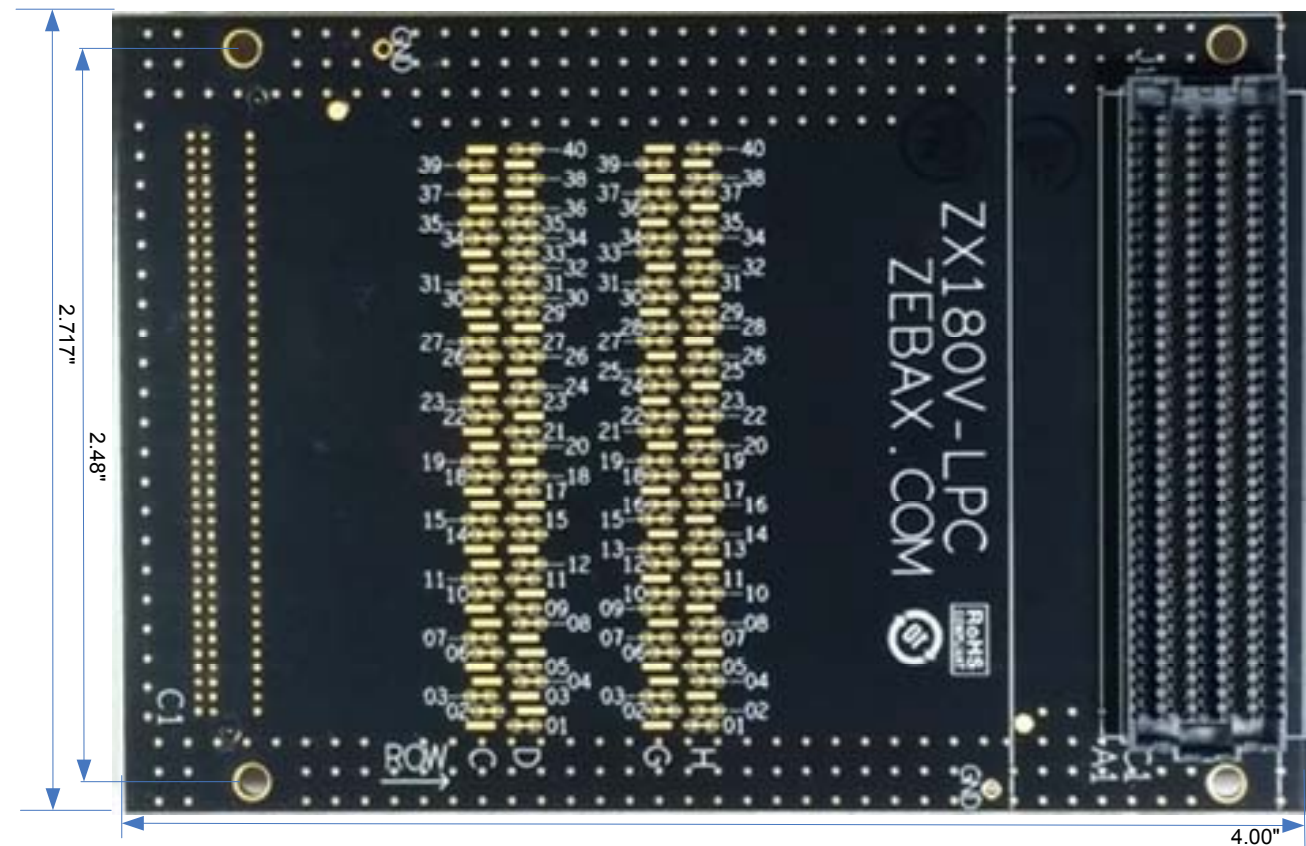
All listed Samtec Molex FMC connectors listed, table below:

ZX180V-LPC FMC breakout adapter mates with the following Samtec Molex SEARRAY™ VITA 57 Connectors				
Molex PN	Samtec PN	VITA PN	Description	Mated Stack Height
45971-4307	ASP-127796-01	CC-LPC-10L	female	
45971-4305	ASP-134603-01	CC-LPC-10	female	
45970-4107	ASP-134605-01	MC-LPC-8.5L	male	8.5 mm
45970-4105	ASP-134606-01	MC-LPC-8.5	male	8.5 mm
45970-4307	ASP-127797-01	MC-LPC-10L	male	10 mm
45970-4305	ASP-134604-01	MC-LPC-10	male	10 mm

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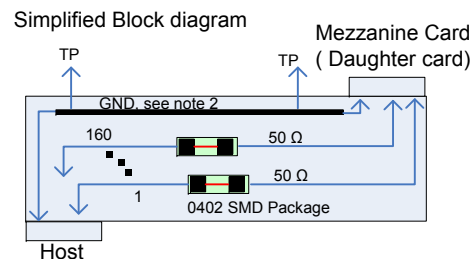
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ZX180V-LPC , Passive FMC VITAL 57.1 breakout adapter



