

**Product Name:** ZX230CPAP USB type C Plug to USB Type A Plug electrical test breakout adapter - converter

**Product Description:** USB Type C Plug to USB Type A Plug test board - breakout adapter - converter. **ZX230CPAP** is designed for general purpose electrical signal analysis, test, measurement as well as compatibility & debug applications. ZX230CPAP is designed for SuperSpeed Gen1 ( 2.5GHz ) SuperSpeed Plus Gen2 ( 5GHz ) and future 20Gbps ( **10GHz** ) bandwidth - electrical performance. Please refer to page 2 for the s-parameter detained information.

ZX230CPAP is shipped with cable assembly, ZXJS1173-230C, enabling full access to VBUS, GND, CC1, CC2, SBU1 and SBU2 signals. The cable assembly includes pin socket, mating with any standard pin header ( 0.025" / 0.63mm SQ pin header ).

RX2-P/N as well as TX2-P/N signal pairs are available on the SMA connector.

ZX230CPAP is designed using 4 layers PCB where the inner layers are GND planes. The GND test point is connected to the inner layer GND planes as well as top/bottom fill.

**Application:** USB electrical signal analysis & measurements. Compatibility test and debug.

**Supported bandwidth:** Supporting SuperSpeed Gen1 ( 2.5GHz ) SuperSpeed Gen2 ( 5GHz ) and future 20Gbps ( 10GHz ) Nyquist frequencies, bandwidth.

**Mates with :** **USB Type C Receptacle**  
**USB Type A Receptacle**  
**SMA connectors** mates with any standard SMA cable assembly.  
**Wire assembly mates with** any 0.025" (0.63mm ) SQ post header length 0.23" ( 5.83mm )

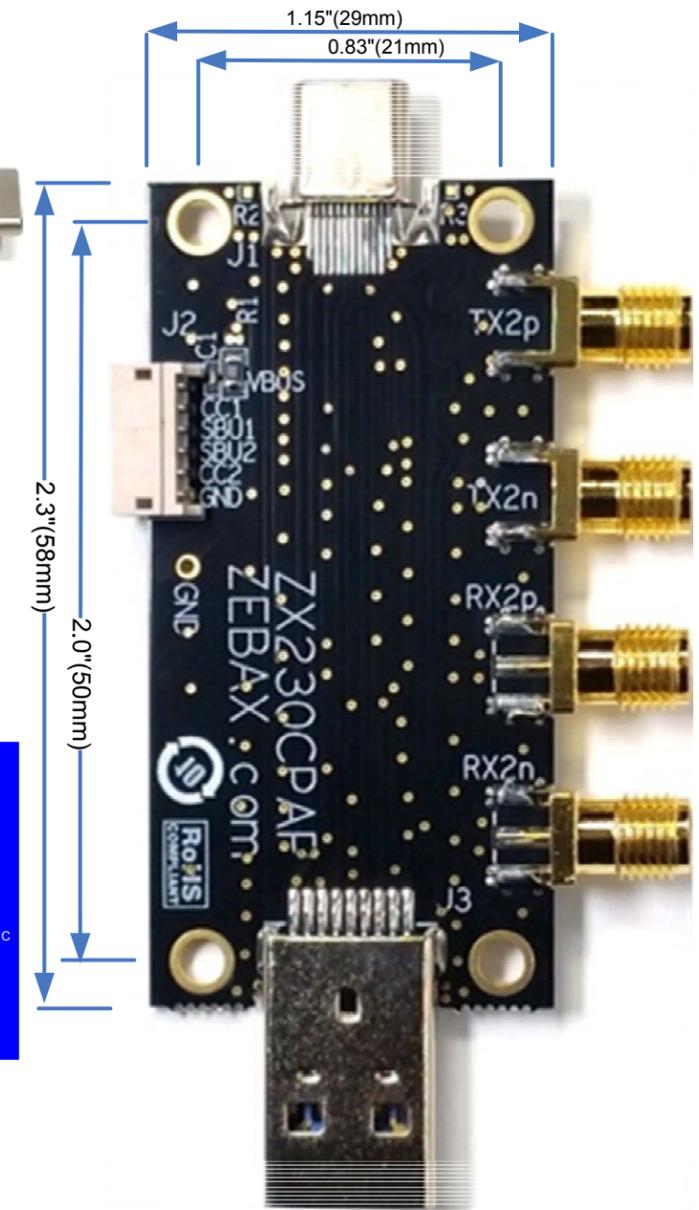
**Pinouts:** **USB Type C Plug to USB Type A Plug** and J2 signal assignments listed below



