

Product Name: ZX182P FMC Vita 57.1 Tektronix P68xx (6880) test board - breakout adapter – passive FPGA Mezzanine Card

Product Description: FPGA Mezzanine card , FMC , passive breakout adapter, meeting VITA 57.1 standard bus interfacing with Tektronix P68xx (6880) differential / single ended signaling applications. Includes 10 rows x 40 pins, totaling **400** pins High Pin Count, HPC, (**200** pins for LPC – Low Pin Count), FCI Meg-Array, housing both CC (Carrier Card - Host) and MC (Mezzanine Card) connectors.

ZX182P is offered in HPC, LPC and FCI Meg-Array connector configuration, see ordering information

Fully compatible with 10 rows x 40 pins single ended or differential pairs design configuration

- All signals are accessible via designated P6880 connector, IPEX, Header, and 0402 SMD package.
- All Clocks are accessible via IPEX-37 connectors
- JTAG signals accessible via 2x4 pin header
- All Power Supply signals accessible via 2x4 pin headers with on-board LEDs indicators.
- Improved signal integrity and crosstalk with **12 layers PCB** with each layers guarded by GROUND plane.
- Designed for **50Ω** single ended and **100Ω** differential trace impedance exceeding VITA 57.1 standard.
- DC to 10GHz bandwidth applications

GND test point for easy access as well as applying external ground reference

Application: FMC VITA 57.1 daughter card Bringup, testing, emulation, Xilinx development Virtex 6 Virtex 7 interface testing daughter board to host, modular design evaluations

Access: 2x4 pin header, SMD 0402 Package footprint as well as P68xx designated connectors

Pitch: 1.27mm (0.05") High Speed connector

Mates with : Xilinx FPGA development systems Virtex 6 Virtex 7 connecting daughter board to Host Any and all FMC VITA 57.1 compliant design CC-LPC-xxx CC-HPC-xxx MC-HPC-xxx MC-LPC-xxx where xxx is 10L, 10, 8.5L 8.5

Samtec Molex HI-SPEED HI-DENSITY SEARRAY design connectors.
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:

ZX18x FMC breakout adapter mates with the following Samtec Molex CC / MC SEARRAY™ VITA 57.1 Connectors

Molex PN	Samtec PN	VITA PN	Description	Mated Stack Height
45971-4307	ASP-127796-01*	CC-LPC-10L	female	
45971-4317	ASP-134485-01*	CC-HPC-10L	female	
45971-4315	ASP-134486-01	CC-HPC-10	female	
45971-4305	ASP-134603-01	CC-LPC-10	female	
45970-4117	ASP-134601-01*	MC-HPC-8.5L	male	8.5 mm
45970-4115	ASP-134602-01	MC-HPC-8.5	male	8.5 mm
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
45970-4317	ASP-134487-01	MC-HPC-10L	male	10 mm
45970-4315	ASP-134488-01	MC-HPC-10	male	10 mm
45970-4305	ASP-134604-01	MC-LPC-10	male	10 mm

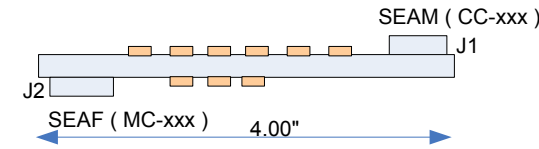
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ZX182P Block diagram, See Page 2

ZX182P , Passive FMC VITAL 57.1 breakout adapter – test board



CC: Carrier Card typically located on Host
MC: Mezzanine Card, typically located on Mezzanine Card
SEAF: SEARRAY Female connector
SEAM: SEARRAY Plug (Male) connector

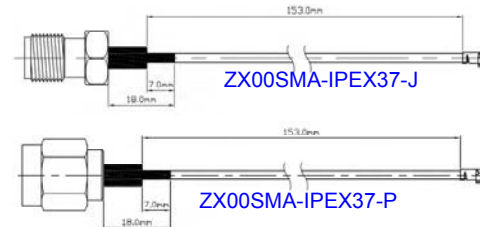
Probe connector, headers, IPEX-37 access points

ZX182P-X-X Package includes:

Part number	Quantity	Description
ZX182P-X-X	1	FMC Mezzanine Module
ZX00SMA-IPEX37-X	4	SMA to IPEX-37 cable assembly , Note 1, See ordering information

Notes:

1- Used for measuring or supplying external Clocks.



