Product Name: **ZX122BX – PCISIG M.2 NGFF passive adapter module, Providing ANY M.2 finger connector type breakout adapter solution**

Product Description: ZX122BX enables any combination of M.2 KEY_ID brakout solution for test, debug and development purpose. All 75 signals are available for access via the M.2 finger edge connector.

Designed with 50Ω trace impedance on all traces, improved signal integrity and crosstalk.

ZX122BX provides access to all 75 signals via accessible 0402 SMD landing pads. Dedicated GND test point, interfacing with the inner ground layers + top/bottom GND fills.

ZX122BX can be inserted into any M.2 NGFF PCISIG connector and wired (stitched) to any Evaluation board (development board) for purpose of debugging, development, testing, or characterization.

- Designed in 4 layer PCB
- All signals accessible via 0402 SMD landing pads.
- Dedicated Module GND test point for ease of probing and system ground reference.
- The "GND" test point, accessing inner ground layers for improved signal integrity and crosstalk.
- Matching 50Ω trace impedance on all traces.

"GND" test points and Mounting holes are connected to 2 internal GND layers.

Application: Bringup, testing, emulation, development, modular design evaluations for wifi GPS GYRO Compass BT FM PCIe X2 X4 SATA SSIC UART FMI USB I2C PCM UIM DP SDIO and more standards

Mates with : Any standard M.2 NGFF PCISIG connector, please see ORDER info for "Key_id"
TE 2199125 2199119 2199230 2199133
JAE SM3ZS067
Bellwether: SD-80148 SD-80149 SD-80152 SD-80159

OnBoard M.2 connector 4.1 mm Height

Pitch: 0.5mm

Breakout Access: Accessible via 0402 SMD landing pads. All signals are accessible on top layer of the module. Dedicated GND test point interfacing with the inner ground layers + top/bottom GND fills.
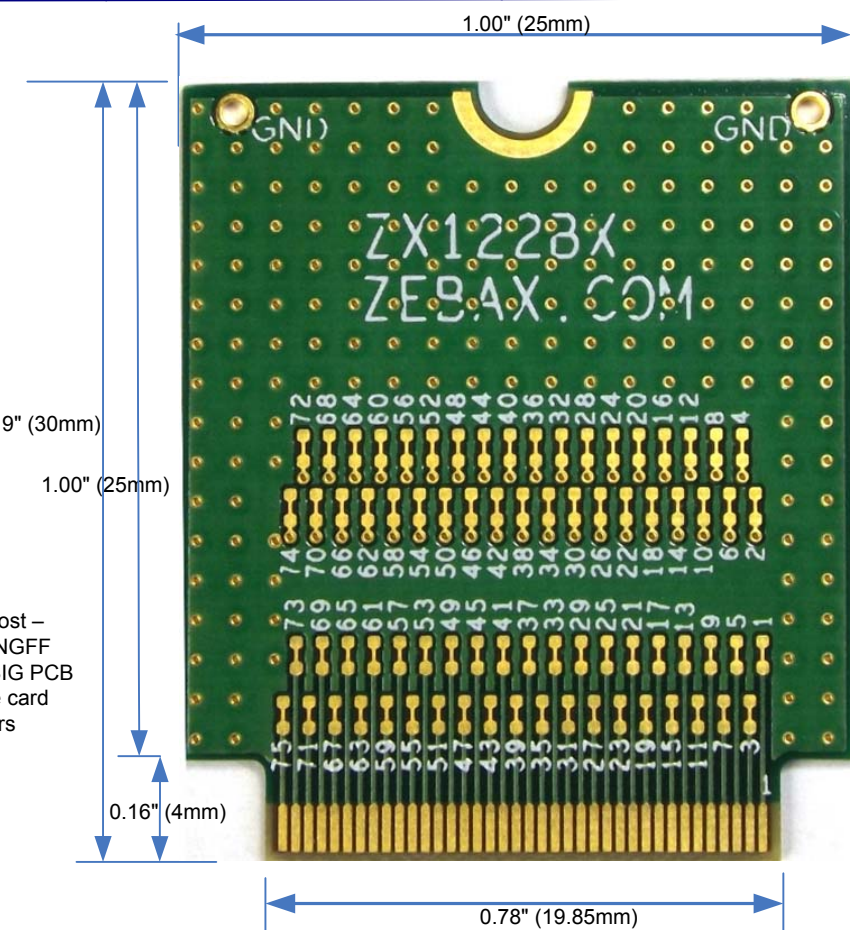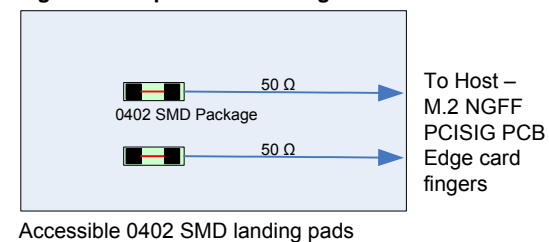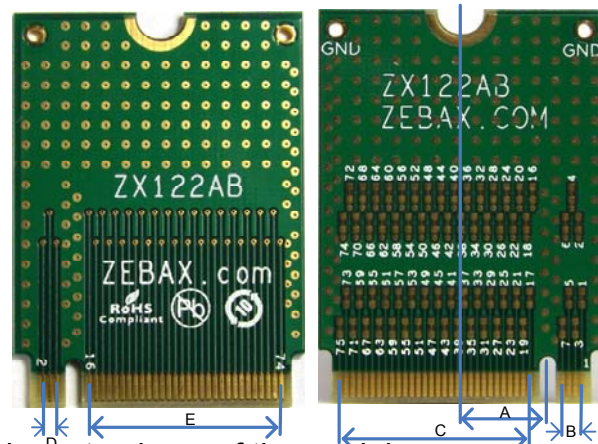