**Note:**  
1- SEAM connector type interfaces with HOST.  
2- SEAF connector type interfaces with Mezzanine Card.



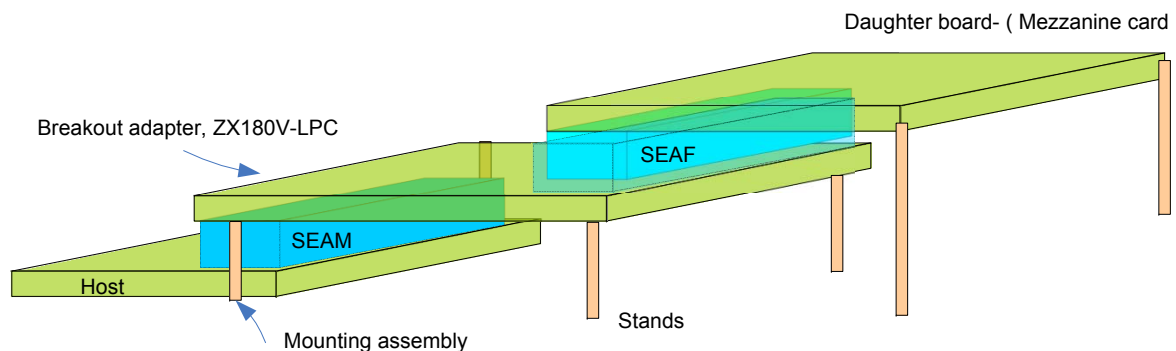
**Note:**  
1- All Vita 57.1 signals are accessible.  
2- All Vita 57.1 reserved GND signals are accessible via GND Test points.



Typical signal connection: 0402 SMD Package

Break signal path:

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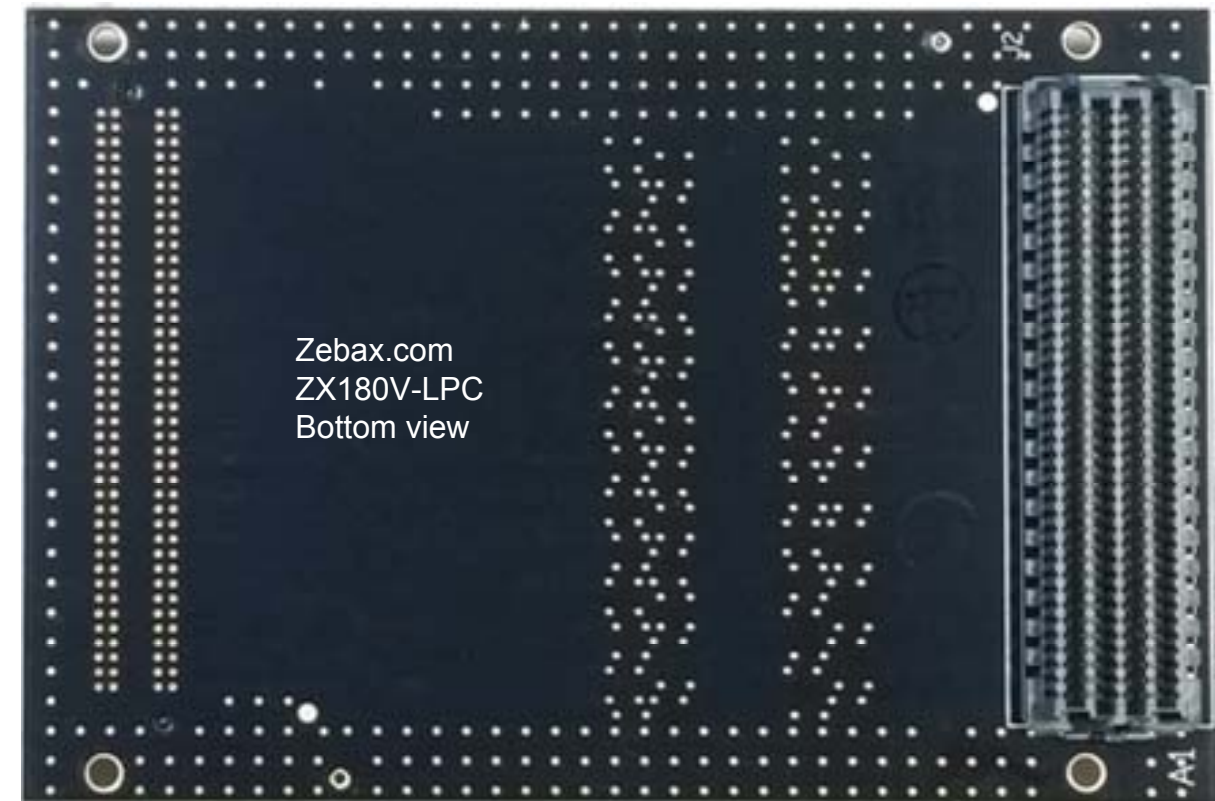
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DESCRIPTION: FMC Vita 57.1 breakout adapter – passive test FPGA Mezzanine Card LPC		ITEM: ZX180V-LPC
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		SHEET: 1 OF 2

**Product Name:** Cont's ZX180V-LPC FMC Vita 57.1 test module – accessing all Vita 57.1 LPC signals

**Ground:** ZX180V-LPC is breakout adapter – test module , offering VITA 57.1 signals. It enables user to implement design changes ( cut signal path ) , or simply access the Vita 57.1 signals for test and measurement purpose.  
The Vita 57.1 GND reserved signals on the ZX180V-LPC are connected to the module inner GND planes and top & bottom GND fills. The GND access point is offered by 2 onboard GND test points interfacing with test equipment, host and target.