ZX182P-F-X Mates with any and all FMC VITA 57.1 compliant design using FCI Meg-Array 400 pins design. Meg-Array 10 rows x 40 pins FPGA Mezzanine Card (daughter)

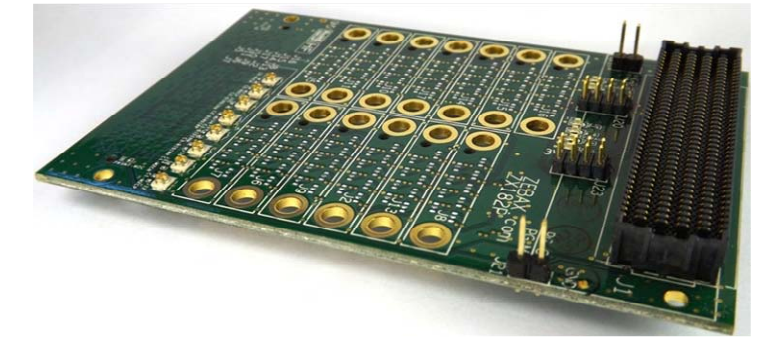
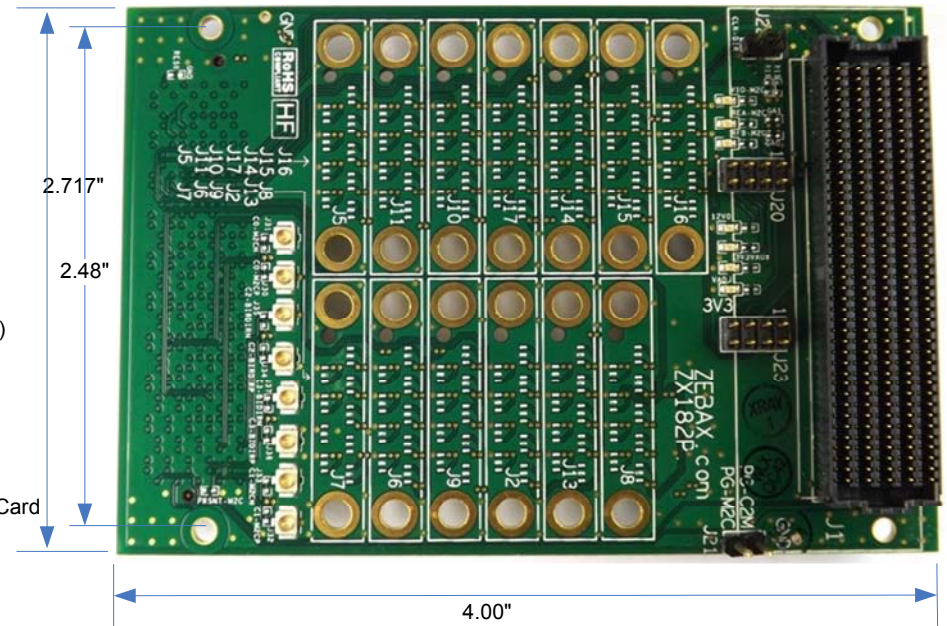
Mated Stack Height: 4mm 6mm 8mm 10mm 12mm 14mm
Meets Telcordia GR-1217-CORE and NPS25298-2 Specifications

FCI ZX18x-F-X FCI Meg-Array 10rows x 40 pins FMC breakout adapter mates with the following FCI Meg-Array VITA 57.1 Connectors

Plug (CC)		Receptacle (MC)		
84520-002LF	84740-002LF	74221-001LF	74388-001LF	74390-001LF*
84520-101LF	84740-102LF	74221-101LF	74388-101LF	74390-101LF
84520-202LF*	84740-202LF	74221-201LF	74388-201LF	74390-201LF
84520-092LF	84740-092LF	74221-091LF	74388-091LF	74390-091LF
84520-192LF	84740-192LF	74221-191LF	74388-191LF	74390-191LF
84520-292LF	84740-292LF	74221-291LF	74388-291LF	74390-201LF
6mm Plug	0mm Plug	4mm	6mm	8mm

* Used on ZX182P-F-X

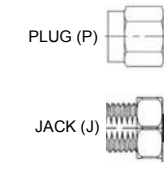
LF : Lead Free



ZX182P board thickness is 1.5mm +-10%

Ordering INFO:

Part Number
ZX182P-X-X options
J : SMA Jack (Standard)
P : SMA Plug connector
H : HPC - High Pin Count connector
L : LPC - Low Pin Count connector
F : FCI - FCI Meg-Array connector