1.00" (25mm)

1.19" (30mm)

1.00" (25mm)

0.16" (4mm)

0.78" (19.85mm)

Figure 2- Simplified Block diagram

50 Ω
0402 SMD Package

50 Ω

To Host –
M.2 NGFF
PCISIG PCB
Edge card
fingers

Accessible 0402 SMD landing pads

Ordering INFO:
Part Number

	KEY_ID1	KEY_ID2
ZX122BX	A	B, E, M
	B	A, E, M
	E	A, B, M
	M	A, B, E
	Z	Z

Z: Bank – Do not make any M.2 KEY_ID cutout on the Finger edge connector.

Device Under Test, DUT

Note ZX122AX

ALL ZEBAX products are **RoHS** compliant and **Lead Free** unless otherwise indicated.

Module Insertion, Removal process:
1- Move the Module against the housing chamber, see figure 1
2- Rotate module to 25°, insert it until the module surface reaches the ramp, figure 2, 3
3- Rotate the module to horizontal position, see figure 4
4- Fix the module by screw, see figure 5

Fig. 1
Fig. 2
Fig. 3
Screw Fig. 4
Fig. 5
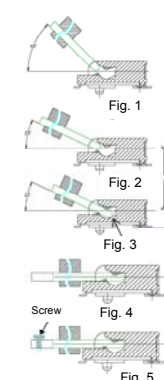
Key ID	Pin	Interface
A	8-15	PCIe X2/ USB / I2C / DP X4
B	12-19	PCIe X2 / SATA / USB / PCM / UIM / SSIC / UART-I2C
C	16-23	Reserved for Future Use
D	20-27	Reserved for Future Use
E	24-31	PCIe / USB / I2C / SDIO / UART / PCM
F	28-35	Reserved for Future Use
G	39-46	Future Memory Interface (FMI)
H	43-50	Reserved for Future Use
J	47-54	Reserved for Future Use
K	51-58	Reserved for Future Use
L	55-62	Reserved for Future Use
M	59-66	PCIe X4 / SATA

		KEY ID					
		A	B	C	D	E	F
Diemsion	A	6.625	5.625	4.625	3.625	2.625	1.625
	B	1.500	3.500	3.500	4.500	5.500	6.500
	C	14.500	13.500	12.500	11.500	10.500	9.500
	D	1.000	2.000	3.000	4.000	5.000	6.000
	E	14.500	13.500	12.500	11.500	10.500	9.500

Dimension, See ZX122AB reference listed above

ZEBAX TECHNOLOGIES
SANTA CRUZ, CA U.S.A (831) 2 2 2 – 0717
WWW.ZEBAX.COM

SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT

ASSEMBLY DRAWING
ITEM: ZX122BX M.2 NGFF PCISIG

DESCRIPTION: **M.2 NGFF PCISIG passive breakout adapter for ANY M.2 KEY ID combination**

CHECKED: M. MARINA
DRAWN: SLAVIK
REVISSION: 1.0
SHEET: 1 OF 1