**Access signals:** ZX180V-LPC provides access to all Vita 57.1 signals ( excluding the GND signals ) via onboard 0402 SMD footprint package.  
Table below lists the Vita 57.1 signals , to be used as reference accessing ZX180V-LPC FMC Vita 57.1 test module breakout adapter.

Pin	K	J	H	G	F	E	D	C	B	A
	Signal	Signal	Signal	Signal	Signal	Signal	Signal	Signal	Signal	Signal
1	NC	NC	VREF_A_M2C	GND	NC	NC	PG_C2M	GND	NC	NC
2	NC	NC	PRSNT_M2C_L	CLK1_M2C_P	NC	NC	GND	DP0_C2M_P	NC	NC
3	NC	NC	GND	CLK1_M2C_N	NC	NC	GND	DP0_C2M_N	NC	NC
4	NC	NC	CLK0_M2C_P	GND	NC	NC	GBTCLK0_M2C_P	GND	NC	NC
5	NC	NC	CLK0_M2C_N	GND	NC	NC	GBTCLK0_M2C_N	GND	NC	NC
6	NC	NC	GND	LA00_P_CC	NC	NC	GND	DP0_M2C_P	NC	NC
7	NC	NC	LA02_P	LA00_N_CC	NC	NC	GND	DP0_M2C_N	NC	NC
8	NC	NC	LA02_N	GND	NC	NC	LA01_P_CC	GND	NC	NC
9	NC	NC	GND	LA03_P	NC	NC	LA01_N_CC	GND	NC	NC
10	NC	NC	LA04_P	LA03_N	NC	NC	GND	LA06_P	NC	NC
11	NC	NC	LA04_N	GND	NC	NC	LA05_P	LA06_N	NC	NC
12	NC	NC	GND	LA08_P	NC	NC	LA05_N	GND	NC	NC
13	NC	NC	LA07_P	LA08_N	NC	NC	GND	GND	NC	NC
14	NC	NC	LA07_N	GND	NC	NC	LA09_P	LA10_P	NC	NC
15	NC	NC	GND	LA12_P	NC	NC	LA09_N	LA10_N	NC	NC
16	NC	NC	LA11_P	LA12_N	NC	NC	GND	GND	NC	NC
17	NC	NC	LA11_N	GND	NC	NC	LA13_P	GND	NC	NC
18	NC	NC	GND	LA16_P	NC	NC	LA13_N	LA14_P	NC	NC
19	NC	NC	LA15_P	LA16_N	NC	NC	GND	LA14_N	NC	NC
20	NC	NC	LA15_N	GND	NC	NC	LA17_P_CC	GND	NC	NC
21	NC	NC	GND	LA20_P	NC	NC	LA17_N_CC	GND	NC	NC
22	NC	NC	LA19_P	LA20_N	NC	NC	GND	LA18_P_CC	NC	NC
23	NC	NC	LA19_N	GND	NC	NC	LA23_P	LA18_N_CC	NC	NC
24	NC	NC	GND	LA22_P	NC	NC	LA23_N	GND	NC	NC
25	NC	NC	LA21_P	LA22_N	NC	NC	GND	GND	NC	NC
26	NC	NC	LA21_N	GND	NC	NC	LA26_P	LA27_P	NC	NC
27	NC	NC	GND	LA25_P	NC	NC	LA26_N	LA27_N	NC	NC
28	NC	NC	LA24_P	LA25_N	NC	NC	GND	GND	NC	NC
29	NC	NC	LA24_N	GND	NC	NC	TCK	GND	NC	NC
30	NC	NC	GND	LA29_P	NC	NC	TDI	SCL	NC	NC
31	NC	NC	LA28_P	LA29_N	NC	NC	TDO	SDA	NC	NC
32	NC	NC	LA28_N	GND	NC	NC	3P3VAUX	GND	NC	NC
33	NC	NC	GND	LA31_P	NC	NC	TMS	GND	NC	NC
34	NC	NC	LA30_P	LA31_N	NC	NC	TRST_L	GA0	NC	NC
35	NC	NC	LA30_N	GND	NC	NC	GA1	12P0V	NC	NC
36	NC	NC	GND	LA33_P	NC	NC	3P3V	GND	NC	NC
37	NC	NC	LA32_P	LA33_N	NC	NC	GND	12P0V	NC	NC
38	NC	NC	LA32_N	GND	NC	NC	3P3V	GND	NC	NC
39	NC	NC	GND	VADJ	NC	NC	GND	3P3V	NC	NC
40	NC	NC	VADJ	GND	NC	NC	3P3V	GND	NC	NC



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Bottom view

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