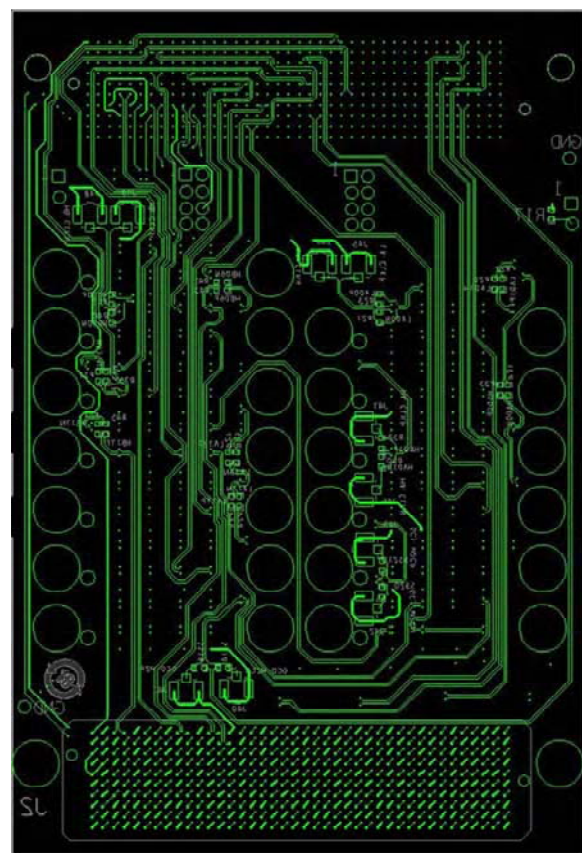
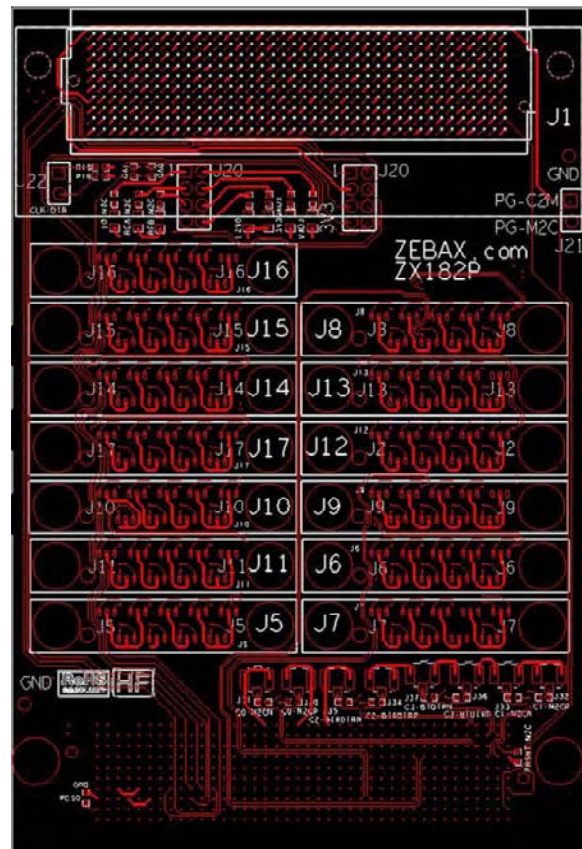


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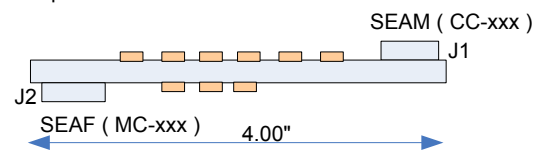
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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING ITEM: ZX182P
DESCRIPTION: FMC VITA 57.1 test board for P6880 Tektronix probe – passive mezzanine HPC LPC Meg-Array	
CHECKED: M. MARINA	DRAWN: SLAVIK
REVISION: 1.0 SHEET: 1 OF 3	

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ZX182P , Passive FMC VITAL 57.1 breakout adapter – test board



CC: Carrier Card typically located on Host
 MC: Mezzanine Card, typically located on Mezzanine Card
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Probe connector, headers, IPEX-37 access points

Typical SS signal connection using 0402 SMD Package



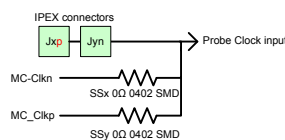
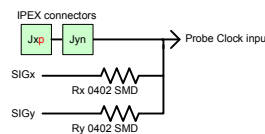
Break signal path:



Clock routing technique

Probe clocks are routed using IPEX connectors for use with external clock sources as well as optional resistor stuffing as exhibited below. Jxp, Jxn are IPEX positive and negative IPEX connectors. The Rx, Ry (0402 SMD package) are not stuffed as default. SIGx, SIGy are defined signals reserved as probe clock option, if available. Please see Probe signal assignment table for assigned IPEX and availability of SIGx, SIGy per designed probe access.