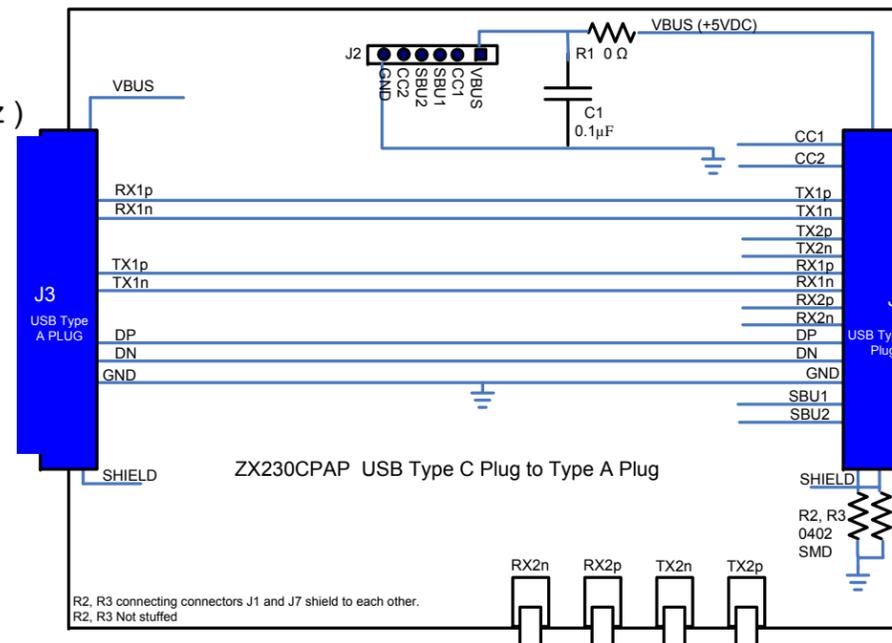
ZXJS1173-USB wire assembly accessing VBUS, GND, CC1, CC2, SBU1 and SBU2



See Page 2 for more data



**Circuit Diagram**



Ordering INFO:  
Part Number ZX230CPAP



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

**Package includes:**

Item	Part number	Quantity	Description
1	ZX230CPAP	1	USB Type C Plug to USB Type A Plug electrical test breakout adapter.
2	ZXJS1173-230C	1	Wire assembly for accessing J2 signals, Note 1
3	ZX230CP	0	USB Type C TPA-P electrical test breakout module – Plug.
4	ZX230CR	0	USB Type C TPA-R electrical test breakout module - Receptacle.
5	ZX00WT-09NM	0	SMA Wrench Torque 5/16" (8mm)

Notes: 1- Supplied extension wire assembly enables to interface test equipment or 3<sup>rd</sup> party modules.

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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING
	ITEM: ZX230CPAP
DESCRIPTION: USB Type C Plug to USB type A Plug electrical test breakout adapter - converter	
CHECKED: M. MARINA	DRAWN: SLAVIK
REVISION: 1.0	
SHEET: 1 OF 2	

**Notice**

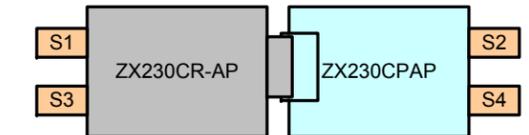
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**Product Name:** ZX230CPAP USB Plug type C to USB Type A Plug electrical test breakout adapter Cont's

**S-Parameter, Insertion loss:** The following insertion loss measurements were obtained using Agilent NA with the following test case:

- 1- ZX230CPAP mating with ZX230CR-AP at USB type C connector.
- 2- NT interfacing with the supplied SMA connectors on both ZX230CPAP and ZX230CR-AP modules.



**Test network :** ZX230CR-AP ( Type C Receptacle ) to ZX230CPAP ( Type C Plug )

S12 : TX2+ RX2+  
S34: TX2- RX2-

Signal Pairs	Insertion Loss at USB Gen1 ( 2.5GHz ) Gen2 (5.0GHz) Nyquist frequencies (dB)			
	0.626GHz	1.25GHz	2.5GHz (Gen1)	5.0GHz (Gen2)
RX2-P/N	-1.30	-0.65	-1.35	-3.75
TX2-P/N	-1.38	-0.63	-1.67	-3.75

All values are dB

**S-Parameter files:** [ZX230CXAP-S-Parameter](#) – It is .7z file. It consists of .s2p files, only.

**Pinouts:** USB Type C Plug to USB Type A Plug and J2 signal assignments listed below

ZX230CPAP - USB Type C Plug to USB Type A Plug

Signal	USB-A		USB Type C		USB-A		Signal
	Pin#	Signal	Top	Bottom	Pin#	Signal	
J2.6 GND	4,7	GND	A1	B12	4,7	GND	J2.6 GND
<b>TX1p</b>	6	<b>RXp</b>	A2	B11	9	<b>TXp</b>	<b>RX1p</b>
TX1n	5	RXn	A3	B10	8	TXn	RX1n
J2.6 VBUS	1	VBUS	A4	B9	1	VBUS	J2.6 VBUS
J2.2 CC1			A5	B8			J2.4 SBU2
<b>DP</b>	3	<b>DP</b>	A6				
<b>DN</b>	2	<b>DN</b>	A7				
J2.3 SBU1			A8	B5			J2.5 CC2-VCONN
J2.6 VBUS	1	VBUS	A9	B4	1	VBUS	J2.6 VBUS
RX2n	SMA		A10	B3	SMA		TX2n
<b>RX2p</b>	SMA		A11	B2	SMA		<b>TX2p</b>
J2.6 GND	4,7	GND	A12	B1	4,7	GND	J2.6 GND

J2	
Pin	Function
1	VBUS
2	CC1
3	SBU1
4	SBU2
5	CC2-VCONN
6	GND

J2.x signals are accessible on J2 connector  
SMA: Signal available on SMA connector

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