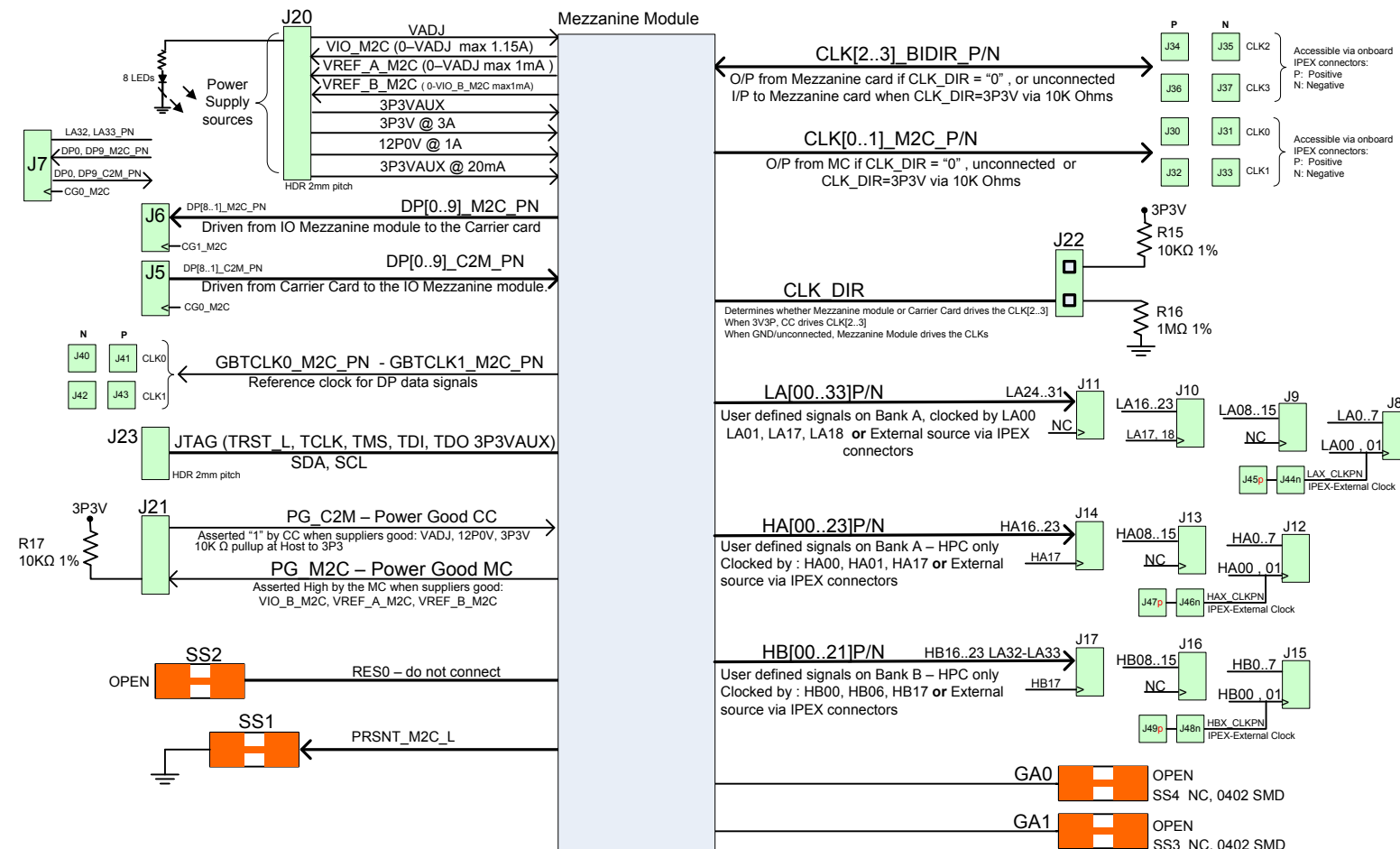
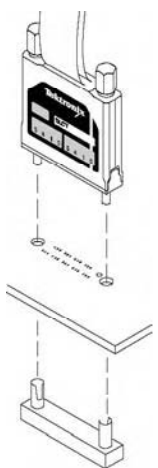
MC clock source routing to probes are accessible at IPEX connectors. SS (0402 SMD package) can be used to disconnect MC from providing the Clock or install appropriate filtering, if applicable.



P6880 P68xx Probes

P68xx Logic Analyzer Probes connect TLA7Axx series Logic Analyzer module to target systems. P68xx probe connect to ZX182P (target) through podlets holders or leadsets.

Installation requirement : Probe installation requires thin elastomer holder with the nut bar for ZX182P



- Note:**
- 1- MC Mezzanine Card - CC Carrier Card (Host)
 - 2- All Clocks are accessible via onboard IPEX connectors
 - 3- IPEX Jxyp is positive terminal, Jxyn is negative terminal of the external clock source.

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